U.S. DEPARTMENT OF ENERGY

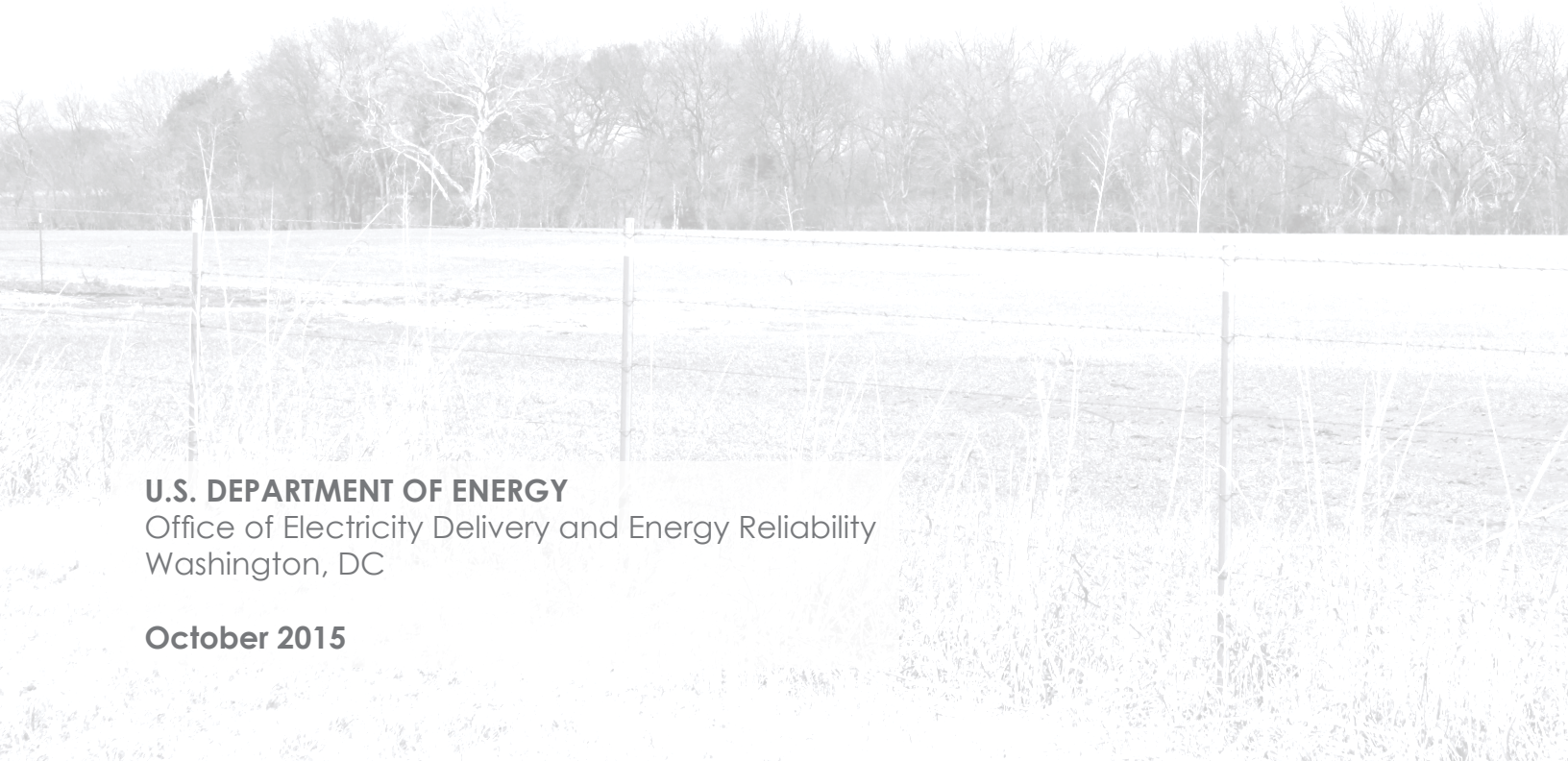
DOE/EIS-0486

Final

PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT

ENVIRONMENTAL IMPACT STATEMENT

Volume VIII of VIII



U.S. DEPARTMENT OF ENERGY
Office of Electricity Delivery and Energy Reliability
Washington, DC

October 2015

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT DRAFT
ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING LOCATED AT THE
WOODWARD CONVENTION CENTER
IN WOODWARD, OKLAHOMA
ON 5:00 P.M. ON MONDAY, JANUARY 26, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lindsey Goodenow, CSR

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(On Monday, January 26th, 2015, a public hearing open house was commenced at 5:00 p.m.)

MS. SHUMAN: My name is Wanda Shuman, S-h-u-m-a-n, there's no C. I live in Woodward, but my land is in Harper County. I'm going to leave this here. It tells you how many acres I've got. There's no homes on my land, very, very few trees, a fence around the road, and I have nothing but grassland and hills. And the wind blows so hard, it takes two men to close the wire gate. That's a joke. 1|12

Anyhow, here's my section numbers and everything. I'm real easy to get along with and I don't have any cattle. I lost my husband eight years ago, and so anyhow, I think this is it.

(Exhibit 1 is marked for the public record.)

(At 5:50 p.m., the open house was recessed for the public presentation. After which, the formal public comments began at 6:28 p.m.)

MR. FASANO: This portion of our meeting is officially designated as a public hearing as a Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on January 26th, 2015, at the Woodward Convention Center in Woodward, Oklahoma. It is being held to receive comments for the Draft EIS.

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We are commencing the public comment portion of this meeting at 6:30 p.m. and are scheduled to adjourn once all participants have had a chance to make their comment. Each speaker will have approximately three minutes. We will try to provide flexibility as time allotted based on the number of speakers that have registered.

This meeting was preceded by a presentation by DOE's EIS Document Manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting comment.

For the record, my name is Greg Fasano. I've been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier are being followed.

The court reporter's task is create a complete and accurate transcript of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

DOE will place copies of the transcript on the public meeting on the DOE web page as soon as practicable.

Okay. The first two speakers are Matt Gard and Margaret Benbrook. So Matt, if you would come up,

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please?

One other thing, if you please give your name, address, and affiliation if appropriate, that would complete the record as we get it transcribed. Thank you.

MR. GARD: My name is Matt Gard. I'm from Prairie View and I'm here just as a concerned citizen. Being a landowner out north of Major County, I've noticed a lot of atrocities by utility companies coming in through our area and manhandling the landowners and their rights as they come across them like with pipeline or like OG&E did when they put their high line through.

And I would like to give kudos and points to the Clean Line. I followed the -- all of their meetings around for the past, at least, three years and witnessing their handling of the situation of bringing a large power transmission line through our area. And the public awareness that they've presented to us and our communities, I believe they've done a very good job of getting the information out to the public about the project. And they're wanting to approach it a whole different way than what OG&E has and also some of the pipeline companies in our area. So that's all I have.

MR. FASANO: Thank you, Matt. Margaret

1|2C

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Benbrook?

MS. BENBROOK: Thank you. I am Margaret Benbrook. I live at 202243 East County Road 29, Woodward. I live on a suggested route that the transmission line would run along. My concern is under the section of electrical environment. And on page 49 of the summary, there is a discussion of how the electrical environment affects health -- the health of human beings. And this is a concern of mine because my home is fairly close to the proposed line. And I'm a grandmother and I have two small grandchildren that live out there with me.

And so I began to do some research just recently. And studies kept popping up, starting back the 1970's, that saw some correlation between transmission frequencies, magnetic and electrical frequencies, that correlated with increased numbers of childhood leukemia. This kept coming up o again.

And I just recently saw a study that was done in India in just 2012, and it was shocking. There were 300 children had been diagnosed with leukemia. And all of those 300 children were living in close proximity to transmission lines. And most of those transmission lines were not as high frequency or high voltage as the

1|15

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one that Clean Line will be putting up. This was a very good study, controlled study with other children that did not have leukemia. And they found that if you moved away from the line, if you moved as much as 600 meters from the line, the incidents dropped by 61 percent of the incidents of childhood leukemia.

So it does show that as further you move away from the high frequency, and especially the magnetic frequency, the numbers drop off. 1|15 cont.

And I feel this is an issue that was not covered sufficiently in the technical investigation that went into the study. And I would propose that more study is done. And I'm asking also the DOE the question: Can you actually measure with the instrumentation -- I know it can be done, but can you require that this be done since this is such a high voltage line and one that we have not much experience with?

MR. FASANO: Please began to wrap up.

MS. BENBROOK: Well, I have more to say and more facts that support my --

MR. FASANO: Just summarize.

MS. BENBROOK: -- viewpoint on this. But I feel there should be further study because Clean Line is stating that the right-of-way only need only be 200 1|15 cont.

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feet. And the World Health Organization says it needs to be at least 100 to 150 yards away from the transition line not to be of a significant health hazard. Thank you. 1|15 cont.

MR. FASANO: And again, please feel free to submit your written comments and we'll get those transcribed.

MS. BENBROOK: Thank you.

MR. FASANO: Thank you. Lisa Ellington and Jim Mason?

MS. ELLINGTON: No. I have laryngitis. I signed the wrong sheet.

MR. FASANO: Jim Mason and Jordy White?

MR. MASON: Thank you. My name is Jim Mason. I work as the Director for Economic Development for Elk City. Elk City, obviously, is about 77 miles south of here. We do have a reputation primarily for oil and gas, but we also have two major wind farms there for a total of 100 wind turbines for a total of over 200 megawatts of power -- okay, 100 turbines, over 200 megawatts of power.

We do think that renewable energy is very important to complement the oil and gas that those on. This project has been established that it would help our existing wind farm to move their energy to market, 1|12

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which would benefit the existing ones. It potentially would also allow for the addition for further wind farms to be developed. 1|12 cont.

There will be, obviously, probably not an impact in Elk City as much, but in all these situations, in order to get electricity to market, you have to put the line somewhere. And this line here has been determined to be a little bit north of us.

This will actually create jobs during the construction of the project and it will also have some jobs that continue after the project is continued which will all have an economic impact in our communities throughout the area. The potential also is there for manufacturers of wind turbines to move into our areas which will create more additional jobs. 2|24

And I feel like that this overall project is beneficial for the wind energy area. And I obviously -- I grew up on a farm, but I am not a farmer, so I can't speak to the aspect of what it will do to the farmland throughout the area. 1|12 cont.

MR. FASANO: Thank you very much. Jordy White?

MS. WHITE: My name is Jordy White and we've been dealing with Clean Line and Mr. Teel for about two years now. I spoke exactly almost to this date two

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years ago. We operate a ranch near Ames. We've been in the ranching business for over 100 years, since 1893 when the strip opened up.

We have been a working cow ranch, horse ranch since then. We have operated as a guest ranch six months out of the year from April to October for the last 30-plus years. This -- we've been going back and forth with Clean Line, and the proposed route right now crosses right in front of our entrance. And for us, I cannot stress this amount -- this enough, there is no amount of recompense that will make up for the fact that a -- destruction is a dramatic word, but the changing of our livelihood, the changing of our business. 1|24

People come here to us six months out of the year primarily from Western Europe, the Middle East, and Southeast Asia for the chance to get away from cities, to get away from these transmission lines and the blinking lights, the humming. There are possibilities of that. This could irrevocably change our business.

Beyond that, a health issue. I've heard multiple stories, as the lady spoke earlier, and done multiple research on the possibility of these lines distracting pacemakers and defibrillators. My father 2|15

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has a pacemaker. My brother-in-law has a defibrillator. And this is going to effect the long-term usage of people going back and forth under those lines. And as proposed right now, we would -- we travel where this goes, ten to 15, 20 times a day. I can't take a chance with my father's health, with my brother's health. 2|15 cont.

We have businesses based on hunting waterfowl, migratory birds, deer, all sorts of things in that regard. Is that going to affect this business?

We operate as a ranch -- working cattle ranch, Quarter Horses, raising crops and cattle and have been doing so for 100 years. There's been lots of research to substantiate the fact these electrified fences and I -- we cannot have livestock in this pastures during the time of construction or during the time of maintenance. These are 250 acre pastures, and beyond that, that kills the business for us. 1|24 cont.

So my concerns -- and I'm trying to go as fast as possible -- are multifaceted. And for us, there's no amount of money that would make up for a lifetime, a history of my great-grand-father making the run and for my family, including myself living there now and a two-and-a-half-year-old niece, and my future with my family, my sister, and brother-in-law moving 3|6

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back to the ranch from Italy because they want to come home to rural Oklahoma. 3|6 cont.

So for us, it's a huge deal. It's a life-changing factor. There's no amount of money that can make up for that. If there's any way possible to change that for us, which we bring about a large amount of revenue into the state and throughout all sorts of facets from Western Europe and across the world every year beyond our ranching business. So for us, it's a game changer. It ruins -- to not put a dramatic spin on it, but it ruin's my family's history and our future. So thank you. 1|24 cont.

(Exhibit 2 is marked for the public record.)

MR. FASANO: Vince Chaisson and Candyce Kline?

MR. CHAISSON: Vince Chaisson, all I have to say, and I just want to make sure I get it on the record, the proposed route that you have there on Sheet 22, Section 13 has it going directly over one of my wind turbines, so that's not going to work. That's all I want to say. 1|8A

COMMUNITY MEMBER: Over what?

MR. CHAISSON: It goes directly over one of my wind turbines.

COMMUNITY MEMBER: So you've got wind

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turbines too? That's good.

MR. CHAISSON: Thank you.

MR. FASANO: Candyce Kline and then A.E. Lehr.

MS. KLINE: My name's Candyce Kline. I'm a third generation landowner. When Clean Line came to this country and started talking, a group of us got together, we wanted to preserve our property. We wanted our property to be respected. So we formed a group called Southern Great Plains Property Rights Collation and we have a picture that goes with it.

We started a petition. Several people signed it. In fact, 3,000 people signed our petition asking that their property be respected, be cared for just as they would. And we've given this to the governor, to our legislators, but -- and we haven't given it to the Department of Energy, so I thought I would present it to them tonight.

1|6

Let me just read just a little bit of the petition: "We, the under signed, are asking for just treatment for all Oklahoma landowners, homeowners, and for the respect of private property rights. All we ask is that our private property -- that private property owners be given just compensation annually for land taken for this development and for the regulation of

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the placement of transmission lines and substations."

The people that signed it, they listed their name, address, telephone number, e-mail address. So you know that if they did that, they were very committed that their property be kept for future generations. So I would like to turn this in.

(Exhibit 3 is marked for the public record.)

MR. FASANO: Thank you. A.E. Lehr and Sue Selman? Mr. or Mrs. Lehr? Sue Selman then?

MS. SELMAN: My name's Sue Selman. I am a county landowner, Rural Route 2, Box 43, Butler, Oklahoma. This is more in the form of questions that I don't know if you'll answer that today, but we noticed DOE probably is all about federal eminent domain. We made that point at the last meeting. What I'm concerned about is if they get federal eminent domain, will the landowners have recourse in the courts or will that trump any chance of landowners being able to going to court?

1|4

And also I would like to remind landowners that we have the Southern Great Plains Property Rights Collation has a settlement agreement with Clean Line and it has a lot of very good language in things that Clean Line will be required to do and options that you will have. And I am assuming, even if they get federal

2|6

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eminent domain, it will still be held to the settlement agreement. 2|6 cont.

And then as far as the wildlife part of this, Clean Line will have to go through lesser prairie chicken and habitat. And I want to know if they are going to be required to pay mitigation like all the other transmission lines, oil wells, and other businesses in lesser prairie chicken and habitat. 3|25

And I have one other thing to say. I got this call-to-action by Mario Furtado to help bring jobs and investment to Oklahoma. This is a gross overstatement. Thousands of jobs? Not to people in Oklahoma. They will have to bring in construction workers that specialize in transmission lines. That's not going to be people in Oklahoma that's going to be hired. And I think that's just a gross injustice to make those kinds of statements. 4|24

COMMUNITY MEMBER: Where are they going to stay?

MS. SELMAN: That's not my property.

COMMUNITY MEMBER: That's generating --

MR. FASANO: Please, let's let the speaker speak.

MS. SELMAN: Yes. It will bring some money in for motel rooms, restaurants, and gas, but in the 4|24 cont.

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long-term, it will be very few people that they will need to maintain these lines and they will bring in out-of-state workers, not people from Oklahoma. 4|24 cont.

MR. FASANO: Thank you. Lynn Easterwood and then Linda Jo Meyer?

MR. EASTERWOOD: My name is Lynn Easterwood, Route 1, Box 468, Fort Supply. And I just wanted to go on the record to say that your proposed route in Section 28-25-23 in Harper County, the line goes like right between my barn and the house. It's right over the top of my place. And, I mean, if you can move it -- I mean, that just won't work for us. I'm not against the deal, but I just don't want it over my house. 1|11

MR. FASANO: Thank you. Linda Joe?

MS. MEYER: Yes, sir. I'm Linda Jo Meyer.

MR. FASANO: And then Greg Adams will be after that.

MS. MEYER: I'm Linda Meyer. I live in my granddad's house at 9408 Oklahoma State Highway 34 for 63 years. But my other granddad was a doctor in Mooreland. And we just got our centennial farm paperwork in and our sign up. I just want to appreciate you all for being here. It's 70-something degrees out. I've been to these meetings all over

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northwest Oklahoma. There hasn't been this many people in a meeting. It's because we care. We care.

Our family has centennial land that's history here. Our land has been condemned and eminent domain has happened. The power lines form a big X of overhead transmission lines on our historic property. We now no longer cut locust wood there. We no longer trap or harvest animals there. We're not happy. Out dad, Bob Meyer, he's 84 today. With his pacemaker, he just stays off our land. Thank you. 1|34

MR. FASANO: Thank you. Greg Adams?

MR. ADAMS: Greg Adams, Buffalo, Oklahoma, Harper County resident. I've been involved in renewable development for the last 15, 20 years, and have been known the principals involved with Clean Line and before they were Clean Line. I've known them to be honest, respectable businessmen that make an honest effort to do the right things. And the environmental impacts from this line, while all development has some impact, the impact of not doing this line can affect the country and our planet. 1|35

I fully support this line and I fully support this Clean Line and what they've done. Thank you.

MR. FASANO: Thank you. Is Lisa Ellington here? A.E. Lehr? Okay. That's the total number of

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people that have signed up to speak. We're here for you. If you want to speak some more, please let us know. New people that haven't spoken and feel as though they want to get their comments on the record, please let us know now.

COMMUNITY MEMBER: I want to know if I can get some answers to those questions I asked?

DR. SUMMERSON: As I said in the presentation, the Department is not authorized to respond on the record to questions tonight, but you will absolutely get your answer in the comment response document. And that is a formal Department of Energy document.

COMMUNITY MEMBER: But I would also like to know what is environmental justice?

DR. SUMMERSON: That -- afterwards can I give you some information on --

COMMUNITY MEMBER: I think it was in here in the presentation.

DR. SUMMERSON: It is. It's a NEPA term of art. It's a federal executive order. And the intent is to ensure that the federal government does not implement a project that has a disproportionate and adverse effect on minority populations.

MR. FASANO: Okay. Let's leave it at that

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for now on the record and talk afterward.

DR. SUMMERSON: It's a NEPA term of art.

MR. FASANO: Is there anyone else that would like to formally speak on the record?

We're here for a while. I will -- if there is -- we're going to shut down the formal comment period then. So if there isn't anyone else that wants to be on the record, I will state that thank you once again for your participation and comment. Please remember that you may continue to submit comments on this document until the comment period closes March 19th. You can also do it one-on-one with the court reporter if you would like.

This concludes the formal public hearing portion and this meeting is -- the formal comments are adjourned at 6:55 p.m.

Right now we'll have a recess period and please feel free to discuss the project with any staff members, but we're here until 8 p.m.

(At 6:55 the formal public comments were concluded and the open house was resumed.)

MS. FINLEY: It's the four corners of the Cedardale Community. Okay. There's a young couple that lives basically right under where your line's going. They have a couple little kids. And then

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there's another house there that they live part-time. So thank you.

(The public hearing was adjourned at 8:00 p.m.)

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Certificate

I, LINDSEY GOODENOW, Certified Shorthand Reporter, do hereby certify that the public hearing was taken by me in electronic stenographic shorthand and thereafter transcribed by me. I further certify I am not an employee, attorney, nor relative of any of the said parties or otherwise interested in the event of said public hearing.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this February 2nd, 2015.

Lindsey Goodenow

Lindsey Goodenow, CSR

CSR No. 1956

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I have 1120 acres in Harper county that I would like to have wind energy on, please call me at 580-256-3204 - or cell 580-571-7511

There is no homes on my land and very few fences, the land is about four or five miles south west of Laverne, OK. About 2 or 3 miles from a sub electric station along highway.

1|12 cont.

7-25-25 = 320 Acres
8-25-25 = 160 Acres
17-25-25 = 240 Acres
18-25-25 = 700 Acres

Very few trees

Thanks
Wanda Shuman
P.O. Box 1072
Woodward, OK.
73802

EXHIBIT
1
1-26-15 Shuman
PENGAD 800-631-6989

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ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING LOCATED AT THE
PICKLE CREEK CENTER
IN GUYMON, OKLAHOMA
AT 5:00 P.M. ON TUESDAY, JANUARY 27, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lindsey Goodenow, CSR

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Vicki Ayres-Portman, Director of the Panhandle Regional Economic Development Coalition 17
Jason Zan, Oklahoma City 20

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(On Tuesday, January 27th, 2015, a public hearing open house was commenced at 5:00 p.m.)

MR. STRAIN: Well, you know, I just wanted to express from my point of view that I think this will be a tremendous boost for Texas County. Not only the ad valorem taxes that the schools, which are in definite need of funds, County General will get a small portion of that, but the schools get the biggest part of it, which schools in our area are hurting for money, which they were everywhere, but -- and not only will there be the increase in ad valorem tax, but there's going to be sales tax that all these people who are working here, there's going to be -- they're going to spend money here in Texas County. 1|35

And I think it's going to be -- I don't think we have any idea what kind of a financial boom this could be for Texas County, but I think it's going to surprise a lot of people. And the times that we're in now, I think it can be nothing but good for us. You know, we're going to -- like I say, we're going to -- we'll get some ad valorem tax off of all of the towers and the transmission lines and the generator or whatever you want to call that facility there that changes it from AC to DC, but you know, there will also be some use tax that the County will generate also 2|24

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that's going to help Texas County.

So I think economically, to me, it's -- it can be nothing but good for people here. I know they're -- there are some people that are going to see some down sides to it, but overall, I think that it will be something that's good for Texas County. And I honestly look forward to working with these people and getting the deal started. 2|24 cont.

(At 5:50 p.m., the open house was recessed for the public presentation. After which, the formal public comments began at 6:24 p.m.)

MR. FASANO: This portion of our meeting is officially designated as a public hearing for the Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement. The meeting is being held on January 27th, 2015, at the Pickle Creek Center in Guymon, Oklahoma. It is being held to receive comments on the Draft EIS.

We are commencing the public comment portion of this meeting at 6:24 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have approximately three minutes. We will try to provide flexibility in the amount of time allotted based on the number of speakers that have registered.

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This meeting was preceded by a presentation DOE's EIS Document manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

For the record, my name is Greg Fasano. I have been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceeding.

DOE will place copies of the transcript from the public meeting on the DOE web page as soon as practicable.

The first speaker is Carroll Beaman. Please come forward.

MR. BEAMAN: Well, in support of this study and this project, I think it might be worthwhile to take a brief review of the history of the Oklahoma Panhandle. The Compromise of 1850 set the northern 1|35

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boundary of Texas at the famous 36-30 line and the eastern boundary of New Mexico at the 103rd meridian. The Kansas-Nebraska Act of 1854 created the Kansas territory with its southern boundary set on the 37th parallel. These boundaries created a narrow strip of land only 34-and-a-half miles wide and 168 long. The area was called "No-Man's Land," and it is now the Oklahoma Panhandle.

In May 1890, No-Man's Land became part of Indian Territory. When Oklahoma become a state in 1907, No-Man's Land was organized into three counties: Beaver, Texas, and Cimarron.

The reason I'm going back into this is how sparsely settled and how we have not had any transmission in this area. The settlement of the Oklahoma Panhandle started about 1900 with the settlers coming to the Oklahoma Panhandle under the Homestead Act and living on a quarter section of land, 160 acres, which was given to them after they lived on it and improved it for five years.

At that time there was about four families per every section living on every section. Now there's probably not one family for every six or eight sections as we have a depleting population. And there's no industry. There's nothing for the young people. And

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farming operations, to be economic, we need to become larger and larger.

So my mother's parents, my father's parents, and my great-grand-father, the horse and buggy doctor, all homesteaded from 1907 to 1911. My mother was born in 1909 in a dugout on my grand-father's homestead. I was born on the same homestead in '32.

I think it's also interesting to talk about the Oklahoma wind. And Oklahoma become renown, or the Oklahoma Panhandle, for its wind and dust storms that occurred during the 1930's.

As I mentioned, the land was originally settled under the Homestead Act. And a number of homesteaders -- Timothy Egan wrote a book about this called "The Worst of Hard Time," and he explains that during those times, the dust storms, everyone that had enough money or had some place to go, left. The only people left in the panhandle were those too poor to leave. That is one of the reasons it's so sparsely settled today.

And being sparsely settled, lack of industry, no transmission lines, and this is what we need to get this great wind resource we have here to market. 1|35 cont.

So again, I want to -- I would like to encourage everyone to support this project and this

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study. And I do have a form letter that you can make additional notes on and turn in here after the presentations. I would like to give it to everybody to sign it in support.

Then further along, I do want to call attention to -- yes, there you go. Sooner Survey Volume 19, No. 3 titled "Oklahoma United in Support of Wind Power." The key facts of this article are Oklahoma -- and this was a survey made and I have a copy of it here. Oklahomans of all political leanings overwhelmingly support the use of wind power to meet Oklahoma's electricity needs. Building the infrastructure for wind power is a more popular means of generating electricity than building new plants designed to utilize coal, nuclear, or even natural gas as a fuel.

Oklahomans are so committed to the benefits of wind power that 72 percent of the voters are willing to pay more for electricity if it is generated by wind. Fully 40 percent of Oklahomans are willing to pay more than $6 a month, $72 a year, to have their electricity by wind.

Again, this was -- this survey was made in 1990 I believe -- or 2009. By better than three to one margin, Oklahomans favored building larger transmission

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lines for wind power so it become an economic engine for the state and better utilize the wind we have.

MR. FASANO: Can you begin to wrap up, please?

MR. BEAMAN: Thank you.

MR. FASANO: Oh, that's all you had? Thank you.

MR. BEAMAN: Now, I do have these letters of support and Vicki -- where is Vicki? She has some of them and if any of you would like to get a copy, sign it, and put it in the boxes here tonight, we appreciate it.

(Exhibit 1 is marked for the public record.)

MR. FASANO: Thank you, Mr. Beaman. We're going to take a break just for a moment and try to reboot this sound system.

(Off the record at 6:32 p.m. and resuming at 6:36 p.m.)

MR. FASANO: Okay. The next speaker is Mark Loring. Please come on up, Mark.

MR. LORING: Hello, my name is Mark Loring and I drove from Boulder, Colorado, which is an eight-hour drive to get her, specifically to thank Clean Line Energy for doing this project. I started looking into wind energy seven years ago. And Max

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Shilstone from Clean Line Energy was so supportive and helpful and answered all my questions, and I owe a -- well, I owe a whole lot of my knowledge because of Max.

But I'm a landowner in Hooker and my family -- my grandfather homesteaded there and my father and uncle, Emmitt Loring and Ellis Loring, were from Hooker. And that's the -- and so we still have our farm there.

But I wanted -- when I -- seven years ago when I started this, I wanted to educate myself and learn about wind energy so I wouldn't make some of the bad mistakes we made with our natural gas when we signed those leases. Some were good, some were bad. And so I wanted to just inform myself.

I got so involved with this, I wound up putting a wind farm together, a development from Adams to Hooker, north of Hooker and we recently just signed a really good wind farm developer who is -- and we are going to have a wind farm on our properties now. And they pay -- turbines pay very well.

There's going to be a lot of people that is going to make a whole lot of money on this, and it may be my family, it may not be. But I guarantee you, there's a lot of people that are out here that's going to become wealthy.

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And that's what I had found over -- I've gone to conferences in Denver. I flew into Amarillo. I went to Oklahoma City. Some of these conferences were three days long. And the more knowledge I gained finding out about wind, there is no down side. It's -- wind energy is going to take the place of natural gas and oil through the panhandle.

You know, on our land, we don't make -- I'm an absentee farmer. We don't make any money on our property. It's not because I don't have good tenant farmers. I have excellent farmers. But we have drought. We have hailstorms when we have the rains. Money -- the money just isn't there anymore.

So I started researching, trying to find out how I could make money on our property. So our natural gas wells used to produce well. They've dried up. We don't make any money on our natural gas anymore. But I promise you, wind energy is going to make everybody money one way or another.

In the community, it takes -- for instance, Sweetwater, Texas, they have built new schools there from the wind energy. There's a little town outside of Sweetwater, Texas, called Blackwell. They built a brand new football stadium, state of the art. It's a six-man school. It looks like Hooker's stadium,

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which is a really nice stadium now. They built an $11 million addition to their high school in Blackwell. This is the size of town maybe Tyrone.

So all these communities in the Texas County are going to reap the rewards. It's not just the landowners. It's the whole communities will reap rewards from wind development. 1|12

Go on the website. Look up Fort Supply, Woodward, Spearman, Texas. All of those communities have really made millions of dollars, literally, from wind energy.

You know, I also think -- there was something brought up about there was hardly any farmers left in this area, and that's absolutely true. I came back out of college and started farming with my father. And we were having bad drought years. There wasn't enough for both of us, so I wound up leaving and going to Colorado.

Wind farms will help farmers sustain and be able for their sons to come back and farm. There's just no doubt about this in my mind.

MR. FASANO: Can you begin to sum up a little bit?

MR. LORING: I'm sorry?

MR. FASANO: Can you wrap up a little bit?

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MR. LORING: Sure.

MR. FASANO: Thank you.

MR. LORING: Let me sum up here. The other thing, wind energy's costs have come way down in the last couple of years. They're competitive now with natural gas prices. It's -- and as it goes as this moves forward and wind generates, wind energy is going to be much more competitive. It's equal to natural gas right now.

There's a company outside of Boulder called Vestas. It's a billion dollar company. They came into our area. It's one of the largest employers now in the state of Colorado, and they built -- they're building seven megawatt wind turbines now. There was about two or three years ago a 1.5 megawatt wind turbine was the latest, greatest, biggest wind turbine out there. Now they're three and four megawatt. Vestas is building seven megawatt. And in Denmark, they're building a 10 megawatt.

And I'll go ahead and wrap up with I just hope everybody gets -- everybody's going to benefit from this. I promise you. 1|12 cont

MR. FASANO: Thank you, Mr. Loring. Elaine Park?

MS. PARK: I am Elaine Park from Kosep USA.

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We are one of the owners for the coding of a wind farm which is about a 120 megawatt. We have 60 turbines in the Guymon area. And I don't -- I didn't prepare so much as a big speech, but I just wanted to add on what other gentlemen were mentioning.

When I first came to Guymon, I just remember everybody looking at me like what is this foreigner doing here? And, obviously, the news went around the town, and I just remember first time I went to YMCA, everybody were asking: Were you in YMCA today? And, apparently, I was the only Asian girl in the whole town.

But the main point that I wanted to make is that, as you can tell, even foreign companies come to United States for investment and as landowners. The speaker was mentioning earlier that Vestas coming and turbines are being erected. And as more and more people come because of the Clean Line being built, other projects can add up and build more turbines.

And as a wind farm owner in this area, it is a little harder for us to keep -- continuing investing more because of the market price being really low, to be honest. And we are really looking forward for this Clean Line project to go on because if it does go on, there will be more competitors coming to this area

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trying to build turbines and they would pay a lot of taxes, as we do, on this land. And there would be a lot of people coming in and they will be investing more on the land that used to be No-Man's Land.

So we really support this Clean Line project and I hope that everybody else -- I'm sure everybody else in this room supports it as much as wind farm owners around this area. 1|35

And more further questions, I will e-mail. And all I wanted to say is that I want everybody to support this project because this will help the community as a whole. Thank you. 1|35 cont.

MR. FASANO: Thank you. Jeff Bolin?

MR. BOLIN: My name is Jeff Bolin. I'm here representing the International Brotherhood of Electrical Workers, Local 1002. Local 1002 represents approximately 1,000 linemen and other electrical workers throughout the State of Oklahoma and we are in support of this project. 1|35

This project would put -- has a potential to put a lot of our members to work as well as create lots of new apprentice jobs for people throughout the state to help them get started in the trade. Thank you. 2|24

MR. FASANO: Judyth Campbell.

MS. CAMPBELL: I won't take up too much time

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because nobody wants to hear from the assessor. But I just had a few questions because this is a major industry that's going to affect our land values. I do want to know about the estimated loss or increase, if there's an impact study on the ag. land values that it crosses or nearby. 1|13

I want to know what the estimated short and long-term economic impact is going to be. Will the EIS include economic factors in the study? Has there been any research done on the basis for taxation valuation?

Currently, it's being under the five-year tax exemption. And that's fine because it does encourage companies to come into the area; however, that fund -- since the advent of wind power, that fund as taken over half of the fund on wind power. And that fund will be completely depleted, according to calculations, within the next year or two. So we won't be able to provide that incentive anymore. There are federal incentives to complete this, and we do want that incentive to come to our area because any type of energy that does complement the economy and save our water resources and our other natural resources is a good deal for us. 2|24

But we need to look at school districts, especially our rural school districts that are struggling to keep their doors open. We would need to

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know what kind of standardized valuation that this is going to go under. Is it going to go under centrally assessed on the line, which would be assessed through the State at a higher rate -- capitalization rate? Or is this going to be something that will be locally assessed on possibly a production tax? Or is it going to be something that will be done more like the lines of equipment and appreciation and depreciation values? So we need to consider that so that we can protect our rural schools that are needing the valuation. So thank you. 2|24

MR. FASANO: Thank you.

MS. CAMPBELL: And anybody that has those answers, please contact me.

MR. FASANO: Vicki Ayres-Portman?

MS. PORTMAN: Thank you, Greg. As he mentioned, my name's Vicki Ayres-Portman. I am the Director of the Panhandle Regional Economic Development Coalition here in Guymon. I do cover economic development across all three counties of Oklahoma Panhandle as well as Southwest Kansas. So it's been a little over six years ago when Clean Line came to my door and talked about this lofty $2 billion investment that they were hoping to make in a transmission line. As you can imagine, as an economic developer, that got

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me pretty excited.

So as we went along, I learned a lot about Clean Line. They've been probably the most transparent and honest company that I've dealt with as my time as an economic developer. They've had countless meetings across the projected line. I've been involved in numerous of those meetings. They've met with individual landowners, concerns citizens, and helped them with their concerns about the project. In my opinion, they have gone above and beyond what a lot of businesses have done that I've dealt with. So that's greatly appreciated.

You know, one of the things, you know, we talk about here with the farmers and gas and oil and definitely, you know, we have over five billion annually in ag. -- in gross ag. production here out of the panhandle, which is very nice, but if we can help supplement that to our farmers and ranchers and diversify their income so they can hold onto their family farms, I think that's crucial.

This project will finally allow us to take this natural renewable resource that we've always have considered a negative and turn it into a very lucrative positive. 1|12

Nothing, you know, different than what we do

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already with our gas and oil production, you know, it's drilled and produced here and it's shipped off to the market. That's the same thing that this line will do. This is a transmission line that will take the clean energy here in this region and take it to the East Coast grid system where they use high volumes of electricity.

This project will bring millions of dollars annually, as we've already heard. And, definitely, Judyth will -- there's some studies out there. It will bring millions of dollars annually to our landowners and to our counties, to our schools that desperately need it. This is going to be a shot in the arm for all of us. 2|24

One of the things I get really excited about, though, when you talk about this line, you know, it wasn't too along ago, three years ago, all we had -- we had nothing here in the panhandle. Here, we could look across the line in Texas and you could see the turbines over there. And it was frustrating that we didn't have any here in Oklahoma.

And when Novas, DeWind, and Kosep came in and put in the first project, I was fortunate to work with their government and their project and it's been a -- it's been a great deal. But that was kind of the end

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of what could happen here without transmission.

OG&E put in a 345 kV line from Woodward to the Hitchland Exchange. That was completed last year and it's full. The Apex project in Balco, the Goodwell Wind Project in Goodwell, and another project for NextEra have already -- will file that line. So we'll be finished again. So it's really imperative that we have the Clean Line Energy Plains and Easter Clean Line in order to take this out of here.

This will bring six to 800 permanent jobs. This project will be a catalyst to the wind farm development in this region bringing about six to 800 permanent jobs for wind technicians. That doesn't even include the indirect jobs in your retail market, hotels, restaurants, and those kind of services. So we hope that DOE will consider this as a direct impact to our region. 2|24 cont.

If this line is not built, it will be a devastated impact. But if it is built, it will be an awesome, positive impact. Thank you. 3|35

MR. FASANO: Thank you, Vicki. Jason Zan?

MR. ZAN: Good evening. My name's Jason Zan. I work for -- I'm an archeologist at Bison Archeological Consulting Services, and we're out of Oklahoma City.

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Okay. First of all, this is my personal opinion, Oklahoma's been blessed with a lot of natural resources and wind power is one of them. And I believe we should utilize this natural clean Oklahoma resource and export it to the market just like we do with coal and gas and oil. 1|35

Second off, I represent a company -- let me start that again. Clean Line has expressed interest in bringing local firms, local businesses in on this project. The company I represent hopes to become one of those projects. We don't, as of yet, have an agreement with Clean Line, but it's been my experience thus far that they've been very earnest in this interest in the same.

Finally, as a culture resource consultant, my reading of the Draft EIS has been that cultural resource concerns, so archeological sites and historic properties, should be more than adequately addressed during this project. There's a programmatic agreement under development in consultation with the ACHP and State SHPOs, and this should take care of any impact concerns as well as recommendation of new sites. 2|20

SWCA and Pan-American are the two major culture resources firms involved in this project. They both have a reputation for doing solid work and of

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being very professional.

And finally, this type of project, a transmission line, the impacts -- the footprints are pretty small, and so the new cultural resources that are likely to be found, new archeological sites or historic properties that aren't recorded yet, it will be very simple to avoid impacts to those. I know the Cultural Resource Surveys are planning for it. 2|20 cont.

It's my professional opinion at this point based on the Draft EIS that this realm of potential impacts is well-addressed. That's all I have for tonight. Thank you.

MR. FASANO: Thank you. That was the last of the speakers that signed up. Is there anyone else that would like to provide comments or make a statement? We certainly are here to hear those and encourage it. Anyone?

Okay. Then, I would like to say thank you once again for your courtesy, your participation, and your comments. Please remember that you may continue to submit comments on the draft EIS until the comment period closes on March 19th.

This, then, concludes, in a sense, the formal comment period of this meeting. But what we would like to do is actually call a recess in case you do want to

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make comments and change your mind. The court reporter will be here. Staff will also remain to interact with you as much as you care to talk on some of the maps and some of the information.

We're scheduled to be here, you know, until 8:00 I believe. So if you would like to interact more with the folks at Clean Line, DOE, and contractors, please do so.

Again, if you do want to make oral comments, the court reporter's going to be here. Come up to her and let her know and that will record those down. But for now, this is recess. Thank you. And we'll conclude this portion at 6:58 p.m. Thank you.

(At 6:58 p.m. the formal public comments were concluded and the open house was resumed.)

MR. OLINGER: My name's Gary Olinger. I live in Hooker and I've lived around here -- I'm 65 now, and all the years I farmed and everything with my dad and everything. We've got pipelines under our ground. We've got electric lines roaming through. We have big power lines have been put through here. We have no trouble with things like this.

This power line, they shouldn't have any environmental problem at all because all they've got to do is put concrete in the ground, put metal sticking 1|35

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up, and hang the wires on it.

And it's -- you know, out here we don't have hardly any industry and stuff like that. That will help. It will keep places stabilized maybe. You know, I might be able to farm for a few more years if I can get more for my land. 2|24

But it's just a -- and they need to get it done and quit piddling around. And we need to get this done and it will provide a lot of jobs here in the panhandle and everything.

But I've got a son that's 28 and went to the school here. And he's working at the ethanol plant up in Hugoton on that ethanol and all and deals like that. It would be -- you know, he might get a job for one of these deals too. He's a hell of a lot smarter than I am, so he's not farming. But I'm too dumb to do anything else.

And, you know, they've got to get something like this going. We need it. We don't have a whole lot. That's about all I know. If you want them to call me, call me. But that's -- you know, out here anything would help every little bit.

So I don't know. I'm just about to give up on things the way this government's going and keeps giving stuff away. We've got to get a new president.

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He's going to run the country to the ground.

So stuff like this, this clean energy, oil -- we need oil. We need it all is what we need. You know, we can't -- the wind don't blow all the time so we've got to have generation someplace else and we've got water running back up there so send some back.

(The public hearing was adjourned at 8:00 p.m.)

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Certificate

I, LINDSEY GOODENOW, Certified Shorthand Reporter, do hereby certify that the public hearing was taken by me in electronic stenographic shorthand and thereafter transcribed by me. I further certify I am not an employee, attorney, nor relative of any of the said parties or otherwise interested in the event of said public hearing.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this February 2nd, 2015.

Lindsey Goodenow, CSR
CSR No. 1956

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT DRAFT
ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING LOCATED AT THE
BEAVER COUNTY FAIRGROUNDS
IN BEAVER, OKLAHOMA
AT 5:00 P.M. ON WEDNESDAY, JANUARY 28, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lindsey Goodenow, CSR

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OPEN HOUSE COMMENTS

(None)

FORMAL PUBLIC COMMENTS

Speaker	Page
Casey Murdock, Representative	4
Sam Enfield, Map Royalty	4
Brad Raven, County Commissioner	6
Travis Warren	6
Arlene Broadie, Gate, Oklahoma	8

EXHIBITS

(None)

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(On Wednesday, January 28th, 2015, a public hearing open house was commenced at 5:00 p.m. and recessed at 5:53 p.m. for the public presentation. After which, the formal public comments began at 6:28 p.m.)

MR. FASANO: This portion of our meeting is officially designated as the public hearing for the Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on January 28th, 2015, in the Pavilion Building at the Beaver County Fairgrounds in Beaver, Oklahoma. It is being held to receive comments on the Draft EIS.

We are commencing the public comment period of this meeting at 6:28 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. We will try to provide flexibility in the time allotted based on the number of speakers that have registered. However, please be concise.

This meeting was preceded by a presentation by DOE EIS Document Manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

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For the record, my name is Greg Fasano. I have been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

The first speaker is Representative Casey Murdock.

MR. MURDOCK: I yield my time right now.

MR. FASANO: Sam Enfield?

MR. ENFIELD: Thanks. I'll be brief. My name is Sam Enfield. I'm with a firm called Map Royalty. We manage natural gas and wind energy partnerships and we are involved in some development. We developed the Palo Dura project which just went commercial in Ochiltree County, built and owned and being operated by NextEra. So we're very familiar with the area.

I really mainly want to speak to the proposed action. I've started to look at the EIS, looked at some parts of it, and it's a significant document. The

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part I really want to speak to, the proposed action, which is the project itself, everybody in this room knows that the wind energy resource in this area is really quite impressive. This region is benefiting tremendously by having that resource.

Southwestern Public Service or Excel is buying the power from the Palo Dura project and a number of projects. Oklahoma Gas and Electric has wind projects. And this wind reason is really -- this wind resource in these areas really provide important clean and very low cost, surprisingly low cost, energy to this region. 1|35

But the wind resource in the plains -- southern plains and northern plains is really a national treasure. And it is something that the entire nation really can and should take advantage of. But it can only do that with projects like this to take the generation from areas where, like this, where the resource is to the major load centers.

So I just really want to speak to endorse the proposed action. I'm sure this line can be built in an environmentally benign manner. I've been developing wind projects for probably 20 years, and we work through these issues and we do things right. So I think this thing can be done right and it's important

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that it be done right and it's important that it be done. So I just want to speak in support of the proposed action. Thanks very much. 1|35 cont.

MR. FASANO: Okay. Thank you, sir. County Commissioner Brad Raven?

MR. RAVEN: I just want to stand this evening in support of this proposed action. I want to speak a little bit on behalf of what it would do economically for Beaver County and our schools in this area. I look out here and see we have a couple superintendents with us. 1|35

The ad valorem taxes and possible use sales tax and sales tax that this could generate would be huge for our area in Beaver County. We all know that we don't have a lot of manufacturing people coming out here knocking on doors wanting to build in this area. And anything that we can get out here to help do that and do that in a manner that is going to be safe and environmentally safe and benefit our county and our rural way of life, I think we need to do that. And I feel like this will do that. 2|24

MR. FASANO: Okay. Thank you. The last person that actually was on the list is Travis Warren.

MR. WARREN: My name's Travis Warren. Map Royalty kind of stole my thunder a little bit there.

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But a little bit about myself, I run a small land service company. I do right of way work and oil and gas work, but my dominant industry that I work in is renewable power. And the reason I do that is for personal reasons, simply because I think that is the road that we need to start moving towards is focusing more on renewable energy. So with this project in itself, it's going to open up the door for much more of that to happen.

Unfortunately, we could talk all day about these wind projects, but these wind projects are in need of this line. That's why these wind projects are out here is for this project itself. And the way I look at it is, you know, America depends on each other. We've got our logging industry in the northwest. We've got all of our steel and factories in the northeast. We can go on about the farming and the cattle ranching down here. People don't just show up to the grocery store and buy stuff. It doesn't just magically appear. They are things that get brought in from other areas where those resources are dominant.

Here we have an opportunity to take a dominant resource that's going to produce electricity, and it can power places all over the country with these kind of projects. And that in itself I think is 1|35

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something that needs to be leaned upon, but we need the local help.

These projects can't get it done without the land. And, of course, the land is not owned by these companies. These companies need your help to get these projects and ultimately, in my opinion, America needs it done simply because we were moving to that -- to that area where local resources aren't going to cut it. We're going to have to bring in from other parts of the country in order to achieve the goals that we have. That's all. 1|35 cont.

MR. FASANO: Okay. You can't rest at all. Arlene Broadie?

MS. BROADIE: I'm from Gate, Oklahoma. And I want us to stop and consider the health affects of this, what not only it does to our wildlife, but what it's going to do to your children. There's proof out there, there's evidence that being close anywhere near a high transmission area can cause some very serious health issues. And I think that's something we need to really, really look at and get some proof that that's not going to happen or that there's things being done to mitigate that. 1|15

And then my question is, because everything I've read says that even though you do this, 2|36

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three-quarters of the power's lost in the transmission. That's my question: Is it or is it not? That's all. 2|36 cont.

MR. FASANO: That's the number of speakers that have signed up. Is there anybody else that would like to come up and provide some comments for the record?

Okay. Then I would like to say thank you once again for your participation, your courtesy, your comments. Please remember that you may continue to submit comments on the Daft EIS until the comment period closing on March 19th. At this time, I'm going to place the hearing in recess at 6:37 p.m. rather than adjournment in case someone else would like to comment.

Staff is going to remain for your convenience to discuss anything about the project, ask questions and interact more. We're here for you and hope you'll partake of those resources. So we're in recess now.

And again, if you do want to provide comments one-on-one privately with the court reporter, you're able to do that. So just come up and see her and we'll get those things recorded. Thanks.

(At 6:38 p.m. the formal public comments were concluded and the open house was resumed until the public hearing was adjourned at 8:00 p.m.)

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HEARING January 28, 2015
ENVIRONMENTAL IMPACT STATEMENT 10

Certificate

I, LINDSEY GOODENOW, Certified Shorthand Reporter, do hereby certify that the public hearing was taken by me in electronic stenographic shorthand and thereafter transcribed by me. I further certify I am not an employee, attorney, nor relative of any of the said parties or otherwise interested in the event of said public hearing.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this February 3rd, 2015.

Lindsey Goodenow

Lindsey Goodenow, CSR
CSR No. 1956

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT DRAFT
ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING LOCATED AT THE
OCHILTREE COUNTY EXPO CENTER
IN PERRYTON, TEXAS
AT 5:00 P.M. ON THURSDAY, JANUARY 29, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lindsey Goodenow, CSR

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EXHIBITS

(None)

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(On Thursday, January 29th, 2015, a public hearing open house was commenced at 5:00 p.m. and recessed at 5:55 p.m. for the public presentation. After which, the formal public comments began at 6:28 p.m.)

MR. FASANO: Okay. This portion of our meeting is officially designated as the public hearing for the Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement.

This meeting is being held on January 29, 2015, at the Ochiltree County Exposition Center in Perryton, Texas. It's being held to receive comments on the Draft EIS. We are commencing the pubic comment portion of this meeting at 6:34 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. We will provide flexibility in the amount of time allotted based on the number of speakers registered; however, please be on concise.

This meeting was preceded by a presentation by DOE's EIS Document Manger, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

For the record, my name is Greg Fasano. I

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have been asked by DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in DOE's record of these proceedings.

The first speaker David Landis, please.

MR. LANDIS: David Landis, P.O. Box 849, Perryton, Texas 79070, affiliation City of Perryton. I was afraid I would be the first one drawn to speak. I really have nothing to add. I feel a little inadequate with the landowners that we have representing this project tonight. They are the ones that need to be heard.

My perspective comes from an economic development perspective and the diversity that it brings to our community and area and would -- with an energy source that is clean and renewable that continues to expand our diversity. And so I guess I'm just offering a comment of support contingent upon it being met with our custodians of the land, the landowners that are here. Thank you. 1|35

MR. FASANO: Thank you. Sheryl Hardy.

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MS. HARDY: Well, I was hoping for a lot more than three to five minutes. No. Actually, three to five seconds would probably sum up my comments, but I too think the landowners are the people here that need to comment. But my full name is Sheryl Hardy, P.O. Box 849, Perryton, Texas.

And I'm here on behalf of the Perryton Community Development Corporation. And I too look at this as an economic driver. I've had the distinct honor of working in the wind industry and learning a lot about it through the last eight or nine years and met Clean Line Energy people at different and various meetings and trade shows and things like that.

So I've had knowledge of this project for a long, long time and have watched it evolve. And this is amazing what all has been done within the last two years, and I admire all the hard work and thank you very much.

I believe wind is part of our past and I think it's a part of our future as well. And being married to a farmer, you know, we've always looked at wind as a source to help us pump water and do things for our cattle and for our crops and do different things like that. But knowing that Texas now is the top producer of wind and seeing the positive effects, 1|35

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and I'm not discounting any of the negativity that evolves within these type projects, but I have seen a lot of positive and have had a lot of opportunity to see the impact it has on small rural communities where you can directly see what it has done. 1|35 cont.

And here, just recently with the activity within our county, I think any of our retailers or service providers will tell you that they have seen a lot of positive growth. So I guess I too support this project on an economic development aspect. Thank you. 2|24

MR. FASANO: Thank you. Shawn Campbell.

MS. CAMPBELL: Hello. My name is Shawn Campbell and I work for the Perryton Community Development Corporation. The address is P.O. Box 849, Perryton, Texas 79070. And I agree with both what David and Sheryl said and I think the landowners are the primary people in this discussion and in this whole project, but I am in favor of the project. Thank you. 1|35

MR. FASANO: Thank you. Is there anyone else that would like to make formal comments? Please raise your hand, speak up. I'll call on you. There you go. Come on up, please. State your name, address, and affiliation, please.

MR. BRANSGROVE: My name is William Bransgrove and I'm from Hereford, Texas. I live at 134

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Ironwood in Hereford. I'm here representing other family members who have land that this particular project would cross. And I'm more concerned more than anything else about what kind of compensation we're going to get for the detriments to the use of this land compared to what it might be, because whatever they're going to build is going to be there for the next 100 years, and that needs -- compensation needs to be calculated in come form or fashion that's equitable for that length of time. And I thank you for that opportunity to speak. 1|6

MR. FASANO: Thank you. Is there anyone else that would like to provide comments?

Okay. Then thank you once again for your courtesy and your participation and your comments. Please remember that you may continue to submit comments on the Draft EIS until the comment period closes on March 19th.

At this time, I am going to his place the hearing in recess at 6:40 p.m. rather than adjournment in case someone else would like to comment. If you would like to comment, the court reporter's going to be here. Just see her one-on-one and she can record your comments. It's not a problem that way either. So in recess rather than adjournment, and please stay and

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talk to the staff members some more. We're scheduled to be here until 8 p.m., actually, so take advantage of that and thank you again.

(At 6:39 p.m. the formal public comments were concluded and the open house was resumed.)

MS. HARDY: I wanted to address the housing issue because it was said that a rural setting, that would be a negative aspect to provide housing for the growth in the development construction phase of these projects.

We spent, oh, probably about the last three to four years working on housing aspects for this community because we were met with everything in the other rural communities. So we've been extremely aggressive and we found a way that we can tie that back directly to primary job creation. And with this being a 4A economic development organization, we had to tie that back legally, which we did improve.

Since that time, we've invested a large sum of funds to that, and I have the exact figures in my office as far as the number of homes and investment within our community and what is on the tax rolls and also what has happened to the commercial end of that.

In addition to building potentially 25 new houses and a 64-unit apartment complex, we are now in

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the process of working on an affordable housing apartment complex as well. So we've seen tremendous growth and also working with motels because that was being utilized as a housing mechanism. We have two new hotels that are going in right now along with our other hotels. So we've invested a lot and will continue to invest in that.

We have another housing development that we're working on presently. It's been in engineering for six months, and once that comes out, it will provide additional lots that we will subordinate to builders, beginning with local builders and then open it up outside. So plans are a lot of housing that we did haven't, and hopefully it will build a nice base for the future of your community. That's about it.

(The public hearing was adjourned at 8:00 p.m.)

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Certificate

I, LINDSEY GOODENOW, Certified Shorthand Reporter, do hereby certify that the public hearing was taken by me in electronic stenographic shorthand and thereafter transcribed by me. I further certify I am not an employee, attorney, nor relative of any of the said parties or otherwise interested in the event of said public hearing.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this February 4th, 2015.

Lindsey Goodenow, CSR
CSR No. 1956

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT DRAFT
ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING LOCATED AT THE
MUSKOGEE CIVIC CENTER
IN MUSKOGEE, OKLAHOMA
AT 5:00 P.M. ON MONDAY, FEBRUARY 2, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lindsey Goodenow, CSR

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(On Monday, February 2nd, 2015, a public hearing open house was commenced at 5:00 p.m. and recessed at 5:49 p.m. for the public presentation. After which, the formal public comments began at 6:25 p.m.)

MR. FASANO: This portion of our meeting is officially designated as a public hearing for the Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement.

This meeting is being held on February 2nd, 2015, at the Muskogee Civic Center in Muskogee, Oklahoma. Is it being held to receive comments on the Draft EIS. Were are commencing the public comment portion of this meeting at 6:26 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have approximately three minutes. We will try to provide flexibility in the amount of time allotted based on the number of speakers that are registered. However, please be concise.

This meeting was preceded by a presentation by DOE's EIS Document Manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interruptive dialogue so that an uninterrupted record of comments may be obtained.

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For the record, my name is Greg Fasano. I've been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

The court reporter's task is create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

The first speaker will be Angel Soriano followed by Destry Dobbs.

MR. SORIANO: Thank you. I appreciate you being here today. I appreciate you hearing me out. This is going to be quick on my part actually, in that, we're proponents of the project for a couple of different reasons. First of all, my name is Angel Soriano, the name of the company is K9 University.

Again, my name is Angel Soriano. The name of the company is K9 University. We're located in Oklahoma City. We employ approximately 23, 24 people depending on attrition. The reason I'm here today is because of the fact that we support the energy industry with highly trained dogs that are trained to find endangered species, presently the American bearing needle. We're also working on the prairie chicken, et

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cetera.

So our interest, of course, is obvious in that this possibly, if it goes through and the industry needs our services, we're probably talking about anywhere between 12 to 15 new jobs from us alone that would be hired from the local towns that support it. These are high-paying jobs. It will probably bring back, in our part itself alone probably about a million dollars a year or so back into that particular center. 1|35

So that's my input. My input is a little bit selfish; however, it is an industry that it will most likely help the local economy as well as the Oklahoma economy. We're an Oklahoma company. We're not outside of here, and we employ Oklahomans. That's our vested interest.

So I ask and encourage DOE to approve the Plains and Eastern Clean Line project based on those comments. Thank you.

MR. FASANO: This is Destry Dobbs followed by Allen Barrett.

MR. DOBBS: Referring to a statement of the Draft EIS proposed route in Sequoyah County, Township 12 North, Range 23 East, detailed in Daft EIS Volume 3, Appendix A, Chapter 1, Figure 1.0-2, Region 4 Aerial Map. We would like to propose an adjustment to the 1|11

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route of the transmission line which we would considerably lower the negative environmental impacts of the project in this region. The map shows the currently identified route marked in black and the reroute suggested by Dr. Wyatt Dobbs and the landowners in the area indicated in orange.

There are several factors that make the proposed route a better solution for the transmission line. It will minimize the potential environmental impacts including the following: First, our purposed route is -- our purposed reroute is shorter. It will shave distance off the transmission line and make for a significantly more straightforward route. For the vast majority, approximately 85 percent, of the reroute, it would parallel an existing Southwestern Power Administration transmission line. 1|11 cont.

Second, the current route cuts through a much more densely populated area. The present route crosses 14 properties and 16 residences are located in close proximity the transmission lines. The proposed reroute is almost completely uninhabited. In fact, there is a six-mile expanse with only one residential structure affected by the route.

Third, the current route traverses the main area of Lazy D. Bar Ranch's commercial operations. The

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line will have a serious detrimental effect on the ranch's agri-tourism operation passing directly over Lazy D Bar commercial cabin and resort area.

Fourth, if built on the current route, the transmission line would greatly interfere with the private air strip indicated in the map in blue. The close proximity of the transmission line would pose a safety hazard to pilots flying into the air strip. It would also force the complete abandonment of our emergency landing strip to the south, also indicated on the map, as takeoff and landing would be rendered impossible. 1|11 cont.

Finally, the current route would damage the lease hunting operation for 1,920 acres of Deer Management Assistance Program lands which have been managed under the Oklahoma Department of Wildlife Conservation for over 20 years.

Along with this proposal, we are submitting comments and maps from area property owners who support the reroute. Thank you.

(Exhibit 1 is marked for identification.)

MR. PUBLIC: Allen Barrett and Bill Poindexter.

MR. BARRETT: Allen Barrett, Preston, Oklahoma, Area 35, Township 14-N, Range 12-E, Section 7

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just west of Highway 75. We own nine and three-quarter acres there on a hillside. There's a creek on the 200-yard easement you guys are wanting on the alternate route that is a major thoroughfare for wildlife habitat running east/west. There's two residential areas on the 1,000-foot corridor and a 70-year-old pond in that area also. I would like for you guys to at least acknowledge and have a look at that area on the alternate route. Thank you.

MR. FASANO: Thank you. Bill Poindexter and Charles Pope.

MR. POINDEXTER: I'm Bill Poindexter from Sallisaw, Oklahoma, Section, I think, 39. I'm not positive. My wife and I bought a house and five acres a year ago. We were unaware of any proposed line, and this line's going to go just north of my place. We've got two children. We don't want them anywhere near a major power line. And we are strongly opposed to this line. 1|34

MR. FASANO: Thank you. Charles Pope and then Carol Mitchell.

MR. POPE: Thank you. I just want to say a few words. I live in Okmulgee, Oklahoma. My address is 21801 Herrick Road. And we -- right now, we have a power line running within probably 250 to 300 feet away

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from my home, probably 60 feet away from two barns that I have and it crosses 160 acres. We have wooded area which we use for turkey, deer hunting.

And we also have grandchildren that come out and we -- I was just going to say that I just heard a part -- about a day or so ago about that there may -- these power lines may have something to do with autism in young children. And I just want to mention that with us living that close to the power lines. 1|15

And also do want to just say that we've -- where my house sits, which is along a private -- not a private road, but a county road. We do not have that much more room to move a barn or build another barn. And we would just like to have you to think about that, that there are places that -- just south of the house across the road, a nice open clearing, and I'm sure the landowner probably would not mind for you to run a line across his place. That's just a few things I would like to say. Thank you very much. 1|11

MR. FASANO: Okay. Carol Mitchell and Jeri Koehler.

MS. MITCHELL: My name is Carol Mitchell and I live in Sequoyah County. I'm a little emotional. I live in Sequoyah County and directly under this power line. We have had this family farm for 70-plus years.

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My family was moved out of the Barling area where Camp Chaffee was built which was taken by eminent domain as forest farmland fair market value. From everything I understood, that wasn't really happening.

This is property I've lived on all my life mostly and will pass on to my children and grandchildren. We have lots of wooded area. We have deer and turkey and lots of squirrels.

And anyway, that's just part of my getting around to say that I really oppose this because of the tactics that Clean Line has used. We have -- I heard -- the first I heard about this was in the summer last year. There were no mentions anywhere that I saw, and I read two newspapers. And I had a phone call from a fellow from Clean Line who told me that he wanted to come out and see where the structures were and the area because they were looking at three different lines at that time. 1|34

And so he came to my house. I met him up at the top of my driveway because I thought we were going to look at places. Well, he didn't really know where any places were on the map that he had he said. And he kept wanting me to sign a piece of paper. And I said "I'm sorry. I don't know anything about this. I need to know a little bit more before I sign anything."

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And so he kept pushing and pushing and he even told me that all my neighbors had already signed this and that I would be the only one who hadn't. And I had spoken to the neighbor across the road, Steve, and he had not signed anything for sure.

And so anyway, that exchange went on for a little while and he kept pushing and I said -- I just said, "You know, I really don't like being strong-armed."

And he got in my face and he said, "Let me tell you, lady, what strong-armed is. It's taking your property and doing it anyway."

I can't condone those kind of practices. I just totally oppose. I just don't think it's right that they should be able because they're a big company and private industry wanting to make money and not caring about anything else.

MR. FASANO: Excuse me. Can you begin to wrap up, please?

MS. MITCHELL: Yes. I'm pretty much through. I just -- I don't believe that that should be something that is allowed anyway. Thank you.

MR. FASANO: Okay. Jeri Koehler and Delmer Quimby, please.

MR. KOEHLER: Good evening. I'm Jeri

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Koehler. I'm from Claremore, Oklahoma. I'm the Executive Director of the Claremore Industrial and Economic Development Authority, also known as CIEDA. CIEDA's a public trust authority established to stimulate economic growth and the development for the City of Claremore. We do this with the focus of the creation of primary jobs, and our efforts are two-fold: We expend the economic base by seeking a diversification of employment opportunities; and we also assist our resident industry to maintain or expand our employment opportunities.

Claremore has a population of approximately 20,000 people. We have a strong educational system complete with a six-year university, a regional career tech center, and an award-winning public school system. We also have a strong industrial base with approximately 4,000 jobs in our industrial park.

If you were to stand at the edge of Claremore on any given day, you would notice a variety of products leaving our community on semi-trucks which you know means money coming into our community for our residents. On any given day, you'd see the massive air coolers from ASH, you'd see the cable system from Baker Hughes, or the pumps from National Oilwell Varco.

But there's one more item everyone in

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Claremore's very familiar with, and that's the poles that Pelco Structural exports daily. These poles service the traffic control, utility, lighting, and communication industries. This is important because it provides quality primary jobs to our citizens for industries not reliant on the cyclical nature of oil and gas.

The Clean Line project would have a significant impact on jobs in Claremore. It would mean Pelco Structural could add an additional 100 to 150 jobs, perhaps doubling its current employment. It's sometimes difficult to measure opportunity costs, but in this case, it's simple. The project would mean over $300 million for commerce to Claremore.

I stand here tonight on the heels of another round of layoffs in our community from the recent plunge in oil prices. Last week was painful for many Claremore families and the cycle is by no means finished.

I urge you to consider the impact from this project from an economic development perspective, which in short means jobs in Claremore and in Oklahoma.

MR. FASANO: Thank you. Delmer Quimby and Whitney Pearson.

MR. QUIMBY: I'm Delmer Quimby. I'm totally

1|24

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opposed to this. I feel Tennessee has more hydraulic electro-power possibility than any state I've ever been it. They need to use it.

Also I want this company, Clean Line, they're going to profit a lot off of that line if it goes through. And who's paying DOE? Is Clean Line paying any of it? The expenses we incur with DOE? I guess I don't get an answer on that. Taxpayers.

I was over northeast of Enid in a little town named Garber and they were having a meeting in a little, old -- some farmers were and a little cafe, gasoline station there at the meeting deal. And some wind energy company had built some mills, hadn't paid the contractor, the contractors have liens on their property. Are we protected by that? They thought they were. So just I'm opposed to it. That's all there is to it. 1|34

MR. FASANO: Whitney Pearson and Jacob Daniel.

MS. PEARSON: My name is Whitney Pearson and I'm here today representing the Sierra Club. The Sierra Club supports the proposed Plains and Eastern Clean Line project which will provide a critical transmission link between a region of the country with tremendous untapped wind energy potential and a region 1|35

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with significant load but fewer renewable resources. Sierra Club will submit more detailed comments in written form before the end of the comment period. 1|35 cont.

We appreciate Clean Line's efforts to engage and educate us and other groups and state agencies about this project. The Clean Line project will able communities and states across the southeast to embrace low-cost renewable energy and shift away from the aging, dirty coal power plants that pollute our communities today. Not only will this allow for reduced use of fossil fuel generation from receiving states, but it will also allow for more wind development in Oklahoma with the intended economic benefits. 1|35 cont.

Oklahoma has some of the best wind resources in the nation which are extremely cost effective to develop, especially when combined with the fact that there's already a trained local workforce.

Sierra Club strongly encourages development of homegrown renewable resources in all of the southeast region but recognizes the urgency of maximizing the excellent resources of Oklahoma in the immediate term.

The benefits of stimulating the development of renewable energy go far beyond the cut and dry

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figures about avoiding greenhouse gas issues. The tangible impacts of climate disruption include increased severe weather events, increased smog formation, and intensified drought, the climatic change that many areas of the nation are already experiencing. Many of the ecosystems and wildlife in the area affected by Clean Line are already stressed by drought. And the benefits of renewable energy spurred by Clean Line will alleviate those conditions, and alleviating those conditions should not be ignored.

The additional wind capacity developed because of this project would generate jobs, local tax revenues, and royalty payments for landowners as we have heard. 2|24

The Sierra Club has heard concerns raised by communities about how the construction of this transmission line will affect their enjoyment of the natural environment in their region and disrupt their livelihoods. We believe that Clean Line partners should take these concerns seriously and work with landowners and others to identify an acceptable route that minimizes the impacts as much as possible. 3|8

Wind power is capable of meeting more than 30 times the state's current electrical needs. We believe that Oklahoma utilities still have enormous potential

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to utilize more wind in their portfolios and the Plains and Eastern Clean Line project will not prohibit them from doing so. Oklahoma's wind resources can go beyond just Oklahoma to serve population centers outside of our state, and doing so will result in economic benefits locally and environmental benefits more broadly. 2|24 cont.

MR. FASANO: Please wrap up in the next minute.

MS. PEARSON: Projects like this will make a clean energy economy a reality in every state. We urge Clean Line developers to work with all community stakeholders to ensure the best, most environmentally responsible route possible. And we look forward to continued conversations to make this project even better. Thanks. 3|8 cont.

MR. FASANO: Thank you. Jacob Daniel followed by Garland Farris.

MR. DANIEL: Hello. My name is Jacob Daniel. I'm a college student from Claremore, Oklahoma, and I am coming here in proponency of this project. First, I believe it's important to harness wind -- Oklahoma's potential for wind energy. We already maximized our oil and natural gas production, and I think it would be silly not to make meaningful use of our wind potential. 1|35 2|12

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Second, I would like to stress the economic impact of this project. I know that my family and other families in the Claremore area and other areas in Oklahoma would greatly appreciate the jobs it would generate -- this project would generate and as well as the tax revenue from people spending in our local community and putting more money into our communities for our schools and other public works projects. So with that, thank you. 3|24

MR. FASANO: Thank you. Garland Farris followed by Darryl Phillips.

MR. FARRIS: Good evening. I'm Garland Farris, property owner in Sequoyah County, a quarter mile north of Sallisaw, Area Section 21. I'm a member of the Cherokee Nation and a veteran. And I opposed Clean Line proposal. 1|34

Over 100 years ago, my grandmother and my great-grandmother were allotted near Cherokee land that lay along the proposed Clean Line transmission lines. My father was able to purchase this land back 54 years ago. This was his ancestral land. He spent the rest of his life to improve the land and then raise cattle to support a family.

After serving my nation, I returned home to help my father maintain the land and to keep up his

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high standards. With luck and hard work, my wife and I were able to improve the land and increase the land holdings.

As the current transmission route is shown, there will be three or four of these massively tall towers going across this property the full length of my ancestral land which will not improve the value at all. 2|6

The construction of the line goes further than running over my ancestral lands, but also desecrates the land that are sacred to the Cherokee. Our property has two historic routes that border and cross it. To the south lays Old Military Road. It's a 19th Century military supply road that was the main route from Old Fort Smith to the frontier of Fort Gibson. From the Cherokee Nation, Fort Gibson is just located a few miles east of Muskogee. A few hundred miles north of Old Military Road is a trail that the Cherokee hold sacred and has been marked on the east/west a mile away on the Trail of Tears. The proposed Clean Line route puts towers directly on top of this sacred trail and as it crosses the full length of my property. This would be the equivalent of a power line being built along the Lexington Concord Road in Massachusetts which was historic and important in founding our nation. 3|20

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And those of you who are not familiar, the Cherokee Nation was removed from their ancestral land in Georgia and North Carolina by the U.S. government and forced on the Trail of Tears to Indian Nation which is now Oklahoma. That was the case of early eminent domain by the federal government to take Cherokee land and give it to private individuals. There were no gains by the Cherokees, just death and sorrow, a sorrow that we have lived with over 200 years.

It would appear that Clean Line Energy wants to get the Department of Energy involved in this project so eminent domain could be used to take our land. If this happened, it is a repeat of history where the federal government partners, in this case with a private corporation, to take important lands that are Cherokee and their history. Thank you. 4|4

MR. FASANO: Thank you. Darryl Phillips and Patsy and/or Terry Thomason?

MR. PHILLIPS: Good evening. My name's Darryl Phillips. I live in suburban Sallisaw, Sequoyah County. I rise this evening to support progress. If Clean Line is part of progress, I support this project. 1|35

You know, all through the history of the country, we've had progress. Sometimes good, sometimes not so good. One of the main ones was the railroad.

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As we moved the railroad west, it went across people's property. It went across a lot of property. The people didn't want that steaming, smoking, noisy, scares my horses-type machine, but we put the railroad in. And it served us well and we built the west. We built Oklahoma which we wouldn't have done nearly the same if he hadn't had the railroad.

Later on, we put in the interstate and the exact same thing happened. People objected. Don't put it in my backyard. It's going to cut my ranch in half. It's going to cut off a big part of my farm or I'm going to have to move my house. But we put in the interstate. And now strawberries can be grown in California in eaten two days later on the east coast. We couldn't do that before. And along the way, we had industries like the trucking industry that we couldn't foresee coming. It became a big thing because of the interstate.

Then we had one that went the other way, the high-speed trains that all over Europe you can get on a train and go from city center to city center. Very nice. Very convenient. Very fuel efficient, quiet. We don't have any high-speed trains in this country. Why? Because of the landowners. Yes. We want the train, but we don't want it in my house, we don't want

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it to go through my field, we don't want it to go past my scenic place. And the landowners have managed to stop the United States from having any high-speed trains. The highest speed train on the East Coast goes through a tunnel that was dug in the Civil War.

MR. FASANO: Excuse me. One-minute wrap-up, please.

MR. PHILLIPS: I believe that we need the energy. I believe when we have something exported out of Oklahoma, the money flows back to Oklahoma. Not all of it, of course, but we have something for sale that goes out, we have money that comes back. I won't take anymore time just thank you for recognizing my comments.

2|24

MR. FASANO: Thank you. Patsy Thomason followed by Marty Edwards.

MS. THOMASON: I'm Patsy Thomason from Sallisaw, Oklahoma. And I just want to give you a little more background. My father-in-law bought our 90 acres in 1963 and my husband was seven and his brother was 13, and the four of them, my mother-in-law, father-in-law, and those two kids, built the house that is on our property right now. Five of -- I mean, four of the five grandchildren have lived in the house. My father-in-law passed away and he gave the land to my

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husband and his brother.

Now, the house is not -- the Clean Line does not come onto our property, but it will hang over the farm house. So my son lives there now. And you can see that our land is cherished by our family and it's loved by our family. Now, I want to look at you guys that are in favor of this, do you want -- I'm very passionate about this. Do you want this in your -- would you want this in your back door, your front door?

[redacted] Had we known five years ago, we could have put her trailer just a little bit further away from this proposed line. Now I'm concerned for her health.

Can you guys give my 100 percent assurance?

1|15

[redacted] I want it -- if you all come through here, I want it in writing 100 percent that it's not going to affect my daughter. [redacted]

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[redacted] So I am so passionate about this, you guys.

And now my son will live right under the power line, the 200-foot power line. Will it affect his daily normal life? I mean, the TV, the cell phone, the Internet? You know, will his daily life be interrupted? 2|8

We love our land. We love the peace and tranquility of our land, the sound of the crickets, the katydids, and the frogs. Tin Cup Creek runs right down below my house on a bluff and I love it out there. And I don't want to hear humming, cracking, and all this noise and everything from this line that's not going to do Oklahoma much good. Thank you. 3|34

MR. FASANO: Thank you. Is Terry Thomason going to make a comment?

MS. THOMASON: No. He was just -- 37 years together, he was just going to go up there with me.

MR. FASANO: Okay. Marty Edwards and Daron Harrison.

MR. EDWARDS: I appreciate the opportunity to introduce myself and to state my support for this project. My name is Marty Edwards. I'm one of the 1|35

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owners of Whitehawk Engineering at Whitehawk Foundation Systems located in Moore, Oklahoma. Whitehawk Engineering provides structural and civil engineering and survey services. Whitehawk Foundation Systems provides all steel foundation solutions that is especially suited to remote regions where concrete is difficult to transport.

I'm proud to say that I was born in Oklahoma. I've lived in Oklahoma all my life. I'm a member of the Choctaw Nation of Oklahoma. I'm very aware that one of our abundant natural resources in Oklahoma is wind.

Supply and demand is one of the foundational elements of our economic system. We have an abundant supply of wind in the Oklahoma Panhandle, but it must get connected to the high density population centers where the demand occurs. You know, in order to fully reap the economic benefit, this connection must happen. And that, in a nutshell, is what the project is all about. 2|24

The reasons that I support the project is that America has an insatiable demand for energy and it grows every day. And this project, I see, as a component in meeting that demand with a clean and renewable power. 1|35 cont.

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As Oklahomans, we're all very aware of the economic benefit we derive from exporting oil and gas and I see this wind energy as just another abundant resource that we can export to the community and the public's benefit. The dollars derived from this perspective venture will recycle over and over again in our economy. Good paying jobs will benefit the communities that these workers live in and that they transport themselves to. The building of this very unique infrastructure will support numerous construction and manufacturing jobs in Oklahoma. The workers employed by the project will spend dollars in local restaurants. They'll spend dollars in local stores. They're spend dollars in living accommodation. 2|24 cont.

The way I see it is that our local communities will benefit from the tax dollars that will flow in from the project. For all of those communities that are along the transmission line, there will be an ongoing revenue source that will be generated. As long as the wind blows and as long as the demand for electricity exists, I see this going on.

MR. FASANO: One-minute wrap-up, please.

MR. EDWARDS: I have a three-year-old grandson. I've got a granddaughter scheduled to arrive in April. I see these types of improvements --

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community improvements as beneficial to them and to their grandchildren. It will occur for a long time to come.

I appreciate this process. I appreciate the opportunity for the public to come and make comment. And I appreciate the extensive review process that is involved in this. And so I commend all those that are here tonight and all of those that are involved in the project -- the potential project for their dedication to thoroughly examine the impact of this process and this project. Thank you very much. 3|2A

MR. FASANO: Thank you. Remember, if you have written information that you didn't get through, please submit it and we'll get it in the record. Daron Harrison and Steve MacDonald.

MR. HARRISON: Thank you. My name is Daron Harrison. I live on 104668 South 46 50 Road. I am a property owner that this is impacting. I live in Sequoyah County on 100 acres just north of Sallisaw on my land that my parents deeded to me and my brother. And it was deeded to us with no stipulations or no conditions. Our intent is to pass this property down to our children without any stipulations or without any conditions.

What Clean Line is doing with this

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transmission line makes my property worthless to anybody except Clean Line. This property is sacred to me. Clean Line has no right to take what is not theirs. How does this happen? One day we're enjoying what my parents struggled to provide for us, and the next day somebody from the company in Houston, Texas, tells me that they will be needing my land so this -- so they can place these C-transmission towers on my property. And for what? These towers they propose to construct on my property and many of my friends' will only take electricity to the people in Tennessee for the profit of private investors. This project has no benefits to us. 1|6 2|8

I don't want their money. It's not a money deal with me. My property's not for sale to Clean Line or to anyone else. And I am not for eminent domain for private gain in any way. We're at a turning point now. Does a private company get to join our government and take one's livelihood, one's means of making a living? Does a private company get to join our government to profit privately for companies? If this is allowed to continue, who's to say what other private companies will join the government to take more property? 3|4

We wouldn't be here today accept years ago, one of Clean Line's founders worked in the Department

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of Energy and crafted Section 1222 of the 2005 Energy Policy Act, which without that, they would not have success in their efforts. Clean Line knows they would never be able to get this project across us in Oklahoma and Arkansas without the power given to them under Section 1222, eminent domain. 3|4 cont.

I urge you to please not to partner with Clean Line. It will destroy our lives in Oklahoma for the profit of a few people in Houston, Texas. There are alternatives that are available to supply the TVA with energy without coming through your backyards. Thank you. 4|34

MR. FASANO: Thank you. Steven MacDonald followed by Tommy Lewis.

MR. MACDONALD: My name's Steve MacDonald. I live in Sequoyah County also. Before I read from my script, I just want to say to Mr. Phillips, Interstate 40 -- comparing what Clean Line wants to do to Interstate 40 is not at all what the comparison is. Clean Line wants to build a toll road. There's no entrance ramps. There's no exit ramps. That's coming from Guymon, Oklahoma, all the way through to Tennessee. We're not going to benefit at all by it.

As I said, I live in Sequoyah County on 40 acres of property my grandmother back in the 50's

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bought saving her money from Social Security. She acquired over 300 acres and gave me 40 to put my house on in 1985. I'm married. I have four kids, five grandchildren. I'm a Vietnam Veteran. I worked all my life and retired in 2007.

This proposed project will split my property in half. I've got 40 acres that comes right down the middle. The Department of Energy and Clean Line would take thousands of dollars of my home's equity. My home would never be worth the value it is now and I doubt if anyone would buy my property with a tower, which I'm going to have one guaranteed because I've got 40 acres because it's going to dissect it in half.

Before you make your decision on this project, I would like for the DOE to send a representative to Sequoyah County. Meet with our real estate agents, our county commissioners, and our landowners. And ask our landowners, ask them is there a price you will accept for your property? See if they'll get permission. Ask them if they will get permission and take the payment structure that they are offering which is fair market value two to $3,000 an acre. There's a structure for the towers. You might make some money.

But Clean Line thinks this offering is fair

1|6

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market value for our property is that, and that's all they have to do is offer market value. How about if I come on your house and see a place on your hill that I want to come and build a house on and tell you I'll offer you fair market value for your property? Would you give that property to me? This is what they're asking us to do. They're going to ask us to give the fair market value for our property.

Then the next question becomes what percentage of private property is the DOE, Clean Line, willing to take in Sequoyah County, State of Oklahoma, Arkansas, and Tennessee using that same power of eminent domain given under Section 1222? If this project is so good for Oklahoma, let's let us in Oklahoma vote on it.

2|4

3|36

MR. FASANO: One minute, please.

MR. MACDONALD: I challenge you here today to ask in the audience to raise your hand if you'll tell Clean Line: No, thanks. I'll keep my property. No eminent domain for private gain. Thank you for letting me speak tonight.

MR. FASANO: Thank you. Tommy Lewis followed by Theresa Reutlinger.

MR. LEWIS: My name is Tommy Lewis. I live in Sequoyah County. And at Vietnam we served our

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country. You serve the country, you come back home, and somebody's trying to take your land. Is that right? 1|6

COMMUNITY MEMBER: No.

MR. LEWIS: That's right. They're not thinking about anything but the money situation. They're not thinking about the wildlife. You think about the flowers makes beauty. You dig that flower across there. You set somewhere else, often it won't grow. If it's set back, it's going to be years before that takes over. The trees helps your air. Right? And I know old people know, they should know, that all of our wildlife, bugs and stuff, is moving north. I don't know if you know that, but I seen that for my own eyes. 2|31

I own land there by the line. I've got property leased. I've got property leased to hunt on with my kids. This line's coming right by. When you disturb an animal, a bug, or anything, it will not come back to that area. It's got a certain area it will graze in. 2|31 cont.

And like I say, I hate for people to come through trying to take your land that was gave to you or bought. That's more that's like communist to me than anything. Every individual ought to have a right

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to own their land, take care of the land like you want to. Not somebody coming in, trying to push you to settle what they think the value is. Your kids coming along, they've got to have some place to live or to -- they may sell it, but that's their situation. But now when they come along and do this, they're not going -- don't won't to be there. And it's devaluating the land.

And like I say, when they start digging those holes for those piers, which they had over this, they say out where the earthquakes are starting. When you dig up that ground, what's going to happen? Clean Line don't care. They want to come and set it in there. They come to my place, we still got water wells there. And possibly, you say that's dynamite and so forth. They my hit a vein. Veins of water's like oil, gas. It runs underground. It pools like a spring. If they hit that, maybe not, but then how deep you going to go?

MR. FASANO: One-minute wrap-up, please?

MR. LEWIS: And so I appreciate speaking to the audience. In my life, I oppose it very, very much. 3|34 And I'm proud to serve the country for you.

MR. FASANO: Thank you, sir. Theresa Reutlinger followed by Ardyce Elizabeth Briggs.

MS. REUTLINGER: Theresa Reutlinger, I live

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at 2500 Shelby Court here in Muskogee. I kind of agree with the gentleman that spoke a couple people ago. I think maybe Oklahomans need to vote on this, not just let somebody come in and start taking people's land. 1|36

You also made mention about the wind power going to be growing and stuff like that. There's also talk at the capital that they're going to stop the tax incentives for wind power, so it might not be growing as quickly as you think. 2|11

I also read -- and I can't remember how many years ago, I do believe it was in a veterinary journal or something along that line. There's people -- I know there's a lot of cattle people here in Oklahoma and into Texas. There was some people who had some cattle and were losing weight. They couldn't figure out why. They did have some high-powered metal electric lines like you're talking about putting in. And they finally decided that what the problem was and why the cattle were not eating and were so tenderfooted is the water source. Somehow when the cows went to drink water, they were getting little shocks through their hooves and the rest of their body.

I would like somebody to check on that and see for those people who might be having cattle and you're trying to put these lines through their property 3|15

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to see about this. I don't know if there's any veterinarians in the audience that maybe read this thing also. I can't remember what article it was or, you know, magazine or whatever. My husband's a veterinarian, so I'm sure it was one of the professional magazines. But that is a good possibility that you might be not only taking people's land but also affecting their livelihood for their cattle. 3|15 cont.

MR. FASANO: Ardyce Elizabeth Briggs and Genia Means.

MS. BRIGGS: First, I'm kind of crippled. I've had a knee replacement about six months ago. So but anyway, I'm getting along fine. But I don't like to have to be bothered with highway right-of-ways, water lines, telephone lines, and you name it, and electric lines. And I've got three or are going to have three. Okay.

First thing I want to know about is right here I have a Kodak picture that says, "United States Department of Energy Southwestern Power Administration Partners in Powers." Partners in power. Southwestern Power and Department of Energy. Okay.

Now, what I want to say is that I want to read to you about the lines and the kilovolts. In November of '64, OG&E came through me with 345

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kilovolts or 345,000 volts. In November of 2010, OG&E came through me or by right in my front yard 345 kilowatt -- kilovolts or 345,000 volts. In October 2012, this Clean Line, or whatever you want to call it, to be built -- I got all this information and I have also attended all the meetings. They're coming through with 600 kilovolts or 600,000 volts. And this voltage on me totals 1,280 kilovolts or 1,280,000 volts. And that's all I have to say. Thank you. 1|15

(Exhibit 2 is marked for identification.)

MR. FASANO: She's feisty. Don't let her get mad at me.

MS. MEANS: My name is Genia Means and I'm a Cherokee landowner in Sequoyah County and I'm speaking for myself and my dad -- elderly dad and my elderly neighbor that this proposed line is going to go right over the top of their homes. And they haven't decided if they're going to take Fonda's house or my dad's house.

Dad has 11 acres and he'll lose four, up to five acres. And then he will lose his home, his barn, his chicken coops, and his storage building. And then he'll be left to rebuild or more or what. And he's elderly. And the same with my neighbor, Fonda. 1|8

As a Cherokee Native American -- as a

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Cherokee native, we're a sovereign nation. Why are we allowing someone that's going to come into Oklahoma and not even pay us for our land? You're talking, oh, yeah, it's going to bring millions in? What about the billions of dollars that property owners are going to have? My home with my two-and-a-half acres, I'm on the edge of the green line, and I won't get anything but the noise and the ugliness and the voltage and the illness, if any. Because according to my paper that I oppose, health impacts have not been fully investigated, and so many of these research things that they've been told that they've given us, they have not. 1|8 cont. 2|15

I oppose the fact that Clean Line scoping has been flawed because not anyone has been notified properly. They sent out to me a property description with my deceased sister's name on it using my last name and my name and omitted my sister and my dad's name. So they don't even know whose property they're going on or where it's at. 3|2C

I oppose this mostly because I live at South 4640 Road and I have a water reservoir behind my home and it has eagles nesting and it's a duck -- and it's ducks flying in. But we're going to lose our eagles and we're going to lose our ducks. And we'll lose decades of old oak and hickory trees are going to be 4|31

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cut down and it will eliminate habitat for our animal species. 4|31 cont.

I lose -- I oppose this because of the loss of control of our land development. And once you're inside that thousand-foot green space, you can't build a fence, you can't do anything to maintain your buildings, and you lose your home. 5|6

And I also oppose this because invasion of privacy when access to the easement is granted 24 hours a day. You're going to have strangers coming on your property. You don't know their history. You don't know their criminal background, what kind of sex offender you have coming around your young children. There's just -- it's gone.

Oklahoma isn't energy independent and not one watt of -- not one watt of energy is going to benefit anyone here in Oklahoma. Tennessee doesn't even want it. So basically you're going to come across Oklahoma. Arkansas's not going to let you in. Choctaw Nation has opposed it. The Creek Nation has opposed it. And from my understanding, Cherokee Nation has also opposed it. 6|20 And surely between all of the Indian tribal agencies here -- we are a sovereign nation and no one should be coming on. Mary Fallin's already declared us a sovereign nation. She don't want us using Medicare, so

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you know, we're already there.

MR. FASANO: One-minute wrap-up, please.

MS. MEANS: It will also -- I oppose the fact that this property line -- this construction company out of Texas is going to destroy our culture, our way of life, rural family farms. And farm lands are going to be split into pieces. Yeah. I guess living in an apartment building in the city is hard to imagine serenity of living in a country life, but it is. It's worth every penny and every blood that's been shed to build these farms, keep these farms, and pay the bills to keep them running. 5|6 cont.

Alternatives have not been fully investigated. Bearing cables or rebuilding existing lines to handing this new energy should be done in another way. They're already taxing solar panels so they're going to tax wind energy. That is not free. And if we get rid of some of our opposition to taxes in Oklahoma City, we might have some jobs and revenue to pay our state bills. 7|11

MR. FASANO: Thank you. Okay. Phil Albert followed by Natalie Fullbright.

MR. ALBERT: Thank you very much. I am here to speak in favor of the Clean Line project. I'm one of the hundreds of businesses in Oklahoma that will see 1|35

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wind transformed from a northwest Oklahoma resource for economic development to a statewide resource. I see this project as a legacy project for Oklahoma tantamount to what we saw with the development of the current irrigational channel back in the 60's. 2|24

I think this project is an opportunity for us to create good, permanent jobs to keep our children here. I speak in favor of the project.

MR. FASANO: Thank you. Natalie Fullbright bright followed by Dean Swan.

MS. FULLBRIGHT: My name is Natalie Fullbright. I've addressed this issue before as a former assistant attorney general of the Cherokee Nation, but I'm here tonight as a private citizen.

I reside in a small community in Akins, Oklahoma, which is five miles northeast of Sallisaw in Sequoyah County. I'm also, obviously, a citizen of the Cherokee Nation.

The Cherokee Nation has passed a resolution in opposition to this line primarily because it's going to run right over the top of the Trail of Tears. My great-great-grandfather was forcibly removed by the United States government from White, Georgia, to Oklahoma. That trail is paved in my ancestor's blood and many of my family members died along it. 1|8

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When they got here, they were allotted land. I have been raised in Sequoyah County and I still reside on my great-great-grandfather's Cherokee allotment.

All the people in my community have is their land. We are not a well-off socioeconomic area. Sequoyah County is not. The largest asset these people have is their land. Their retirement plan's tied up in their property values. If my parents' property value were to decrease, it's going to seriously harm their retirement. It's going to seriously harm me, in that, I inherit that land. What's going to happen to it with it being so close to a power line? Nobody's going to want to buy it. 2|6

I understand that this may bring jobs to Moore and Enid and Claremore, but those areas are more socioeconomically diverse than we are already. It's going to financially destroy my community. I can't see the benefit of bringing in a project that is going to financially benefit one community while destroying mine. And our main problem is that we're a bunch of Indians who were allotted land in a poor socioeconomic area by the United States government, and now a private business wants to destroy our property value. 3|24

I would strongly encourage the Department to

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work with the Bureau of Indian Affairs and to take into consideration that the Cherokee Nation and the Choctaw Nation and the Trail of Tears Association and the Intertribal Council all have either passed resolutions or have pending resolution against this plan. Thank you. 2|6 cont.

MR. FASANO: Dean Swan followed by Sylvia Swan.

MR. SWAN: My name is Dean Swan. I live here in Muskogee. I'm a veteran of the United States of America. I was drafted and put in harms way for the good of the country. The setback now after the new eminent domain ruling by the U.S. Supreme Court which supports the total fascist cooperation -- for those who know what fascism is, it's when the corporations run your country and not the people. The corporations now have power. The eminent domain is being done not by the government but by a private corporation and will always be done by private corporations. Even a business downtown can take your property away if they say that they can make more money with it than you can. That is not correct.

One of the problems I have is I absolutely love the concept of green power. Duh. But here's how it's being manipulated and used here in Oklahoma.

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Oklahomans say free money, free money, bring your bucket, bring your buckets, it's free money. So I'm going to sell this money now. I might have to charge you for the cost of my bucket, plus a little profit for myself, but yeah, it's free money for me just kind of like a windy day. But, of course, I'll have to charge you for my friends' times and my time.

And one of the things I have a little bit of trouble with, we already have so many encroachments into our property and lands. We have existing power lines. We have a national grid. For crying out loud, tie into the national grid. You're putting in 35 million kilowatts, 35,000 kilowatts, it doesn't matter. Put it into the national grid. Down the road, take it out a thousand at a time. 1|6 2|11

Everybody's keeping books. You don't have to put in your own private -- private power transmission line to disrupt people's properties. Take that green power, sell it all over Oklahoma. Oklahoma has enough wind energy to supply us total free for 32 times over. God, this land sucks -- or blows. I'm sorry. It blows. It's wind. 2|11 cont.

So the money is temporary. The jobs they promise is temporary. Once that transmission line -- I mean, what's a guy going to be paid for, to look at it? 3|24

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Well, that's going pretty good. That's what you're going to get charged for anyhow. We already have enough. For crying out loud, if you want your own private transmission line, put it along a state highway. You're going to use the same thing. But guess what, you don't have to tear up anybody else's property that went right through there. 2|11 cont.

I'm Choctaw. I have a little bit of trouble having, you know, lands forcibly taken away by corporations. I mean, I served my country because it was for the good of the country. I didn't have a choice in the matter. But to not have a choice in the matter because you're a rich corporation, that's called fascism. For crying out loud, get off your hind ends and get out and vote these fascists out of power.

MR. FASANO: One-minute wrap-up, please.

MR. SWAN: All right. In a couple of minutes. The money is --

MR. FASANO: One minute would be great.

MR. SWAN: Yeah. Okay. Green energy is absolutely -- I mean, none of us can say nothing about that. But we're not getting none of it. It's going out to Tennessee. Put it here. The governor has already outlawed us from putting solar panels and wind generators on our own the properties for crying out 2|11 cont.

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loud because they support the oil companies. And they refuse to accept the science of global warming and they refuse to accept the science of a picture of an oil pouring down a neighborhood, you know, from an oil spill.

You know, I don't know about you, but yesterday at my house, we had a wind spill. You know, I recovered from it, you know, but I'm more in line to agree with the green energy. But my God, that's Oklahoma's wind. Keep it in Oklahoma. Thank you.

MR. FASANO: Thank you. Sylvia Swan followed by Jason Zan.

MS. SWAN: Hi. I'm Sylvia Swan. 727 Capital Place, Muskogee. You know, if we could get this many people to show up at our council meetings, we'd probably have a better government running it right now. Anyway, I'm not in favor of eminent domain. I've seen what it does. I've seen what happens. The other thing is that I dealt with one of the federal agencies -- 1|4 well, actually there were eight of them altogether in California. And what I saw is we paid a lot of tax money for people who didn't know how to do their jobs. And so in order to be able to get control back for the damage that had been done because nobody was doing oversight took about five years. And it took going to

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their offices and looking at all their documents and showing them what they had missed.

And so the other thing is we have a congress that's just decided that they don't want the Department of Energy. They don't want the Environmental Protection Agency anymore. And so they're going to be pushing -- if you don't keep your eyes open, they're going to be pushing to eliminate all these companies. So, yeah, they're going to want to get any of this stuff passed as fast as they can.

I'm in favor of natural energy. I'm in favor of wind energy. I'm in favor of the reduction of fossil fuels that are used. I don't know how many videos you guys watch about all the information is out there. All you have to do is go on, what is it, Pivot I think it's called now. All of -- there's a company called -- I'll think of it.

Anyway, I started Muskogee Clean County Coalition hire in Muskogee. And what we're looking at is we're looking at all of the things that are being done that have no oversight from the agencies that are supposed to govern them. So I would say that the two problems with this project are: One, that it's, you know, primarily for profit; two, that you're not going to have the oversight from your legislators nor from

2|36
3|3

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these agencies.

What it takes is it takes you. It takes every single one of you stepping up to the plate. It took me five years to get that company under compliance, and I was lucky because it usually takes ten to 15 years and they usually hope you die out by that time. So there's a lot of corruptness that goes on in the government. We all know that. And energy and money-making opportunities are what they look at. Eminent domain is a very good way to get in there. I would be very scared if I was a large landowner and that's what I would be dealing with.

And I think that collectively, you have a voice. The only way that you can make anything happen and what's happening all over the country is people speaking up. There's a group on the Internet call Moms Rising. It was one woman who talked to her neighbor next door who was upset about what was going on in her school. She sat with the president two weeks ago and was involved in the discussion. They are a million mothers strong in the world. And they did it on the Internet. They don't go to meetings. They don't write letters. They do it on the Internet and they attack their legislators for what they're not getting done. And on that note, I say good luck. I still hope you

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get good energy.

MR. FASANO: Thank you. Jason Zan followed by Karen Long.

MR. ZAN: Good evening. My name's Jason Zan. I represent Bison Archeological Consulting Services out of Oklahoma City. I want to appreciate everybody speaking tonight. It's really informative and good to get your perspectives on things. I attended the public meeting in Guymon, Oklahoma. This is an area where the greatest amount of concentrated development is happening for this project.

My conversations with the landowners there, I've noticed, they were in broad support of the project and they felt that Clean Line had been transparent with them and dealt fairly with them. I gather that's not the experience of everybody here. And so I would like to hear your perspectives as well.

The reason it's interesting to me, Bison Archeology Company I represent a small Oklahoma local business. We've been interested in potentially trying to become part of this project since we found out about it. One of the things that we're looking at is whether or not it's a good company to work for. And so far everything we've heard has been positive. We don't want to -- we've worked for a lot of different clients

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in the past. Some of them are good, some of them are bad. And honestly, our experience is you want to work for the ones that are trying to be above board.

As a small local business, we have not yet made an agreement with Clean Line. I don't know that one is going to be made. But it has been my experience thus far that they have been entirely earnest about their desire to bring local businesses in on this project.

As a culture resources consultant, I read through the Draft EIS. My reading is that culture resource concerns should be adequately addressed. There is a programmatic agreement under development. The SHPOs of each involved state are consulting on the project, so is the Advisory Council of Historic Properties. This agreement should address the concerns and potential impacts of cultural resources, archeological sites, historic properties, that sort of thing that are involved in this project. 1|20

As you know, there are two national register listed properties not far from Muskogee. We have the Oktaha School and the Honey Springs Battlefield south of here. They can be avoided by selecting the applicant proposed route over the 3C or 3D alternate routes.

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While I fully expect new archeological sites and historic properties to be found and documented during the surveys prior to constructed, projects like this typically make avoidance of disturbance to these types of resources fairly simple. Transmission lines have typically a small footprint, and usually avoiding an archeological site is as simple as moving one of the support towers. 1|20 cont.

Finally, SWCA and Pan-American are the two major culture resource companies involved with this project with Clean Line. In our industry, they have a reputation for professionalism and for producing sound work. From my perspective, I would encourage DOE involvement in the Plains and Eastern Clean Line. Thank you for your time. 2|35

MR. FASANO: Thank you. Karen Long followed by Don Oft.

MS. LONG: My name is Karen Long and I'm also one of the owners that the Clean Line is proposing to go across. As a landowner of private note, I've noticed that Clean Line transmission line cuts straight through my property. It doesn't follow along any roads. It doesn't follow along any property lines. It cuts across my land. It cuts across my mom's land. It cuts across my sister's land. It cuts across my other 1|8

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sister's land. It cuts across my neighbor's land. There's no regard to any kind of boundaries. 1|8 cont.

[redacted] I've looked up. There are studies that indicate that there are problems with electromagnetic waves when you have somebody with seizures. [redacted] 2|15

I'm not an engineer. I don't even know if I'm going to say the words right, but on a personal note -- but I mean on a note of an Oklahoma citizen, I've noticed -- I've looked at the map of Oklahoma and I've looked at how this is a line that goes completely across Oklahoma. I don't think there's another project that's been like that. I could be wrong. I notice that it goes completely across the aquifers. And I've also noticed that these aquifers are sometimes less than 100 feet long. These towers are going to be anywhere from 25 to about 50 feet long which is going to be 25 to 50 percent close to the aquifers. These aquifers are water for everybody except Oklahoma City. And it concerns me that some of these are going across highly vulnerable areas for pollution. 3|18

And so -- and I've seen that -- I've heard and I haven't seen any reclamation plan in case there's

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a problem. So I think that is a real concern to all citizens. Thank you.

MR. FASANO: Thank you. Don Oft?

MR. OFT: Good evening. My name's Don Oft. I'm from Sallisaw. I live in a piece of property that's on Old Military Road. You heard about that earlier, Trail of Tears. It's 20 acres. In 19 -- or 2008, I had a successful company in Colorado that got caught in the -- I call it the depression. We lost the company. We lost our retirement. We lost our savings trying to hold that company together waiting for things to turn that never turned. My wife and I decided to move were our daughter was in Sallisaw.

Once we got there, we had to start over. I had to reinvent myself so I started working oil fields. I'll be 70 this year. I'm still working because I refused to give in. Now we're starting to get our life together. We lived in a fifth wheel while we redid our house. Now you're telling me power lines are going to come through. I refuse. I don't want to reroute the power line. I want to stop the power line. 1|34

Where and when did it happen that a private company can partner with a government agency to create the power of eminent domain to take our property? This is something new. Eminent domain isn't new. Eminent 2|4

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domain is like for public utilities and for local areas, but now we have a project that goes from western Oklahoma all the way across our state.

I'm a veteran. I enlisted in 1966. I got out in '69. I love this country. But if we're going to have something come across our state, then the benefits should stay in this state. Why should they go to Tennessee? 3|11

One thing is common tonight that I saw. You know what it is? The proponents of this power line, I haven't heard one say that they live in a routed power line or they live underneath the power line or they have property at the power line. They have businesses that they're going to make money on. The money's being made by the people in Houston, the people that own this power line. How many of you are going to make money off of this? You have everything to loose. What do you have to gain?

MR. FASANO: One minute wrap-up, please.

MR. OFT: When I'm ready.

MR. FASANO: Please respect the time limits that everybody have to do, please. Thank you.

MR. OFT: When I'm ready. So instead of figuring out a way to reroute it to protect each one of your individual parcels, come up with a way to stop it. 1|34 cont.

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Come up with a game plan. Go back to the individual communities. Form organizations. Get in the newspaper. Contact your representatives. Contact the Department of Energy. This affects lives, individual lives. I'm not here for a business to make money.

We are fortunate to have a ten-year-old adoptive daughter. We've had her since she's five days old, and we're going to have a life for her. I'm tired of listening to all of this. Go home. Find a way to stop it.

MR. FASANO: Thank you. That was the last person on -- that had signed up to speak. Certainly, we have a little bit more time. Is there anybody else who -- first of all, who hasn't had a chance to speak that is interested in coming up and providing comments? Just come forward, state your name, affiliation if appropriate. Anybody who would like to speak that hasn't? State your name, address, and affiliation.

MS. BROWN: Hi. My name is Emily Brown and I'm actually from Arkansas, but the proposed route goes about 400 feet from my house and we built on family land. It's my husband's land. He's camped there his whole life.

Anyway, but I have a two and a four-year-old that I'm very concerned about health-wise. Yeah, it's 1|15

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ugly. Yeah, it's eminent domain sucks. But heath-wise, my children, I'm going to raise them there their whole lives and that's my main concern. I've done research, my friends's done research. There's cluster cancers, there's childhood leukemia. I cannot put them in harms way. 1|15 cont.

I'm going to be stuck with a house that I cannot sell. And it's our dream home, I don't want to leave it. I'm being forced to leave. So I am completely opposed to this and it's very upsetting to me. Thank you. 2|6 3|34

MR. FASANO: Thank you. Anybody else who has not had a chance to speak yet that would like to come forward?

MS. HALL: Hi. My name is Haley Hall and I am also from Arkansas and we are here because we want to help support you guys and not Clean Line. Anyway, I just wanted to say one thing about the pacemaker malfunctions that they had asked about earlier. In their own EIS study it stays that fixed pacing mode, even brief periods, could be life-threatening. So there's your answer to that and that's all I have to say. 1|15

MR. FASANO: Any other new speakers?

MR. PRICE: I'm Arlend Price. I grew up in

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Sallisaw, Oklahoma. I served in World War II under George Patton and now I have two Bronze Stars and a Purple Heart to prove it. So if there's any question there, I am -- I would like to make it clearer.

But anyhow, I wanted to tell you, this thing is dangling across our property in Okmulgee County. We're not for it. We're against it. And we want you to know that we're against it. 1|34

And I -- I want to tell you from the bottom of my heart, we don't need the dollars. We need peace. We need peace. We don't want the money. That's all this is for. It's for making money. That's what it's for. So I do thank you. Have a good night. May God bless you all.

MR. FASANO: Thank you. Anybody else who has not spoken yet? Come forward. Remember, clearly state your name.

MR. KNOERMSCHILD: Thank you my name's Karl Knoermschild and I live in Broken Arrow, however, I grew up in Arkansas. And I wanted to mention a couple of things. My brother is still living on the farm that was bought from my grandfather, my father. My grandfather came from Germany and homesteaded in Arkansas and put a road to his house and built a house. And we kept it up and my brother and his family still

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live on the property.

And there was no electricity there. We got electricity when I was about ten years old. And then they put a big line through about -- about 15, 20 years ago. And now they want to put this other line through with 500, 700 feet wide and that would enclose my brother's home and where he wouldn't even be able to live in his own home because that would give a lot of possible diseases to the family.

And I got a research here. And I just want to read it to you real quickly from the EM Watch Program and they have a list here of what the electricity can do to an individual. They have done research. They have found that it causes brain cancer. It also causes childhood and adult leukemia. It also caused Lou Gehrig's disease. It also caused Alzheimer's disease. It also causes breast cancer in women and men also, the birth defects and many other diseases also. 1|15

And I think that there ought to be a different way to do what needs to be done than to run over our people and just pay no attention to what they need. What the big companies need is all they think about. Thank you. 2|11

MR. FASANO: Thank you, sir. Anybody else

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who has not spoken? Come on up, sir.

MR. PARISH: My name is Steve Parish and I live just outside of Gore, between Gore and Vian. And I too am a combat veteran. I went over to Iraq and I was hooked up with a special force unit, and while I was there in a short time, me and my four guys, we took out over 300 enemy soldiers.

And when I came home, I was asked from the Veterans Health Department what they could do for me, and I said I need to be left alone. I need to be next to the woods, the creek, the streams, and the wildlife. This power line -- the power line is coming within 100 feet of my house it's going to open my place up. I am against eminent domain. Thank you. 1|34

MR. FASANO: Thank you, sir. Anybody else? Please come forward.

MR. LEMLEY: May name is Jim Lemley. I live at Summit. We are not in the direct line, but we are close. I'm opposed to the program. I like to go out at night or in day, look up, and see nothing but sky. The other point I would like to say, I really feel sorry for Tennessee because they must not have any wind. 1|34

MR. FASANO: Others?

MS. MAGIE: Hello. My name's Chris Magie and

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I also live on Old Military Road. I just bought 40 acres with all of the money that I had and this power line is going to take all of my equity. I will have no savings and it will financially destroy any opportunity to sell my property in the future. I am a single mother of three teenage children. This property is adjacent to family property that our family has had for 70 years. My children hunt and fish that property, and this will take out three generations worth of property that was purchased and was intended to hand down. Thank you. 1|6

MR. FASANO: Come forward. We're quickly approaching the 8:00 hour which is our scheduled time, so let's get a few more in here.

MR. REMINGTON: My name's Mike Remington. I live Salina, Oklahoma, about 60 miles north of here. I'm not impacted by this line. I'm sympathetic to the people that are. This deal affects me because in the future, if this deal goes through in the future, I may be impacted somewhere down the line. You don't have to be in this proposed line for it to affect you today. It's going to affect you from now on because if they let this precedent go through, there's nothing going to stop it.

COMMUNITY MEMBER: That's right.

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MR. REMINGTON: You know, this is an eminent domain deal that's supposed to be for public use. I'm not going to get anything out of it. Most of you are not going to get anything out of it. It's for private gain. That's not what eminent domain is for, and it shouldn't be allowed to stay. 1|4

MR. FASANO: Thank you.

MR. MILLSAPS: Thank you, sir. Howdy, y'all. My name's Gordon Millsaps. I'm from Arkansas. I just want to come up here and let you all know that we support you in the opposition to this power line. I know that some of you have heard from Clean Line that everybody in Arkansas's on board. That's not true. That is not true. 1|34

Our entire congressional delegation wrote a letter to the Department of Energy asking for an extension so this could be looked into a little bit more. There are groups out there to fight this. Just get on Google. Get on Facebook. Type in Block Clean Line. There are opposition groups to Clean Line projects all over this country. No eminent domain for private gain. Thank you. 1|34 cont. 2|4

MR. FASANO: We're going to take two more people, so please respect the time limits still.

MR. SWAN: My name is Dean Swan. I live in

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Muskogee, Oklahoma. You know, as a member of Sierra Club, I have to reiterate the concept of my love for the green power, whether it be water power, sun power, wind power, anything but fossil fuels. Living here in Muskogee, I go out and wash my car, I go out an hour later and wipe my hand across my car and it's full of coal ash dust from the Muskogee power plant.

Now, I have to be honest. It depends on which way the wind's blowing. Unfortunately, whenever I'm outside or my kids are outside, the wind's blowing towards us, so it does create a little bit of a problem.

I have to be honest with Sierra Club's concept. America needs more energy. The Plains and Eastern Clean Line will deliver more than 3,500 megawatts of new clean renewable power to Tennessee. That's enough energy to supply one million homes. So it is very important. It should be one million Oklahoman homes. Oklahoma already exports oil and natural gas, so exporting wind energy is just another opportunity for Oklahoma to reap the benefits of its redundant resources. But there is the key word, we're not reaping the benefits except momentarily. It's all temporary. 2|11 cont. 3|24 cont.

I've argued and wrestled with the city

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council following and passing TIF regions, areas of improvement where they take the money away from the schools and the fire department for 20 years to give it to corporate development companies building our malls. So for 20 years, our schools don't get the money. Now next year and the year after, we'll have to pass a new bond amendment so we can come up with the money that is now missing from our school.

Yeah. We will have commercial development in the area. We will increase in size. The corporations will make a lot of money. We'll give a lot of people jobs, you know, for these awesome highly pursued jobs for $2 an hour as a waitress. You know, everybody wants those jobs. And so that's where all the TIF money is going. So we have a contingent of power happening here in Oklahoma that is empowering corporations. 3|24 cont.

And remember Ronald Reagan said we're an international monetary system now. So these corporations, it doesn't matter if it's an Oklahoma corporation, a Texas corporation, or a Denver, Colorado, corporation. It's still a corporation and they consider themselves international. That's where they're keeping all the money. At least after today, maybe President Obama will stop some of it from being

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kept overseas.

I want green power in Oklahoma. I don't want green power sold to Tennessee. I don't want Oklahoma to buy energy from Tennessee that they generated from hydro-plants. It's unconscionable and it makes no sense. So for please in God's name, keep Oklahoma sovereign, and keep our wind power here. Thanks. 2|11 cont.

MR. FASANO: Thank you. Last one.

MR. PHILLIPS: Thank you. I'll take as little time as possible. Just to touch on my qualifications, I have three United States patents. I've been involved in electrical, electronic stuff --

MR. FASANO: Excuse me. Please state your name once more, please? I'm sorry.

MR. PHILLIPS: Yes. Darryl Phillips. So I do know my way around electrons a little bit. The thing that's -- okay. The one thing that I've heard stated here this evening that I think is more important than anything else is the health effects. The kids -- those of you like most of us that are too old to have kids, you've got grandkids, you've got great-grandkids coming. What this will do to them is very, very, very important, so is what happens if we don't have the power line, namely the coal-fired power plants. 3|36

The coal has mercury. It has no end of other

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pollutants that are proven to cause autism, to cause child development, to cause a lot of serious problems. We need to do anything we can to stop burning coal. 3|36 cont.

This has nothing to do with who makes money, who doesn't make money, who gets power, who doesn't have power. Health is more important than any of these other issues.

Now, as Thomason and several of the others mentioned, the problems with pacemakers and other implants, that gets into the technology, and I don't want to spend too much time or get too deep into it. But the other transmission lines that are everywhere all around us are AC transmission lines and they have a pulsing energy that pulses on and off at 60 cycles. It really pulses 120 times every second.

The DC transmission line has a steady electromagnetic field that is very much like the magnetic field the earth has. We're sitting in an electromagnetic -- a magnetic field, not electromagnetic field -- a magnetic field right now that's so strong if anybody has a compass, it will immediately swing around and point north. It's a very, very strong magnetic field that the earth has. We all exist in it. Pacemakers exist in it. Babies, kids exist in it. Everything exists in it and always has.

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MR. FASANO: Please one-minute wrap-up.

MR. PHILLIPS: Yes. Thank you. A DC line like is proposed here has the same kind of magnetic field that the earth has. The difference is it's millions and millions of times weaker. If you walk under one of these lines, you will not see the compass move because it is so weak. Even if you're within 100 feet, you will not see the compass move. Compared to the one in the field that we live in today, it's nothing. So get rid of the AC lines if you want to worry about pacemakers, go DC. Thank you. 4|15

MR. FASANO: All right. Thank you once again for your courtesy, your participation, and your comments, and for observing the ground rules on time limits and things like that. I'm glad -- I hope everybody got to speak that wanted to. We're at that time where we have to end this portion though.

Please remember that you may continue to submit comments on the Draft EIS until the comment period closes on March 19th. At this time, I am going to adjourn this meeting at 8:09 p.m., and please be safe and thank you for coming.

(The public hearing was adjourned at 8:09 p.m.)

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Certificate

I, LINDSEY GOODENOW, Certified Shorthand Reporter, do hereby certify that the public hearing was taken by me in electronic stenographic shorthand and thereafter transcribed by me. I further certify I am not an employee, attorney, nor relative of any of the said parties or otherwise interested in the event of said public hearing.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this February 11th, 2015.

Lindsey Goodenow, CSR
CSR No. 1956

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ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING LOCATED AT THE
YOUTH AND COMMUNITY CENTER
IN CUSHING, OKLAHOMA
AT 5:00 P.M. ON TUESDAY, FEBRUARY 3, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lindsey Goodenow, CSR

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(On Tuesday, February 3rd, 2015, a public hearing open house was commenced at 5:00 p.m. and recessed at 5:47 p.m. for the public presentation. After which, the formal public comments began at 6:25 p.m.)

MR. FASANO: This portion of our meeting is officially designated as a public hearing for the Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement.

This meeting is being held on February 3rd, 2015, at the Cushing Youth and Community Center in Cushing, Oklahoma. Is it being held to receive comments on the Draft EIS. We are commencing the public comment portion of this meeting at 6:25 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have approximately three minutes -- three to five minutes. We will try to provide flexibility in the amount of time allotted based on the number of speakers that have registered; however, please be concise.

This meeting was preceded by a presentation by DOE's EIS Document Manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interruptive dialogue so that an uninterrupted record of comments may be obtained.

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For the record, my name is Greg Fasano. I've been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

The court reporter's task is create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

The first speaker will be A.E. O'Connor followed by James Slagle.

MR. O'CONNOR: Brevity has not always been my long suit. I had a grade school teacher tell me that she thought I had been vaccinated with a phonograph needle.

So I live -- most of you are probably familiar with the area that I live, five miles south of Pat O'Connor. We moved there in 1975. I was working for American Airlines. I retired from American Airlines. I moved here for the purpose of having an airport on my own place. And my plans were that when I got retired and was on fixed income, which is the case now, I would subdivide and make a residential airport.

When I got the draft, it shows them going right across my place. Obviously, that would negate

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any kind of aircraft operation regardless of which way they went. And so that's what I was concerned about because not just I couldn't operate it at all, but I couldn't -- I'm marked in, subdivided about half of it into ten lots and they had to be over ten acres. And so they are like 10.02 and such today. 1|24 cont.

Well, the survey was done in '08. And I don't think I have to tell most people what the economy did in '08. So that's the reason that I was delayed in that here lately. I've had some health issues, but I still -- and I presented them with a copy of the survey. And so regardless of where it went north and south, east or west, it completely negates any possibility of flying. There will be no way to -- that it could be used as an airport. And as I said, we moved here in '75 with the specific purpose of that. At that time I was driving 50 miles one way to American Airlines at that high price of $.49 a gallon of gasoline at the time.

Well, I've retired a pretty good while and I had a business of buying and selling airplanes. So I have three hangers there that their dividing the aircraft there because they're 42 to 60-foot clearance. Well, they're a lot more valuable as an aircraft hanger than they are as a hay barn.

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And so that's my biggest concern is that it would completely negate my plans for a retirement income. So whether that's a good enough reason for them to reconsider it, but as I said, if it was built on my place, I have no idea how I would have a retirement because, obviously, the airplanes can't operate. 1|24 cont.

Not even considering the facts of the aesthetics because many people I talked to when they would go to a property that was for sale when they were in the market and they would see big power lines across, unless you were willing to sell for a third of what your neighbors would get. That's my other concern. So anyway, thank you for listening and I hope they will take it into consideration. 2|6

MR. FASANO: Thank you, sir. James Slagle and then Harvey Morris.

MR. SLAGLE: Good evening. I'm James Slagle and I would like to encourage the DOE to do whatever is feasible to approve this project, not only this project but also projects that are similar to this all across the nation. I would like to thank the DOE and its contractors for doing all this work on the EIS and the NEPA process. It's a very time-consuming cumbersome process, as can be witnessed by the big books in the 1|35

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back of the room here, and a lot of time and effort and public comment goes into this. And so I would like to thank everybody that's made a public comment in this process as well.

You know, part of this whole transmission project is to get the renewable energy from the wind farms that are going to be built in Oklahoma and Texas. You know, this is all part of the environment. It reduces pollution. It reduces water use, a huge, huge impact in that part of the country. But you can't get the renewable clean energy out of those areas without having the transmission line to go with it. And part of the analysis that went into all of this is the types of structures that are going to be used along the line as well to minimize the impacts along the entire route.

2|1

Some of the other connected actions that -- things that would not happen without this project, there's going to be an expansion of the interregional transmission capacity, all these different projects that are going to happen because of this project. That also results in an improvement of the reliability and the integrity the of overall grid system, which at the end of the day, that's a contributor to energy independence and our national security as well.

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I think everybody can remember what happened

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in India a couple three years ago when most of the nation suffered a power outage. And that was -- a lot of that went right back to the grid reliability and integrity, or lack thereof in their case.

Some of the other side benefits that I'm not going to go into a lot are the -- and they're mentioned up here -- are the job creation. There's going to be thousands of jobs created along this transmission route and there's going to be billions of dollars of investment and economic development and stimulus as a result of this project.

4|24

So from my perspective, I'm an engineer, I've worked in the energy industry for over 35 years, specifically power delivery projects, wind farms, solar farms, and oil and gas projects. So I've got a little bit of experience under my belt. And once again, I would like to encourage the approval of this project and many, many others all across the nation. Thank you.

5|35

(Exhibit 1 is marked for identification.)

MR. FASANO: Thank you. Harvey Morris followed by Ron Ledford.

MR. MORRIS: Thank you. I'm Harvey Morris. My mailing address is 9901 West 151st Street South, Sapulpa, a property that you all have showing to be

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crossing is in the north half of Section 28, 17 North, 8 East, which is just east of where Mr. O'Connor is.

I can sympathize with you being an old pilot that that's not a very good thing to come across your property like that.

I would suggest that the maps you have, you might take another look at those. They seem to be a little bit old and outdated. And in this part of the country, there's a lot of oil wells. And if you went to probably the Oil and Gas Commission or the Corporation Commission at the Bristow office, you would probably get most of the information and GIS information on the wellhead locations and might be able to pinpoint a lot of the obstruction that you're going to have.

Mr. Slagle, I don't guess -- when you were up here, I don't guess they got your address. Do you all need that or do you know who he is already?

I would just -- I've got lots of questions basically about the nuts and bolts of how it's going to be built. But I understand this is mainly for an impact statement on environmental impact. So my interest is going to be what the effects would be on the wildlife, what it would be on the human activity either under the line or close to the line, how close

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we could have barns or houses or so forth, how that would affect the use of property. But as I understand it, there's a lot of answers not yet available on how the line's going to be built. So I guess those -- we'll just have to wait for a while.

There is one thing that kind of concerns me, and I'm not sure it has anything to do with the environmental impact, but part of your package indicated that you all will be paying for right-of-way and for the structures and one of the options was if you didn't take an up-front payment, it would be probably paid out yearly. I know there are a lot of retirement pension plans that have gone under because of people either not putting forth the money or companies going bankrupt or whatever. And I was just wondering if you all still have this option available, what will the Clean Line Energy Company do to guarantee that there will be money 50, 100 years from now to pay for that?

And I look forward to seeing more information on exactly how they -- where the poles are going to be placed and how the lines are going to be built. And so with that, I'm done.

MR. FASANO: Thank you, sir. Ron Ledford followed by John Fuller.

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5|24

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MR. LEDFORD: Thank you. I thank you all for being here tonight. I'm Ron Ledford. I'm a sales manager for Advanced Steel and Crane. We're in west Tulsa. And we build substation and transmission structures used by utility companies. And I've been in business myself for 36 years. We employ about 50 people. And I'm here tonight to speak on behalf of the Plains and Eastern Clean Line project, and I'll tell you this, I'm for anything that will help Oklahoma. 1|35

We're blessed to be able to call Oklahoma our home. We have an abundance of resources within our state that not everyone's so fortunate to have: Oil, natural gas, timber, water, and wind. We export oil and natural gas and Oklahoma has enough potential wind energy to supply more than 30 times our own electric demands. Exporting wind energy is just another opportunity for Oklahomans to create jobs and additional income. 2|24

The Plains and Eastern Clean Line will invest around a billion dollars in Oklahoma, which will help to support thousands of construction and manufacturing jobs within the state. I know that Clean Line has already made an agreement with Pelco, they're pole manufacturers up in Claremore. And they're friends of mine and I'm glad to see them. I hope they get the

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work. We all need the work. They employ about 100 families. And I'm hoping to help Clean Line myself with some of the substations and converter stations along the way. 2|24 cont.

Construction of the new wind farms and subsequent line will result in the need for thousands of skill workers, and Clean Line is committed to using qualified local and regional contractors. Clean Line has already reached out to local Oklahoma companies to provide many services. Even after the project is built, the new facilities will require hundreds of employees for operations and maintenance.

I would imagine that during the construction period, communities hosting the project will benefit greatly from increased economic activity. Stores, motels, gas stations, restaurants, I'm sure they'll see a surge of business. And these increased revenues will be a good thing for local communities like schools, roads, and other community services.

I personally live up in Osage County and we've got a new wind farm going in about 40 miles from my house. It's my understanding that Clean Line is seeking to negotiate easement agreements on a voluntary basis and that their compensation package will be a one-time payment of 100 percent of the fair market 3|6

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value of the land within the easement, plus for each structure on the landowner's property, a one-time payment or an escalating annual payment, which the gentleman referred to a few minutes ago. 3|6 cont.

For as long as the transmission structures are on the property, Clean Line will also compensate landowners for any damage to crops, marketable timber, livestock or other things affected by construction and maintenance. 4|24

The Plains and Eastern Clean Line is a DC line, direct current. And this direct current technology is better because it allows the right-of-ways to be narrower and have fewer structures than traditional transmission lines. So it does minimize the environmental impact.

Landowners will still be able to use the land for cattle or farming as long as they don't interfere with the safe and reliable operation of the transmission line. 5|21

The Clean Line's very committed to working with landowners and communities, and this meeting here tonight shows how Clean Line is seeking input from the community members like yourselves here in Cushing tonight. Clean Line strives to build and maintain long-lasting relationships with landowners by working

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in a respectful manner. Their intent is to maintain a mutually beneficial relationship with Oklahomans throughout the life of this project. Let's work together to keep Oklahoma strong. Thank you.

MR. FASANO: John Fuller followed by Paul Nedlose.

MR. FULLER: I'll pass.

MR. FASANO: John Fuller?

MR. FULLER: No. I'll pass because I didn't think this was --

MR. FASANO: Paul Nedlose?

MR. NEDLOSE: I'll turn my time over.

MR. FASANO: Rodney Hendricks followed by Jeff Bolin.

MR. HENDRICKS: My name is Rodney Hendricks, I live at 225 Route 37, 200 81st Street, Bristow, Oklahoma. No, ma'am. I do not want your line. You all say easement 150-foot to 200-foot, are you going to sell that easement to somebody else to lay a gas line through it, to lay another right-of-way through it? Because I work for the gas company 28-and-a-half years. I make my living down on that farm like the gentleman said. I drove for 50 years backwards and forth to Tulsa and worked for Oklahoma Natural Gas. I know how many places you lay a water line, a gas line, oil line,

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electric line, any of them easements once you all maintain it.

And I will pay the taxes on it or my grandkids will pay the taxes on it. You all are going to have what you want. I'm going to pay the bill. You say you're going to pay me for the structure. Well, for what damage that you do when you go through my field? I own 160 acres out there. I worked a lifetime for it, and you're going to split it down the middle and you're going to tell me if I put a house on it, underneath of it, that's yours, I've got to move out, I've got to get within the easement or what you all call it. 1|6

And you say it will mess the TV up or this or that. I don't have a thing against you all doing this here. You've got two gentlemen that's for you. You've got one gentleman and me, I'm against it. Move your line. I don't want it. And, you know, surely you've got an alternate route. 2|34

And how you surveyed my place without my doing it, because I run both your gentleman off that I had come to my house. And I would like to know how you surveyed my place without my permission. Did you fly over it or did you walk over it? You know, it's called private property. If you want to go on my property, 1|6 cont.

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come to my house and ask me.

I don't have nothing against you all. I think you're doing a good job trying to put energy in, but you're also trying to take what I worked a lifetime for. Imagine people, I walked up to your house and said, hey, you got a nice Cadillac right there. I'm going to give you $200 for it and give you $200 and drive off for a Cadillac. 1|6 cont.

That's what you're doing to my property. I've maintained it. I've drilled it. I've made fields out of it so I can make living. Now you want to pay me what you want to give for it. It's not right. You're cheating American people. 3|24

You've got two men that's for you. I don't know if you all paid them to come in here, but I'm trying to tell you, these people wouldn't be here. There's a man I know you're going within ten acres, ten acres of these people's place, and you're going to just ruin their homes. We live in the country for peace and quiet, not for electric lines over our house. I thank you for listening to me. 1|6 cont.

MR. FASANO: Jeff Bolin followed by Scott Lohah.

MR. BOLIN: My name's Jeff Bolin. I'm here representing the International Brotherhood of

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Electrical Workers, Local 1002. Local 1002 represents over 1,000 lineman and electrical workers throughout the state of Oklahoma, and we are in support of this project. This project will create hundreds of jobs and thousands of man hours worth of work that we can get to our members. Thank you. 1|35 2|24

MR. FASANO: Scott Lohah.

MR. LOHAH: Scott Lohah, and I'm retired from the gas company also. What was in the paper just yesterday in the Tulsa paper was the wind industry, they were going to cut out the tax breaks because they weren't hiring enough people. And so that was in yesterday's Tulsa paper. The movie industry, that was also going to be cut because they weren't hiring enough people.

But this may be a different story, but from what I've heard and read, the Plains transmission line is going to carry from the Oklahoma Panhandle to the state of Tennessee or TVA Electrics that's generated by wind power.

From what I understand, none of the electric generated in the Oklahoma Panhandle is going to be sold to Oklahomans from the Plains transmission line. It seems a little strange that Plains transmission line would bypass selling electric to Oklahoma City, Tulsa, 1|1

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Wichita, as well as the Oklahoma electric companies. Who is buying the electric being generated at the panhandle as we speak? Are they idle? Are they all locked up? 1|1 cont.

From what I've read in the papers, the electric companies feel this project is a waste of two billion tax dollars. They feel they can gather, transport, trade electric to other electric companies anywhere in the United States.

From what I understand, this transmission line is going to be 700 miles long, and each mile some of the electric is lost. In other words, this doesn't make financial sense. 2|4A

As per January 30th, Tulsa World, the U.S. Senate voted down an amendment by a vote of 47 to 51 not to extend the production tax credit for wind energy, which amounts to $2.8 billion. Taxpayer dollars stopped. Now, that makes sense to lose federal support and that's what this line's being booked for. Now we're getting to a loss of Oklahoma State Senate and the Oklahoma House of Representatives' support for wind energy.

As we speak, Senator Mike Mazzei of Tulsa and State Representative Earl Sears of Bartlesville have cosponsored legislature to curtail three major

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subsidies that the Oklahoma taxpayer can no longer live with. They are the zero emissions tax credit, the investment tax credit, the ad valorem tax exemptions, which in 2013 amounted to 44 to $64 million.

Mike Mazzei of Tulsa is the State Senate Finance Committee chairman. He stated in the November 16th Tulsa World that wind power or wind energy is part of the largest corporate welfare giveaway in the history of Oklahoma, and that's what brought us to this much-needed legislation. Now that makes sense. Mr. Mazzei, who is on the Oklahoma Senate and he was elected to watch over our taxpayer dollars, wind energy with today's technology cannot live without taxpayer handouts. This includes the $2 billion line. 2|4A cont.

The wheels are starting to come off of this train, and I would propose that not another dollar go to this unnecessary project. If this project doesn't go through, the chairman of Plains won't lose his job, the lawyers for Plains will won't lose their jobs, the folks with TVA won't lose their jobs. They might miss a Christmas bonus or two. But the Oklahoma and U.S. taxpayer can spend that $2 billion on things that are really needed. And I hope that makes a little sense. I thank all of you and appreciate the time. 1|1 cont. 1|1 cont.

MR. FASANO: Ben Whitt?

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MR. WHITT: Good evening. I'm Ben Whitt, 7245 Ponderosa Lane, Blanchard, Oklahoma. I am one of the landowners of one of the proposed routes. And as an electrician, I know a little bit about that, but I've been reading some on the EIS and how they're going to construct all this. Personally, I don't think the wind energy is really that economically feasible. That's all beside the point. 1|4A

As far as the environmental side, I don't know if anybody -- because I have not read through all of the 3,700 pages -- if they have considered any EMP hardening of the line. But we had a solar flare in 1859 that generated such a large magnetic field that people -- telegraph operator's pages next to their key operators actually caught fire. We can have another major solar flare like that again. Or we can have some of the people that don't like us too good detonate a nuclear weapon way up in the atmosphere, and that would basically wipe out all of our electric generation capabilities for years. 2|15

Building transmission and substation transformers is a time-consuming process that once they go down, you're waiting in line for years trying to get new ones built. So I would highly encourage, if they haven't thought about trying to harden against EMP.

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That way, if we do have either a solar flare or an EMP strike, at least that will at least pay off. Thank you. 2|19 cont.

MR. FASANO: One more chance, John Fuller you're passing?

. FULLER: Yes.

MR. FASANO: Ned, you're passing also?

MR. NEDLOSE: Yeah.

MR. FASANO: Okay. What I would like to do now is, we have time, I want to make sure that folks who haven't spoken yet have a chance to do so. And then after that, we can take some of the folks that have already spoken and want to say something else. So is there anyone else? You don't have to go sign up right now, we'll just take you right now. Is there anyone else that hasn't spoken that would like to come up and provide comments? Remember to state your name address and affiliation, if appropriate.

MS. CASE: My name is Suzie Case. I live at 21919 South 281st West, Bristow, Oklahoma 74010. We have ten acres. That's it, ten acres. This line is going right across the only hay pasture I have. My horses and my donkey are not going to like it. I can tell you that right now. I think that this line -- I'm against it. And the reason I'm against it is because 1|34

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it is going over the backs of hard-working farmers and ranchers who need this land and who need it to grow their crops and take care of their animals. 1|34 cont.

MR. FASANO: Is there anyone else that hasn't spoken yet that would like to provide comments? Come on up, sir.

MR. SMITH: Thank you. My name is Phil Smith. We have property along the proposed route. One question I have that seems to be lost, being an abstract-based state for ownership, when the company gets an easement across our property, as property owners all of the history of that company, no matter what happens, we get to pay for it in our abstracts. Has anything been set aside to help us cover those costs? That's all I have. Thank you. 1|6

MR. FASANO: Any other new speakers? Thank you, sir.

MR. STINER: Thank you. My name's Truman Stiner. I live at 2404 West Duncan Road, Cushing. This does not go across my property, but I question whether you did your long-term evaluation when you say on your handout there or your overhead you haven't done a long-term.

Every tree that you cut down on a right-of-way is gone forever and yet our government is 1|14

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telling us we need to cut down on CO2 omissions. Well, guess what trees do. They give us the oxygen back to breathe. Nobody is taking this to the end of the earth. And that's what happens, it takes a lifetime to get a tree big enough to breathe. So has anybody approached that issue in this environmental study? Thank you. 1|14 cont.

MR. FASANO: Any new speakers? And thank you for comments directly on the document. That's great. Exactly what we're looking for. Any other new speakers? Okay. We'll get some of the folks that have spoken already another chance. Please respect time limits though. Do you want to come up? Please state your name again for the record when you come up.

MR. O'CONNOR: My name is Arthur O'Connor, 16227 South 133rd West Avenue in Bristow. One thing that I forgot. I should have had the notes like a lot of better prepared people than me. But in my research, which obviously I'm not a -- if you know me, you'll know I'm not a computer person. But in my research on this thing and the people picking against it, there's a letter signed by -- because when I got the first pamphlets or whatever, you know, proposing the thing, they was saying they was wanting to use wind energy out around Guymon where they don't need the power to take

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it to the East Coast where they do need the power.

But there's a letter on the Internet, and I'm sorry I didn't bring it with me, eight governors in that area say they don't want this and they don't need it. And that's signed -- that was sent to the senate when Harry Reid was still the senator. But Harry Reid and Mitch McConnell, thanks for your help, but they both signature on it. And it's on the Internet that all these governors that are supposedly getting the energy that we would produce don't want it. 3|1

Now, that seems strange to me because to me, the only advantage is to the investors. And everyone else is in bad shape. Now, I can understand because I work -- I punched a time clock all my life. I can understand why the electrical workers would want this because it provides jobs. But if you think about it, it's temporary jobs. This is not going to last forever. Our farms are, we hope. As long as they don't get crisscrossed and degraded. 1|24 cont.

And like I said, the proposal was that they will pay you the fair market value per acre that they take. No mention the fact that it has depreciated the remaining portion by probably two-thirds I would think. Because I don't know of anyone that would be proud to have this big decoration, line decoration. 2|6 cont.

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MR. FASANO: One minute wrap-up, please?

MR. O'CONNOR: Okay. The last thing that I was wanting to talk about was the letter saying that they do not want. And if you look on their website, if you Google that, and this will be done -- it won't be under their e-mail address, it's another. But it was amazing to me that they would do this, say that they need it and we can provide it when they say they don't need it. And the wind energy that's available just off shore to them they said was something like ten to 15 times more than what would be available on this one. So I really question the need for it as stated by the literature that we received. Thank you. 3|1 cont.

MR. FASANO: Come up, please. State your name again, please.

MR. MORRIS: I appreciate your letting me speak again. I forgot something earlier. My name's Harvey Morris and you already have all that information. You were telling me about your ten acres and your animals, I think that was very appropriate. My experience with high voltage lines has been that they're kind of noisy from groan effects and static discharge, especially in cold weather where you have a lot of rain and so forth, moister.

And I would ask that the Environmental Impact

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Study survey this and tell us if there is going to be any noise from the line or if there's going to be any groan or discharge or anything that would affect the temperament or how animals react underneath it or close to it, not just domestic animals but wildlife. 1|15

I went to considerable time and expense to try to development my property where I could hunt on it and have been successful and I would like to continue to do that. But I certainly wouldn't want something that will degrade the enjoyment I'm getting out of my property now. Thank you. 2|23

MR. FASANO: Is there anybody else that would like to make comments for the record? Okay. Then with that, thank you once again for your courtesy, your participation, and your comments, for respecting the ground rules, the time limits. I truly appreciate it.

Please remember that you may continue to submit comments on the Draft EIS until the comment period closes on March 19th. At this time I'm going to place the hearing in recess rather than adjournment in case anyone else would like to comment. Staff will remain for your convenience to continue to discuss the project and answer your questions.

If you would like to provide comments still, now that I've put it in recess, please see the court

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reporter directly one-on-one and you can provide comments to her. We're scheduled to be here until 8:00. Please interact with staff more, and I thank you very much.

(At 7:06 p.m. the formal public comments were concluded and the open house was resumed.)

MR. NEDLOSE: Okay. I've seen the line going to the back of my ten acres split right in half. That is going to impact the rifle range, hand gun range. The police department comes out and uses that. I also fly on our land and, yeah, it would be a hazard. I guarantee. That's all I got. And I am against it just for that reason.

1|21

2|19

MS. MILLER: Okay. On the impact statement, I am -- Oklahoma is known for it's weather and it's tornadoes. If there are electric lines and structures on the property and a tornado comes through, do you now have live wires on the ground? And a lot of people in the country have cattle. Are they subject to electrocution and wildfires, you know, just actually setting a pasture on fire from a down line? So that's all.

1|19

MR. STILEZ: What will be or will there be a problem if they're running close to the 36-inch pipeline, Keystone, TransCanada?

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Some other comments being you're doing it that fast is in response to the lady with the ten acres bothering her horses, it isn't going to be a problem for her. They'll never know they're there. That donkey could care less. It won't screw up her hayfield, because if she's got two horses and a donkey, she don't have any hay left anyway.

And if they put the poles in like they should or like they told me once before, they can probably skip over any field, unless it's just humongous, and not even have a pole out there. That's what I'm hoping for because the proposed line goes across between my sister and I have three quarters of the land that we got, three 160-acre quarters. That's what I'm trying to say.

1|21

And I understand that they screw up the ground for a while, but it's not near as bad as the pipeline unless they put some big, old poles out there in the field and I have to go around and cut that and then that wouldn't be good. It wouldn't be any worse than the trees that are going around. It's just basically there.

But I think that the economic of it would really be good for us, at least in the short-term because those people will come in here, the workers and

2|24

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they'll bring an RV trailer and they'll provide rent to these parks. It will provide a lot of sales tax money. That's really beneficial particularly in this county because we use a lot of sales tax money to fund roads and bridges, some of it. We use it entirely to fund the Payne County Expo Center and also Cooperative Extension Courthouse -- not the courthouse, the Administration Building in Stillwater. So I know it would be a pain in the butt for a little bit, but I have no problem. And I just want to contradict some of the things them people were saying because they ain't going to know it's there. GRDA line does make my radio static when I go in there with the tractor, but mostly with the truck. I don't like that, but it doesn't take me long to get in the deal. That's all I got.

2|24 cont.

3|15

MR. STINER: The question that was brought up was once they get a right-of-way, what happens after if anything is tore down and they leave the right-of-way? Always before the right-of-ways are never released and they hang with the property forever. Can this be written into the contract procedure, whatever they write, that should they ever tear the equipment down, the right-of-way reverts back to the owner and clears the abstract? That's it.

2|6

(The public hearing was adjourned at 8:00 p.m.)

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Certificate

I, LINDSEY GOODENOW, Certified Shorthand Reporter, do hereby certify that the public hearing was taken by me in electronic stenographic shorthand and thereafter transcribed by me. I further certify I am not an employee, attorney, nor relative of any of the said parties or otherwise interested in the event of said public hearing.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this February 12th, 2015.

Lindsey Goodenow, CSR
CSR No. 1956

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PLAINS & EASTERN CLEAN LINE
TRANSMISSION PROJECT DRAFT EIS
ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING
HELD AT THE WES WATKINS CENTER
IN STILLWATER, OKLAHOMA
AT 5:00 P.M. ON WEDNESDAY, FEBRUARY 4, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lacy Antle, CSR, RPR

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(On Wednesday, February 4th, 2015, a public hearing open house was commenced at 5:00 p.m.)

MS. DILBECK: I just want it on record that to take the resources in Oklahoma and transfer them to Arkansas and Tennessee, we, as lifelong residents of the state of Oklahoma, do not like that.

We don't want those huge transmission lines. They're already across Oklahoma and a lot of places, but these are kind of like those that we saw up in Utah and Idaho that transmit the voltage from the wind power out in Western Oklahoma, the three corners, Oklahoma, Texas -- I mean Oklahoma and Texas and Kansas. 1|34

MR. DILBECK: In Utah, when we come across California.

MS. DILBECK: Yeah, we saw it and they're so ugly. I mean, if Obama would just come out -- and he wants to preserve the pristine Alaska, and then he sees what is happening right here in our beautiful Idaho and Utah. 2|29

MR. DILBECK: They won't do anything.

MS. DILBECK: It's ridiculous.

MR. DILBECK: All up in Utah. Don't

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repeat that.

MS. DILBECK: Yeah, there is in Utah.

The government is self -- I mean, they do everything for self. Of course, we all know the politicians only work for us to get re-elected again, really. Don't you all know that? You work for the U.S. government. These politicians that you have to live with. I mean, you're just a little peon compared to them and --

MR. DILBECK: Honey, don't put all that in.

MS. DILBECK: -- like the EPA there with the pipeline, it doesn't make me any difference. You know how they're arguing with the pipeline and Obama, you know, won't sign it? Well, so what?

MR. DILBECK: I'd rather have 200 pipelines than one power pole.

MS. DILBECK: Yeah, it's under the ground, you don't see that. These things are huge. People that live near them, the emissions, I know they say it's safe, I don't believe them. I mean, it's worse than a pipeline rupture. And there's people in Nebraska that are fighting the pipeline, I mean, it's going to be hidden under the ground and -- 3|15

MR. DILBECK: It's not those people

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fighting it, it's the EPA.

MS. DILBECK: And it's Buffett that owns the railway that brings the tar sands out of Canada into the U.S. How many times has a train wrecked with oil? Several times lately. Yeah, in Canada, on the northeastern side of the U.S., you know, and they don't even talk about that, because it's Buffett who is a friend of Obama, and he owns the railway, and so they don't want the Keystone.

MR. DILBECK: Honey, you can't do anything like -- you're talking about the power line here, not the pipeline.

MS. DILBECK: Yeah, I know. Well, the power lines in Oklahoma, I just strongly object to Oklahoma's resources going out of state like that. And I hope our state legislature -- are you keeping up with them? Okay. There are several legislatures and I'm going to help them get the bills where we pull back those subsidies that the Clean Line gets. You don't call them subsidies, but it's taxpayer money, it's credits. And, of course, you like to put that in words that the connotation is not so hard to swallow for people that don't have a background in all this.

I don't know, just look at all of you in

1|34 Cont.

4|24

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the government that has to put forth to do this sort of thing. That is so wrong of our state.

I want the government to move this Clean Line underground, okay? Tell them to put it underground, that way we don't have to look at it.

And then the people at the Department of Energy in Washington D.C., have them come in and sleep in a bedroom that one of those wind turbines is not very far away and listen to the "swoosh, swoosh, swoosh."

You know, the hearing the other day in Oklahoma City, a lady recorded that, and so she was playing it when they were doing their talk, their presentations, and then the question and answer, she had that "swoosh, swoosh." And the guy that was over everything asked her to turn it off and she said, "This is what I listen to day in and day out."

So if those people up there -- they don't have any idea about the good life we have down here and they're trying to ruin it. Put it underground.

(At 5:50 p.m., the open house was recessed for the public presentation. After which, the formal public comments began at 6:27 p.m.)

MR. FASANO: This portion of our meeting is officially designated as the public hearing for

1|34 Cont.

5|10

6|22

1|34 Cont.

5|10 Cont.

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the Plains and Eastern Clean Line Transmission Project Draft and Environmental Impact Statement. This meeting is being held on the February 4th, 2015 at the Wes Watkins Center in Stillwater, Oklahoma. It is being held to receive comments on the draft EIS. We are commencing the public comment portion of this meeting at 6:30 p.m. and are scheduled to adjourn once all participants have had a chance to speak.

Each speaker will have approximately three minutes, no more than five. We will try to provide flexibility in the amount of time allotted, based on the number of speakers that have registered; however, please be concise.

This meeting was preceded by a presentation by DEIS document manager, Dr. Jane Summer Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

For the record, my name is Greg Fasano. I have been asked by DOE to conduct this comment period as neutral moderator. I will assure that the ground rules reviewed earlier in the evening are followed.

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The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

The first speaker is Brent Kisling.

MR. KISLING: Thank you very much for the opportunity to provide comments this evening on this very important project. My name is Brent Kisling, I'm the economic development director from Enid, Oklahoma. I will be unable to attend the hearing tomorrow night in Enid and wanted to make sure that my comments were part of the public record. But I'm also a farm boy from Northwest Oklahoma, from Burlington, in the Northern Alfalfa County area and understand that many of the needs and challenges that we have in agriculture and also as landowners in our area of the state, that and oil and gas are probably the two most important industries in our area when it comes to economic development.

I will tell you right now, in Northwest Oklahoma and North Central Oklahoma there is unprecedented wealth in our communities. A lot of that is because of increased drilling with oil and gas, a lot of it's because of profits in

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agriculture, as well as in manufacturing. But one of our major choke points that we have in this area of America is water and work force. And so how do we get investment into this area with these limited resources?

One way to do that is to solicit for the investment in wind energy, which we've been very successful in doing the last several years. One problem with wind energy is that it's producing electricity that has to be consumed by people or by industries and we don't have near as many of those in Northwest Oklahoma as they do, say, on the East Coast, that's why a project like this is very important to us in this area of the country. Not only is it an important project, it's an important privately funded project for our area, to be able to take wind energy that worked very well in this area and take it to the populated areas of the East Coast. 1|1

I can tell you I have worked very closely with the folks at Clean Line Energy for the last five years. I have visited their headquarters in Houston in order to learn more about this project in order to make sure that it was something that would work well for the constituency that I represent in

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Garfield County and Northwest Oklahoma. It's also something that will help us to continue to grow and be successful.

I can tell you without a doubt that I have found them in every step of the way to be professional, to be very diligent and to be very understanding in the way that they have approached this project. I have witnessed a number of situations where they could have had the opportunity to cut corners and they chose not to, because of that, I think this particular project is revolutionary for our area of the country and would certainly support its approval. Thank you. 2|35

MR. FASANO: Thank you. The next speaker is Cassie McCoy.

MS. McCOY: Good evening. As you said, my name is Cassie McCoy and I am here this evening to support the project. Much like my -- the previous presenter, I am also a country girl from the opposite side of the state. I grew up in a very small town called Miami, Oklahoma, some of you may have heard of it. It's not pronounced Miami, like most people think. I'm also a graduate of OSU and now I live in Oklahoma City, and when I was reviewing the list of meetings I thought, "what a 1|35

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great opportunity to come back to Stillwater," so thank you for organizing this event tonight.

As I mentioned, I'm here in support of the project. As most of you know, Oklahoma already exports natural gas and oil and this has been a very valuable resource for our state. How much of you cheer for the Oklahoma City Thunder? It probably wouldn't happen if it wasn't for Chesapeake Energy. You can't drive down to Oklahoma City and not see the huge skyscraper that Devon has built, so we've already seen the benefits of natural resources. This is just another opportunity for our state to take advantage of the abundant resources that we have in our state.

This project will create a lot of job opportunities for Oklahoma, it will unlock over -- it will unlock billions of extra monies in investments. As she mentioned, this line will cover a lot of mileage, which means it's going to cover a lot of property across the state, many of it would be individual property, and thankfully they've done reviews to ensure that the line will have minimal impact on land and property and it will be sensitive to environmental issues, but I think the biggest issue is probably the damage to individual property.

1|35 Cont.
1|35 Cont.
2|24
3|6

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How many of you, while you were driving here today, counted the number of transmission lines that you passed? It's the same as the utility lines that give you power to your houses right now. So just keep that in mind and thank you again for the opportunity to speak.

MR. FASANO: Thank you. Aubrey Pixley.

MS. PIXLEY: Good evening. My name is Aubrey Pixley and I'm from Claremore, Oklahoma and I'm here tonight to show my support for the Plains and Eastern Clean Line. There are many reasons to support this project, and a few of the reasons I support it are the creation of jobs and the additional income to our state. For example, in my community there's a company called Pelco Structural and they manufacture steel tubular -- it's a product that will be used to manufacture -- used in the manufacture of these windmills and they employee about 100 Oklahomans and they do great things for our community, so their success is our success. And I know there are businesses like them across the state that will benefit, along with their communities, from this project.

And along with that, the construction of this line and the building of these wind farms will

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create about one thousand -- or thousands of jobs, and once this project is complete, the sites will employee hundreds of people to maintain and operate them. 2|24 Cont.

Another reason I support this project is that wind energy is abundant in Oklahoma. We have the potential to supply more than 30,000 times our own electric demand, so that gives us the opportunity to export wind energy in the way that we already export oil and natural gas, and that's another opportunity for the state to benefit financially from this project. 3|1 2|24 Cont.

Lastly, and probably most importantly to me, I feel like this country needs more options when it comes to clean and affordable energy, and most people, myself included, don't have that option, and I feel like wind energy is a step in that direction, and for that reason and many others, I am here to support this project and thank you for your time. 1|35 Cont.

MR. FASANO: Thank you. Gail Cullens.

MS. CULLENS: My name is Gail Cullens and I'm from Sallisaw, Oklahoma and I oppose this project. I oppose the government teaming up with a private investor for eminent domain. They have gone to the Oklahoma Corporation Commission and did not 1|34 2|4

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mention anything, why the Section 122 until they were requested and the rebuttal was about the viability of the insurances, environmental transmission grid impacts, carbon emission reduction, cost of delivering wind. Failed to say anything about the application, and that was the response. However, in July of 2010 they had applied with the Department of Energy and on their update in August 2011 it states under "Condemnation" that the DOE and Southwest understand and agree that the ability to acquire through a condemnation proceeding property necessary for the development and construction operation of the project is one of the primarily reasons for Clean Line's interest in developing the project with DOE and Southwest for the use of the EPA section. 2|4 Cont.

So they didn't even tell Oklahoma Corporation Commission up front that this was a parallel project that they were doing. There are four other projects with these long lines, all -- including 11 states, and if we let this go through, it's just going to set a precedent that any company can come through and team up with the government if they have reasonable cause and come and take your land and I disagree with that. We need to stand up

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for our rights. 2|4 Cont.

As a matter of fact, they just applied, the Grain Belt just applied with that transmission line, tax credits. Oklahoma wind energy companies, in 2012, received $43 million in tax credits, in 2014, $32 million in tax credits. Senator Mark Allen has stated that this project could cost Oklahoma at least 40 million tax credits. That's a lot of money. 12 more wind farms, 12 more areas with wind farms, we need some more tax credit. We're already sending out lot of money on a tax credit. A credit is not a deduction, it's not a formula, it is straight off the bottom. We have that opportunity in our income tax and I'm sure every one of us will take that opportunity, whether it's child care, retirement, any way to save our tax liability, so you can be assured that this company that is for profit will take the tax credits. 3|24

Jobs -- oh, by the way, Warren Buffett, his statement, he has invested in wind farms and he says he does get a tax credit if they build lots of wind farms and the only reason to build them is for the tax credit, and without that, it doesn't make sense.

Jobs, yes, they have posted thousands of 3|24 Cont.

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jobs on the original proposals with 6,000 permanent jobs, 2011 it came down to 10,000 construction jobs, 1,000 permanent jobs. There current website says 5,000 construction jobs and 500 direct jobs. On the draft environmental impact statement it says, peak construction, 1700 jobs, of an average of 965 and a total of full-time jobs between 72 and 87, that's 15 at each converter station and 42 permanent jobs for the entire state of Oklahoma and Arkansas. Thank you. 3|24 Cont.

(Exhibit 1 marked for the public record.)

MR. FASANO: Scott Lohah.

MR. LOHAH: Yes, my name is Scott Lohah and I live in Hominy, Oklahoma and we're being affected by some of the wind farms at this time. There's one in -- that will be going to federal court and that this could really turn all this around on February 26th, one of them is going to federal court and may vacate the premises. But hopeful if this goes through, hopefully there's a lot of jobs, retirement, and motels and restaurants.

But the Oklahoma State legislature, just a few days ago, are -- they're going to cut the jobs tax incentive because there's not enough people hired with the wind farms, and also with the movie 1|24

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industry, they would come in six or seven years ago and promised a lot of jobs, so they're getting ready to cut that tax incentive. 1|24 Cont.

But from what I've read, Plains transmission line is going to carry from the Oklahoma -- is going to carry from the Oklahoma Panhandle to the state of Tennessee, TVA, electric that's generated by wind power. From what I understand, none of the electric generated in the Oklahoma Panhandle is going to be sold to Oklahomans from the Plains transmission line. It seems a little strange that Plains transmission line would bypass selling electricity to Oklahoma City, Tulsa, Wichita, as well as the Oklahoma electric companies and the City of Stillwater. Who is buying electric being generated by the Panhandle as we speak? Are they idle? Are they chained up? 2|4B

From what I've read in the papers, the electric companies feel that this project is a waste of 2 billion tax dollars. They feel they can gather, transport, trade the electric to other electric companies anywhere in the United States. 3|4A

From what I understand, this transmission line is going to be 700 miles long. For each mile of that, some of the electric is lost. In other

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words, it does not make any financial sense, as per the January 30th, Tulsa world, the U.S. Senate vote down an amendment by a vote of 47 to 51 not to extend the tax credit for wind energy, which amounts to 2.8 billion tax dollars stopped. Now, that makes sense to lose federal support, now we're going to talk about losing state support. 3|4A Cont.

Now we're getting to the loss and I've got people -- it just in the -- at Oklahoma City as we speak. Now we're getting to the loss of the Oklahoma State Senate and the Oklahoma House of Representatives support for wind energy. As we speak, Senator Mike Mazzei of Tulsa and State Representative Earl Sears of Bartlesville have cosponsored legislation to curtail three major subsidies that Oklahoma taxpayers no longer can live with. They are the zero emissions tax credit, the investment tax credit, and the ad valorem exemptions, which in 2013 amounted to 44 million to 64 million dollars. 1|24 Cont.

Mike Mazzei of Tulsa is the state senate finance chairman. He stated in the November 16th, Tulsa World that wind power or wind energy is part of the largest corporate welfare give away in the history of Oklahoma and this is what brought on much

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needed legislation. Now, that makes sense. Mr. Mazzei, who is elected by us and then the senate elected him to watch our finances, that Mr. Mazzei watch over our taxpayer dollars. Wind energy, with today's technology, cannot live without taxpayer handouts, this includes the $2 billion transmission line. 1|24 Cont.

The wheels are starting to come off this train and I would not propose not another dollar go to this unnecessary project. If this project doesn't go through the chairman of the Plains won't lose his job or the lawyers for Plains won't lose their job or the TVA won't lose their jobs, they might miss a Christmas bonus or two, but the Oklahoma and U.S. taxpayers can spend that 2 billion plus dollars on things that are ready needed. And I hope that makes a little bit of sense. Thank you. 4|34 1|24 Cont.

MR. FASANO: Okay. That's the five people that signed up to talk. Is there anyone else who hasn't spoken yet who would like to provide comments on the record? It's easily accommodated, just come on up and we can take your comments. Come on, sir.

Please state your name, location and affiliation, if appropriate.

MR. CROSS: My name is John Cross. I live

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in Stillwater, or right outside of Stillwater on 56th Street, and my comment is it not going to be anything as elaborate as the previous speakers, but within the last year I feel like we've had some kind of environment impact. We have at least four pads that have -- where they've drilled within a mile of our house. We feel the earthquakes at this point and I'm not sure exactly whether this is just a line or -- is it a line or wind turbines, who answers that? 1|17

MR. FASANO: Just continue in comment, sir.

MR. CROSS: It's wind turbines?

AUDIENCE MEMBER: It's a line.

MR. CROSS: We feel, at this time, it primarily has environmental impacts all around us at this point. And if this goes through, I hope it brings a lot of primary jobs, high wage jobs, not secondary labor market jobs, which are low wage and so forth. We need that for the economy. So just talk about jobs. You need to -- for me, you need to point out what kind of jobs you're going to bring into the economy, and not just a lot of low wage jobs, but I feel like that we've been impacted. 2|34 3|24

We've had at lot houses for sale out on

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56th Street where the pads for fracking have stepped -- located right across the street from houses and so forth. If you do the -- if this occurs, my hope is that the proposed route down 177 South takes it instead of coming out by 56th Street. Thank you. 4|8D

MR. FASANO: Is there anyone else who would like to provide comments on the document?

Okay. Last call for someone who would like to make a comment.

Okay then. Thanks again for your courtesy, your participation and your comments. Please remember that you can submit comments on this document through March 19th.

At this time, rather than adjourn the meeting, I'm going to place the hearing in recess at 6:52 p.m. In case someone else would like to make a comment, we're here until 8:00 p.m. If you would like to make a comment still, you can do it one-on-one with the court reporter, it will get recorded down verbatim for the record.

Staff will also remain for your convenience to answer questions, look at maps again, and hopefully answer your questions. So with that, thank you very much for coming.

(THE PUBLIC HEARING WAS ADJOURNED AT 8:00 P.M.)

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CERTIFICATE

I, Lacy Antle, Certified Shorthand Reporter, do hereby certify that the public hearing was by me taken in shorthand and thereafter transcribed; and that I am not an attorney for nor relative of any of said parties or otherwise interested in the event of said action.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 11th day of February, 2015.

Lacy Antle, CSR RPR

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT DRAFT
ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING LOCATED AT THE
ENID CONVENTION HALL
IN ENID, OKLAHOMA
AT 5:00 P.M. ON THURSDAY, FEBRUARY 5, 2015

FACILITATOR: Greg Fasano

REPORTED BY: Lindsey Goodenow, CSR

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EXHIBITS

(None)

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(On Thursday, February 5th, 2015, a public hearing open house was commenced at 5:00 p.m. and recessed at 5:49 p.m. for the public presentation. After which, the formal public comments began at 6:31 p.m.)

MR. FASANO: This portion of our meeting is officially designated as a public hearing for the Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement.

This meeting is being held on February 5th, 2015, at the Enid Convention Hall in Enid, Oklahoma. Is it being held to receive comments on the Draft EIS. We are commencing the public comment portion of this meeting at 6:31 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have approximately three minutes. We will try to provide flexibility in the amount of time allotted based on the number of speakers that have registered; however, please be concise.

This meeting was preceded by a presentation by DOE's EIS Document Manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

For the record, my name is Greg Fasano. I've

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been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

The court reporter's task is to create a complete and accurate description of this meeting. The verbatim transcript of oral comments received tonight will be included in DOE's record of these proceedings.

The first speaker will be Stan Ralstin followed by Laura Girty.

MR. RALSTIN: My name is Stan Ralstin and I reside in Enid, Oklahoma, and I'm the Northwest Regional Development Specialist with the Oklahoma Department of Commerce which is the primary economic development agency in the state. Before that, I was a Real Development Specialist with the Oklahoma State University Extension Service. I was born and raised on a farm in the Oklahoma Panhandle and I have lived and worked in northwest Oklahoma my entire wife working in the area of economic development.

Two truths that I've learned over these 30 years of my experience are: No. 1, economic development takes time, it's not an overnight process, and when it comes about it is very important; No. 2, some projects are worth pursuing and some projects are not. And that will most likely and most of the time is

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determined by the local values and by the integrity of the company that's bringing the project along.

The Clean Line project has been in development over several years and the people that I've worked with in my capacity have been first class. 1|35

It has been several years since Clean Line began talking to the people in the panhandle about this potential project, and here we are tonight moving another step closer to the finish line.

The time frame has been a long one partially by the regulations that are in place to protect the public and private good, but I can say without hesitation that I've never see a company work so hard to be open and transparent in the process and in their plans for this project. They have been open in all their dealings with landowners, local county and state officials, and in local communities. 1|35 Cont.

I know they have conducted literally hundreds of meetings across this state and across the state of Arkansas to allow people to provide their inputs and their concerns. They have held what they've called office hours where they will set up in a small community to allow people to come in one-on-one without the glare of public scrutiny and without their peers where they can speak privately with them about their 2|2B

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concerns or about their support for this issue.

They've held roundtable meetings with county commissioners and city officials and chambers of commerces to get their concerns and issues. I see Clean Line employees at more meetings in northwest Oklahoma than I see a lot of the rural community leaders. They basically have become a part of the communities. 2|2B Cont.

They have implemented a landowners' Code of Conduct that requires all of their employees and their representatives and their subcontractors to treat every landowner with consideration and respect. All of this, in my opinion, speaks to the integrity and the honest of the Clean Line and their people. 1|35 Cont.

So quickly looking at some numbers, this investment in Oklahoma will alone be a billion dollars with 2,300-some direct jobs. When the Wind Farms Association construction comes along with it, there will be several billion with many more thousand jobs. Landowner payments will be nearly 35 million annually. And one thing I find unique is with the conversation with county commissioners, Clean Line has voluntarily agreed to pay county governments a one-time up-front construction cost of $7,500 per mile or a total of about $3.2 million to cross county governments across 3|24

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14 counties to assist them in this up-front payment because there will be $13.2 million in ad valorem taxes of those will benefit our schools and so forth. 3|24 Cont.

Oklahoma has always been a leader in energy production in oil and gas, but recently we once again are facing the reality of the cyclical nature of this energy sector. Oklahoma as an inexhaustible supply of wind that can be turned into energy. And other parts of the country have population centers that want clean, affordable, homegrown energy sources. The only way to get that energy from one location to the other is transmission line. And in my opinion, Clean Line is the best company to make that a reality. 4|1

This project benefits landowners, local citizens, communities, schools, cities, state, and county government. But most of all, it diversifies our energy resources so it benefits our great nation as well. 1|35 Cont.

MR. FASANO: Thank you. Laura Girty followed by Bill Cornelson.

MS. GIRTY: Good evening. I'm Laura Girty. I'm with the Oklahoma Department -- the Oklahoma Small Business Development Center and I'm a center director here in northwest Oklahoma. And although my family are landowners in this region, I came tonight to talk to

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you about economic development.

For around 20 years, my job has been help businesses, grow businesses, bring jobs, and bring economic development to this region. I was exposed first to this project in 2012 and since then have watched Clean Line look into how much they could pay the landowners, how many ad valorem, how much construction costs, and the number of jobs. The same process of building this line and transporting wind energy and electricity out of this community is no different than the oil and gas that leaves under our ground in transport pipelines or on trucks. It's taking our resources, and this one rejuvenates itself. The wind is always there, unlike our other resources that will run out. 1|35

It will assist our farmers to diversify their lands and gives them other options besides oil and gas and whatever they're ranching and farming on those lands. 2|21

The investment will be over a billion dollars. We've seen those numbers and heard those numbers on the written documents. That's a lot of economic development, more than I've accomplished in any other project I've worked on in 20 years. The construction jobs are from 2,300 to 4,300 for the 3|24

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following wind farms is more jobs than I've helped in any other way. But even the 250 permanent jobs that will be left in the region is a strong impact in economic development and bettering this region for our communities. 3|24 Cont.

I have watched Clean Line approach communities and be open with the communities on what they plan to do to develop the landowner's Bill of Rights, to make adjustments in counties when they said they don't make money from the ad valorem that goes to the schools. And they have countered that with funds that they are willing to give to the roads or general funds, whatever each county wants. I've never seen another business do that as well, be willing to give and make adaptations that help the communities and those counties. 4|27 1|35 Cont.

Again, this energy -- wind energy isn't going away and it is a way for us to diversify, and thank you.

MR. FASANO: Thank you. Bill Cornelson followed by Edith Willey.

MR. CORNELSON: Thank you. My name is Bill Cornelson. I am from Cleo Springs, Oklahoma. I have a quarter section of land south of Fairview, Oklahoma, that the proposed route is coming through. It is

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bisecting my property, basically coming right down the middle.

My statement -- I have two comments: One is a question; one is a statement. My statement would be that I would prefer that the route be moved to the south edge of my property and go along the south edge of my property on the half section line. The second comments that I have is that it's my understanding that this venture, this company, does not yet have eminent domain. And my question is, under what circumstances would eminent domain be denied to this venture? Thank you.

MR. FASANO: Thank you. Edith Willey followed by Bruce Willey.

MS. WILLEY: As probably a lot of you are, I am quite concerned about electric transmission line going across our property, two of our properties as a matter of fact. We have a large pond that we have waterfowl on a big share of the time that the line would go directly over. We have a plant irrigation on one of our properties. We have a house within a quarter of a mile of the line. That's going to be beautiful scenery, isn't it?

I notice they mentioned access roads. Apparently, they're going to have access roads for

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2|21 Cont.

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these lines maybe for the rest of our lives and forever. They tear up the land. They do their construction. As farmers, we have to work around them with our equipment, around the poles, underneath the lines, not for just a little while, every time you go on the land. They mentioned that they could apply restrictions on our land use. How can they restrict what we use our land for that we have worked hard to get and maintain? Again, I just don't want it on my land for various reasons. Thank you.

MR. FASANO: Please remember to state your name first. Bruce Willey followed by Keith Neufeld.

MS. WILLEY: Bruce doesn't feel like he can walk up there to talk.

MR. FASANO: Would you like to talk from back there?

MR. WILLEY: No.

MR. FASANO: Okay.

MR. NEUFELD: I will pass.

MR. FASANO: You're Keith Neufeld?

MR. NEUFELD: Keith Neufeld.

MR. FASANO: Jess Davis followed by Rylan White.

MR. DAVIS: I'll also pass.

MR. FASANO: You're Jess Davis?

2|21 Cont.
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MR. DAVIS: Yes.

MR. FASANO: Rylan White?

MR. WHITE: I'm not going to pass. Hello. My name's Rylan White. I represent Island Ranch -- Island Guest Ranch west of Ames along the Cimarron River. You've got to forgive me just a little bit. I'm more comfortable on the back of a horse than I am in front of a group.

This power line will directly affect my family's way of life where we ranch, where my family's been since the run of '93. Now, we run a guest ranch, we run a hunting operation, and we run cattle. I, again -- what Edith was talking about, land restrictions, it's my understanding that we will not be allowed on our properties at certain times when they put these lines in. We will have to pull cattle out. We will have to do various things while they're building it. Now, that won't work. Where we run cattle is in very rough, very fragile environment and I can't squeeze cattle to another part of the ranch. I'll have to sell cattle.

As far as health effects -- my notes are a little bit scrambled, so you'll have to forgive me. My dad has a pacemaker. My brother-in-law has a defibrillator. It's our understanding -- we can't get

1|13

1|13 Cont.

2|15

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a definite answer one way or the other, but it can't be said that it won't affect either one of those.

I'm concerned about the electrocution hazards of this line as hot as it's going to be. We got literature from the company that said you had to have drag rods and swinging metal gates because it will -- to ground the gates because it will fry, literally get a hold of you if you get the gates that's not grounded.

I mean, hell, environment impact, when oil companies drill wells down there along the river where we're at, they put a thick rubber mat down underneath the drilling rig to contain any spills and anything.

This land where you're coming across -- where they want to come across the Cimarron River west of Ames comes across ground that I lease. And it's just north of our -- north of our deed land. It's land that's owned by the Fischer family and the Fischer Family Trust. That is rough, rough fragile country.

If any of you all -- and I talked to an engineer briefly and he hadn't looked at the ground before they ran the line. Any of you all are familiar with Little Sahara State Park, that sand along the Cimarron, you skim them off, they won't come back. They will blow away.

And it's -- Edith's talking about waterfowl.

2|15 Cont.

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The Cimarron River where we're at is a huge, huge migratory stock for waterfowl, for eagle, for osprey in the wintertime. 4|31

I mean, 1957 where this line's coming through, the Cimarron River was four miles wild. I don't think your towers are going to stand that. It may be a once every hundred-year flood, but they're going to be up and they're going to have to see it. 5|26

Like I said, the land use restrictions -- I'm going back over myself a little bit. The land use restrictions are something that really, really bothers me, not to mention, you know, just the detrimental effects. It's an add-up. It's land use. It's scenery. It's everything. 6|21

I mean, hell, west of Ames where this route's coming through there's a hill they call Mount Zion that the churches in Ames use every -- we lease this ground. The churches in Ames every Easter have a sunrise service. This has got a 10-foot tall steel cross on it. You drive right through the -- you can drive right by it. I mean, will this electrify that? One alternate route goes right over the top of that. And I'm not talking for you all to have two feet off the ground. I'm talking 250, 300-foot tall sand dunes covered in sage brush and cedar, probably more cedar 2|15 Cont.

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than should be, but it is, I mean, it's rough country.

So like I said, I'm a little bit all over the place up here. You all have to forgive me.

MR. FASANO: One-minute wrap-up, please.

MR. WHITE: Okay. Historical impact through this part of the ranch, Fletcher's right of the Chisholm Trail. It was the side route of the Chisholm Trail that, when they crossed the river at Dover, it angled. It angled off and went to Dodge. It didn't go -- it didn't follow the straight 81 Pathway that is generally accepted as part of the Cimarron River. 7|20

Hell, we've drilled water wells down there and we've come up with bison and wild horse bones from prehistoric times that we sent. We have no idea what it was, and we're talking shallow. That's the other thing. I don't know -- well, we sent those bones to OU and they identified them. But I don't know how deep your towers are going to be, the footings for these towers, but there's ground water in a normal wet year of four feet. I mean, you're talking wet. We can drill a water with a handheld well drilling rig, we can drill wells at 20 foot that will pump 100 gallon a minute. And you're talking -- I don't know how -- you're going to have to go seriously deep to withstand these towers or to put the bases in for these towers. 8|18

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And I'll disagree slightly with this is much different than with the oil and gas companies because we can deal with oil and gas companies. They bury the pipeline, they come in and drill a well, they clean it up and they leave. It's there, yes, but everybody that I've dealt with, I'm not -- I'm representing my dad. My dad's 75. He's done this a lot longer than I have, but, hell, most of the oil companies we've dealt with have been really good. OG&E put 24, 23-feet lines in Waynoka to the booster station by Crystal Lakes there west of Ames. And they proposed the route, they came in and looked at it and couldn't believe how rough the country was. So they changed the route to avoid a lot of that country because they weren't going to dig through it. They had to go through a couple of hills, but they put them back.

MR. FASANO: Can you wrap up? I'm sorry.

MR. WHITE: Okay. That's basically it. Forgive me. But that's it. We just -- we don't want it. 9|34

MR. FASANO: Cynthia Schoeppel followed by John Hendrickson.

MS. SCHOEPPEL: This is in reference to some property I inherited in Major County, Oklahoma. My husband and I have managed the property for about 20

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years. We are very opposed to this line running across the property. It bisects one of the quarters. The main value we believe of the property is aesthetic and recreational. We have a residence there. We have had hunting there for many, many years and will continue to do so. 1|8A 2|23

We have especially been interested in the ecological balance of the property. When the estate of my parents was settled, the very first thing that we did was hire a ranch management specialist from Kansas to come and look at the property. Fortunately, it had not been abused, but there were certain aspects that we needed to change. We immediately quit using pesticides, herbicides, synthetic fertilizers. We allowed the pastures that have been cultivated like with Bermuda to go back to native grasses that were higher succession.

Then about ten years ago, we had a field ecologist from the University of Kansas come out, and she did a very extensive study on the property. I mean, she had all this checklist of stuff. Basically, what she was saying that we had made significant progress in the ecological balance of that property. We spent considerable money building ponds, cleaning ponds out, adding cross-fencing, et cetera, et cetera.

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We have basically a flyover corridor through there. We see a lot of mallard ducks, Canadian geese, blue heron, of course, quail are back. We have horn toads. We have all this wonderful wildlife. And we think the transmission line would adversity affect all of these things. So we are going to oppose this by legal means if the opportunity arises. Thanks. 3|31 4|34

MR. FASANO: John Hendrickson followed by Leslie Ballew.

MR. HENDRICKSON: My name is John Hendrickson and I work for the Bank of Oklahoma in Tulsa. And basically I'm here to represent agent for the Dillingham Ranch, a 6,000 acre ranch located in Logan County, Oklahoma, that has been a part of the Dillingham family since 1956.

The property is very important to them. It's a legacy. It's a property that is maintained to the highest standards. Things are done environmentally -- to be environmentally friendly as much as possible. Things are done to just keep it looking nice. If you drive past it, you look at it, it's a beautiful place. And they don't want this on their property.

It's going to take away grazing land. It's going to take away what they can and can't do with the land. You know, we don't know the impacts of 1|21

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environmentally what can happen as a result of this line going in through there. 1|21 Cont.

There's a lot of promises of things that we've heard that we don't necessarily agree with. You know, I thought this was a question and answer session, and I guess I'll get my questions answered later, you know, but I want to know about eminent domain. I want to know if it's there or not. Agreements that we were supposed to be provided that we know for sure that we haven't received for whatever reason, our counsel is checking into it. 2|6

It's just a lot of different things to us and to the family that we don't want it, we don't need it, and it's -- we've tried to be as nice as possible about conveying that. But it's came back around again and we adamantly oppose it. Thank you. 3|34

MR. FASANO: Thank you. Leslie Ballew.

MS. BALLEW: I'm passing at this point.

MR. FASANO: Roger Dobrovolny.

MR. DOBROVOLNY: No comment at this time.

MR. FASANO: Steven Mackie followed by Lisa Powell.

MR. MACKIE: Good evening. My name is Dr. Steven Mackie. I'm a professor at Northwestern Oklahoma State University and I'm a fourth generation

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landowner near Ames, Oklahoma. I live right between Mr. White there and Mr. and Mrs. Willey at Crystal Lakes.

And I strongly oppose this high voltage power line for several different reasons. But first of all, I want to thank the Department of Energy for hosting this event tonight because public discourse, I think, is losing ground in our society, and this is what makes democracy really strong. And I believe in democracy in the United States of America. So thank you for hosting this.

So I speak tonight in honor of many different people, my great-grandparents settled the centennial farm where I live close by in 1893 in the great land run at that year. I speak for them. I also speak for my grandparents Harold and June Mackie that are not with us anymore that cared deeply for their piece of property names. And I also speak for my parents who continue to care deeply for that property, and my aunts and my uncles and my cousins that live there.

So I have four reason that I proposed this plan. The first one is fiscal. And I've talked to many people in my community about this, and we support the republican State Senator, Mike Mazzei. He's chair of the Oklahoma State Finance Committee, and he opposes

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this project.

Particularly, he has done a lot of research in the last year looking at Clean Line Energy Partners and their practices. And he's done some numbers and my numbers are a little bit different than the development people. So there's going to be some conflict there. But according to our Senator Mazzei, the Oklahoma taxpayers are paying $60 million in incentives for this project. And the landowners that are leasing their land are only getting about $9 million. So there's a discrepancy there that needs to be looked at.

And I'm a public school teacher, so I'm a public servant like these good folks from the Department of Energy, and I'm really concerned about the state of our schools and I'm concerned about the state of our roads and our bridges. And I'm really concerned about this big discrepancy between the $60 million and $9 million.

The second reason is, is it really logical? I mean, building a line that's 720 miles to fund energy systems that are miles away, it just doesn't make sense to me. And I've been accused of not making sense a lot of times, but this project right here just doesn't -- just doesn't ring true for me. And so why did -- if we're going to build a project, let's keep the wind

3|24 Cont.

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3|24 Cont.

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energy local and, you know, fuel economy right here in our own back yard. You know, that just makes sense. 5|1 Cont.

Plus, energy is lost when you transport it. And so you're losing energy when you transport it 720 miles. 6|4B

The third reason is for health. I mean, there are a lot of documented and -- of health risks for not only for people, but for wildlife. And I've done -- I've read some literature on it, and everything from cancer to DNA, changing our own DNA. And as the good man, Mr. White, said, Ames, Oklahoma, is on a major migratory path for wildlife, particularly birds because we live right on the Cimarron River. And we've got the Great Salt Plains just a few miles north of us and it can drastically have an impact on migratory patterns. 7|15 8|31

And the fourth reason is basically for wildlife. I think those of us who live in northwest Oklahoma are deep lovers of the wildlife that surrounds our communities and some of us are hunters and fisher-people. And that's a -- that's not only an aspect of life that we love, but it's a cultural aspect and it's deep-seeded in us and it goes back many generations, and I'm not willing to put that at risk. 9|23

So the risks are too many and great. And

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finally, I just call on the wolf pack to stand and get ready in order to prevent this Texas-based company from coming across our land. And after all, Clean Line Energy Partners have started to gain access to our land through the illegal and unjust practices of eminent domain, and I oppose that too. And mark my words, this is not going to happen on my watch. Thank you. 10|4 1|34 Cont.

MR. FASANO: Lisa Powell followed by Matt Gard.

MS. POWELL: Thank you. I'm Lisa Powell, Associate Director of the Enid Regional Development Alliance which is the economic development office for the Enid region. Right now there is an unprecedented amount of wealth in Oklahoma. Two of the major choke points that we see for continued growth in this area are workforce and water.

One industry that works well with the restraints of both limited work force and limited water is wind industry. However, the problem with producing electricity in northwest Oklahoma using wind is that we don't have the population centers here that can utilize that wind. We produce more than we're able to consume. That's why this project is important to northwest Oklahoma. 1|1

It's a private investment that will allow us

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to add value to this natural resource of wind that is blowing over our heads and export that to other market centers that can use that resource. We have worked personally with Clean Line Energy and their staff over the last five years. We have found them to be nothing but professional, forthright, transparent, and very conscientious. 1|1 Cont.

This is a project we would encourage -- that we support and we encourage the approval of their application. Thank you. 2|35

MR. FASANO: Matt Gard followed by Tom Watkins.

MR. GARD: I'm not going to speak to numbers of what's going to be paid or generated by this company and the money going to the landowners or to the schools or whatever, but we see our schools declining every year on money coming into them. So certainly, that is something to be considered about helping our schools, our hospitals, our rural communities as our population slowly dwindles away. 1|24

I have some of the same numbers that the economic development team here has. I'm not going to reiterate that. Some of this money could be spent to the landowners. You go up a multiplier of seven, some of these numbers spent at the local level will get

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re-circulated in their own communities up to, like, seven times whether it's to go buy a new tractor, a new pickup, grocery store, pay your electric bill. That's just some of the better aspects of some of these owners getting spent back locally. 1|24 Cont.

I followed the Clean Line project for well over three years. I've sat on many of the sounding committees to help generate the possible paths, potential paths for this line to go through. They have taken great steps to work to try to find some of the better possible avenues for this line if it goes through you. It has to go somewhere. And -- but the way they've gone about to choose their routes that they've gone to, it's not like OG&E where they come and just take it and say, here, this is our line and shove it down your throat. 2|18

I'm a private landowner in Fairview, Major County. The gas and oil companies, how they do with their pipelines, they to shove it down their throat. And I think this company here has done Herculean efforts to try to pick some of the least offensive routes possible to go through our communities and our rural area. Thank you. 2|8 Cont.

MR. FASANO: Tom Watkins.

MR. WATKINS: Do you want to wake up every

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morning and look at a 200-foot power line in your face? Do you? Why don't these government people build it in their backyard? Do you want to agree with that?

MR. FASANO: No comments, please. Let him talk.

MR. WATKINS: Listen, this company has not contacted us. My wife has worked her can off trying to preserve my ranch in every way possible for wildlife and everything else. This eight seconds has been in her family for 43 years. We're getting bled dry from water by Enid. So is Cornelson, so are a lot of other people around here, and we're sick of it. We're tired of government telling us what to do, government control. 1|2C

They -- you know how we found out about it? Through a game ranger telling us to come to this meeting tonight and they've got this proposed line coming straight down into our face through our pivots. Now, do we have a personal interest in it? Yes. But the question is do you want to wake up and have your land destroyed and your property value go to nothing? Because who's going to buy your land when you've got a 200 monstrosity structure looking at you? 1|2C Cont. 2|8A 3|6

And you think these agencies and these government people care about what happens? They're

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running this electricity to Tennessee and Arkansas. They don't care about Oklahoma. This is all a big guise, a big put-on. 4|34

And you better see it and you better fight because this is going to be one heck of a fight. Look at the drought we're having. Look at the winds it caused. Look at all the sands going on. And these people talk about environmental impact statement, they haven't set foot or called us one time. This is the first time we've ever even heard about it. 1|2C Cont.

MR. FASANO: Is there anyone else that has comments directly on the Draft Environmental Impact Statement that would like to provide comments?

MR. HENNEKE: Yeah. I would but I didn't get a chance to sign up.

MR. FASANO: Okay. Come on up.

MR. HENNEKE: Thank you. My name is David Henneke. I'm an attorney here in Enid. I'm here on behalf of my good friend, Roy Stutz, who has property just a mile north of Bison, and this line cuts within 300 yards of his house. I also own land south of Drummond that is the alternative route for this line, so it could possibly come over my section. 1|8A 2|8B

And I'm for economic development. I'm for wind energy, but I can tell you, I do not want this 3|6

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line on my property. Nobody in their right mind would (3|6 Cont.)
what this line on their property. And it will generate
money maybe for western Oklahoma and the people that
are going to get turbines and the people in Arkansas
and the people in Tennessee, but it's not going to
generate any money for the landowner that these lines (4|24)
are going to cross.
If this line is so important economically and
whatever else that they want to come up with as a
reason to put this line in, than why not put it under (5|10)
ground? Okay. We have pipeline all across our farms.
They've been doing that for years. We don't like them.
They pay us for it, but it's part of the nature of the
beast. We understand that.
So again, I'm not an electrical engineer, but
my guess is if they can put high voltage lines in
Oklahoma City and Tulsa and New York City and Little
Rock, they can put them across our farms and across our
lands and across our back yards or wherever they need
to be. So that's my opinion. Figure out a way to do
it if it's got to happen.
And if it comes a point where they start
condemning our property through eminent domain, then (3|6 Cont.)
figure out how to make it so that it's least
restrictive on us. The environment, wildlife, the way (5|10 Cont.)

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it looks aesthetically, all those things need to be (5|10 Cont.)
taken care of. In my opinion, you stick it under
ground just like a pipeline.
MR. FASANO: Is there anyone who hasn't
spoken yet that would like to provide comments on the
EIS? Okay. Then with that, thank you once again for
your courtesy, your participation, and your comments.
Please remember that you can continue to submit
comments on the Draft EIS up until the comment period
closes which currently is March 19th, which you heard
Dr. Summerson mention that the DOE is evaluating an
extension to that date.
At this time, I'm going to place the hearing
in recess rather than adjournment at 7:09 p.m. The
reason I'm putting it in recess is in case any one of
you would like to make a comment on the record, please
see the court reporter one-on-one and she'll record
your comments without having you having to stand up
here and doing it orally. So we have that opportunity.
Staff will also remain. We're scheduled to
be here until 8:00. Staff will remain to interact with
you, talk to you about the maps if you like at your
convenience and hopefully get more of your questions
answered. Thank you very much for participating.
(At 7:13 p.m. the public comments were

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concluded and the open house was continued.)

MS. WATKINS: Okay. Well, I own the name of our ranch is Yolo Ranch, Y-o-l-o. It's been in Major County since 1943, and my husband Tom and I run it now. And everything that we've done over the years, what 70, 80 years will be destroyed by this because everything has -- it's a beautiful ranch. And all the decisions made over the years have been so it is beautiful, to make it better to make it beautiful. And one line going through it will overrun all that. It's just that easy. 1|6

You know, from 1943 to 2015, all of our work, blood, sweat, and tears to have a beautiful ranch and everyone knows it's a lovely ranch. It's well-known. It's a -- will be ruined by this line. And we will have to look at it every day from the time we get up in the morning until we go to bed at night. And our ranch, we don't allow hunting. It's going to be -- our wishes were to be a preserve when we pass on. Right now it already is really a wildlife refuge because we have hundreds of deer, turkey, all kinds of birds that you would not normally see. 1|6 Cont. 2|31

It's of over 5,000 acres. It's all wooded other than about 200 acres that are farmed. And it's extremely important to us to have peace and harmony for

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the wildlife. It's protected every way we can. 2|31 Cont.

And our house burned down a few years ago. We're living in the log cabin that's the only house out there now. And I've been working with an architect in Tulsa, Jack Arnold, a very well-known architect, and we're just getting ready to build a brand new house. And you're putting your line right where it is -- where my house -- all my dreams that I've had for seven years to build my house. I can't because of what you're doing to us. And I'm broken hearted. And it's not just -- it's three generations, four generations of hard work, and this will destroy it. And I'll do everything in my power to stop it. This is important. 1|6 Cont. 3|34

This is what you're missing, you're missing that when you see it, it takes away the ambiance of a whole ranch, everything we ever worked for in one -- it's just like, you know, we baked a cake and it was a beautiful cake or a beautiful ranch, and here you come and step on it. Because that's what it's going to do. It won't be worth anything to sell. And I can't stomach living out there and looking at it every day. 1|6 Cont. 1|6 Cont.

I mean, I wish you could see how beautiful our ranch is. It's just fabulous and big cottonwoods. And I'm trying to protect it, protect the trees, protect the wildlife. I love the wildlife. I won't 4|28 2|31 Cont.

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even let anyone shoot them. They can live their lives without being shot at. And it just means so much to us. Thank you. 2|31 Cont.

MR. NEUFELD: My first question was what is the noise decibel at the 200-feet mark on this line on a normal day? Our biggest concern is the devaluation of our property values from this land. I am a tenant. My sister's a landowner here. And we want to be sure we would get compensated properly in a yearly effort of the landowner to being compensated. The farmer now needs to look at them to deal with these. 1|15 2|6

At present we always get $300 a year on every well site as long as we have to deal with it. And that goes to the landowner forever as long as they deal with something on the property. So that's about it.

MS. DAVIS: Our house is positioned to take in the Foss Mountains and everything from my south windows to my west windows and that's mainly windows. And you're talking about putting this pole an eighth of a -- well, I'm a third of a mile from the intersection and an eighth of a mile on the other side. That's just going to cut my view completely. And it sounds selfish of me, but that's how we set the house up intentionally. And that would just take away the beauty and it is beautiful. And I would hate to see 1|29

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that happen. Thank you. 1|29 Cont.

MS. SCHOEPPEL: This is in reference to Major County, Section 18, 20 North, 12 West. It's property that's been in my family for 85 years. The corridor that you are wanting to bisect is part of a larger parcel of land. My attorney has advised us that it would devalue the entire property. We have a residence there plus we've spent a lot of money and time and energy to improve the ecological balance in terms of wildlife and plant species and stuff like that. So we're very opposed to you coming across there. Thanks. 5|6 3|31 Cont. 6|28 1|8A Cont.

(The public hearing was adjourned at 8:00 p.m.)

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Certificate

I, LINDSEY GOODENOW, Certified Shorthand Reporter, do hereby certify that the public hearing was taken by me in electronic stenographic shorthand and thereafter transcribed by me. I further certify I am not an employee, attorney, nor relative of any of the said parties or otherwise interested in the event of said public hearing.

IN WITNESS WHEREOF, I have hereunto set my hand and seal this February 13th, 2015.

Lindsey Goodenow, CSR
CSR No. 1956

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPT OF THE PUBLIC HEARING
HELD AT THE STUDENT COMMUNITY CENTER, ASU-NEWPORT
ON FEBRUARY 9, 2015, BEGINNING AT 5:00 P.M.
IN NEWPORT, ARKANSAS
REPORTED BY MIKE WASHKOWIAK, CCR

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MR. FASANO: This portion of our meeting is officially designated as a Public Hearing for the Plain's and Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on February 9, 2015 in the Student Community Center of Arkansas State University, Newport in Newport, Arkansas. It's being held to receive comments on the Draft EIS. We are commencing the public comments portion of this meeting at 6:30 p.m., and are scheduled to adjourn once all participants have had a chance to make their comments.

Each speaker will have approximately three minutes. We will provide flexibility on the amount of time allotted based on the number of speakers that have register; however, please be concise.

This meeting was preceded by a presentation by DOE EIS Document Handler Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

My name is Greg Fasano. I've been asked by DOE to conduct this meeting as a neutral moderator. I will ensure that the ground rules

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reviewed earlier will be followed. The reporter's task is to take and prepare a complete and accurate transcript of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE record of these proceedings.

Okay, the first speaker is Jimmy Stevens followed by Sharon Wardlow.

MR. STEPHENS: Good evening, everyone. Thank you for the opportunity to speak to you tonight. As Greg said, I'm Jimmy Stevens. I'm the plant manager of a General Cable manufacturing facility in Malvern, Arkansas. On behalf of General Cable, particularly of the 146 employees at the Malvern location and 182 at our Paragould, Arkansas plant, I'm here to speak in favor of the Plains and Eastern Project. 1|35

General Cable has been designated a general -- General Cable has been designated to provide overhead transmission line, cable for that project, which would be about 25 million feet of conductor. The supply work for the overhead transmission alone is estimated to cost about $100,000,000 depending upon the commodity prices and would have a very meaningful impact on the employment of the transmission operations at our 2|24

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Malvern location.

New infrastructure projects like that are critical to General Cable's future and decisions where General Cable has -- where to hire. This project will keep our Malvern plant transmission line running for about two years.

General Cable also supports Clean Line -- Clean Line's goal of developing a local supply chain. Other raw materials that are needed to produce overhead conductors, such as steel, and that steel would likely be purchased from other Arkansas steel companies, which could potentially spur the creation of additional jobs in Arkansas. 2|24 cont.

Additionally, for a project of this size we would likely be coordinating work with a local truck company to deliver the product. It would be about 2100 truckloads of cable, if you think about that, going throughout this project. Also about 550 truckloads bringing that -- bringing the empty reels back to our plant, so it would be a lot more people involved in the local economy.

Arkansas right now is a globally recognized leader in clean energy manufacturing and has captured significant economic benefits to date. Low electricity prices are important to

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manufacturers currently here and who are considering coming to Arkansas. Through Clean Line's partnership and their commitment to work with local qualified suppliers and Arkansas manufacturers, General Cable and other Arkansas companies should also benefit, creating a positive impact on the state's economy as a whole. 2|24 cont.

We need to encourage investment in these transmission system. We believe it would be a good thing for the state of Arkansas. Thank you.

MR. FASANO: Okay, thank you. Sharon Wardlow followed by Jimmy Denton.

MS. WARDLOW: Sharon Wardlow, and I will tell you now that this will be something that will make me get very emotional. I'm representing my deceased father, who was a veteran of World War II, five children, he homesteaded.

MR. WARDLOW: Cut to the chase.

MS. WARDLOW: I have done laid the ground work that I'm emotional. This property, cutting to the chase, I do not want this. I already have electrical lines going across the property, and it's the farmer that is leasing the land. It gives him a lot of trouble, and I'm worried about being able to maintain someone there to farm for my mother. My 1|34 2|13

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father put a lot on me to take care of my mother, and that's why I'm here tonight to speak about it.

Plus, the people that wanted this so badly in Arkansas, has there been any research done to make sure that it is affecting them for the betterment or for working against them? I will bet it will be working for them. I'm sorry, but that's just the way I feel. I don't want anything else, anymore impediments to my mother and my deceased father's property. I love that place as if it were mine, which it will be, and I thank you. 1|34 cont.

MR. FASANO: Thank you. Jimmy Denton followed Darlene Pridmore.

MR. DENTON: Thank you. My name is Jim Denton. I live near Redfield, Arkansas. I've been in the electrical industry for over 40 years, and I stand in support of this project tonight. I'll take just a brief few minutes to tell you why. 1|35

As I mentioned, I've been in the electrical industry for quite some time. I've made my living all over this country, but I chose to try to make it here in Arkansas. I support the opportunity that this project brings, for the jobs. As Mr. Stevens previously announced, General Cable and Arkansas residents that work there will benefit 2|24

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greatly from this project if it's built.

Also know or understand that the wind blades from the wind turbines will be made by L&M Fiber in Little Rock, thus creating additional job opportunities. Being an electrician and traveling, it brings a lot of things or will bring a lot of things to this community because construction people have to have a place to stay, they're going to eat, and if they do what I've always done is they'll spend their money in your local communities. 2|24 cont.

So in addition to what Mr. Stevens said, you've got a supply chain issue where concrete will be bought, steel will be bought, rebar will be bought, nuts and bolts will be bought in addition to the hospitality industry I mentioned. It's my understanding as far as the jobs go it's estimated to bring approximately 5000 construction jobs. Obviously all of them will not be here.

In addition to that, Clean Line, the wind turbines that will be built obviously will be built in the Oklahoma area, they will provide additional jobs. It's estimated if, if you do the math on it, it's a 3500-megawatt, if you do the math on it approximately 1400 windmills at two and a half megawatts apiece. 3|12

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Additional benefits to the community, the taxpayers, this is a private project. The taxpayers will not be on the hook. They'll have no investment in it, as I understand it. Also, it will bring tax monies to your local communities as it crosses through here, as I previously mentioned. Most of the people that work on these projects are no different than the gas industry that you've seen in the local areas and in the Dakotas where there is quite a boom. We expect that with this project, so we think that it will benefit the people in those industries greatly. 2|24 cont.

I'd be remiss if I did not say that I think it's very important for the DOE to consider the alternative converter station in Arkansas. I quite frankly think it should be imperative if this line crosses this state that we should have an opportunity to have a converter station in the Central Arkansas area listed on the maps. 4|9C

I believe that in general, you have a coal-fired unit here with the Independence steam plant. I imagine all of you know someone that has worked on it construction-wise or works there now to run it and maintain it.

And this -- as you know, the EPA is trying

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to clean coal units up, and it's debatable on whether they're doing a good job on it, but I can assure you from being in the electrical industry that your electrical rates are going to continue to go up, and this is a --

MR. FASANO: One-minute wrap up. Thank you.

MR. DENTON: This is a renewable, green energy that will be coming through your area, and I think we should be a part of it. Thank you. 1|35 cont.

MR. FASANO: Thank you. Darlene Pridmore followed by Wanda Hutchinson. Darlene? No Darlene. You're Wanda?

MS. HUTCHINSON: I have nothing further.

MR. FASANO: Bobby Hutchinson? Bill Tilley followed by Matt Crafton. You're Bill?

MR. TILLEY: I'm Bill Tilley. My sister Sharon spoke earlier. There's a lot of you guys that probably feel a little bit like what I might feel, a lot of money going into a lot of big pockets. There's enough rich people in Arkansas. I'd just as soon there wasn't any improvement. I've got electricity at my house. I could give a rat's butt whether this power line goes through. I mean, I don't care about any jobs. Arkansas's got too 1|34

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many people in it as it is. I wish Fisher was smaller than it is.

I could care less whether this power line goes through or not. Electricity rates aren't getting any cheaper, and they're not going to get any cheaper. This is just a way for a lot of people to put a lot of people in their pocket, big business, and Arkansas don't need any more big business. We've got too many millionaires here already. Thank you. 1|34 cont.

DR. SUMMERSON: Thank you.

MR. FASANO: Matt Crafton, followed by Clay Fulton.

MR. CRAFTON: Good evening. My name is Matt Crafton. I'm the president and CEO of Crafton Tull. We are a 260 person architecture and engineering surveying firm. We were founded here in Arkansas in 1963, making us one of the oldest in the state. We have an energy division in Conway that employs about 100 folks, and it's solely dedicated to doing surveying for energy companies.

Our firm has a master service agreement with Clean Line to provide surveying on an as-needed basis. Today we've set the primary control along the 700-mile route and done other preliminary

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miscellaneous surveys to support the project. One thing I'd like to say is that without reservation I can tell you we've been very impressed with all of the Clean Line staff, their professionalism, their courtesy and respect for everybody that they've interacted with, and we appreciate that.

Whether it's provided by our firm or others, we believe when the project -- or if the project happens there may be as many as 50 land surveyors working on this project once it proceeds. This is a workforce that will have a $1.5 million direct salary impact on our state over the life of the project. In addition to the direct salaries, of course, those surveyors will be driving trucks and buying fuel. They'll be staying in hotels and eating meals in the places where they're working, having an impact on the community. 1|24

So on behalf of our company, Crafton Tull, we would urge the DOE to approve the Plains & Eastern Clean Line project, and we appreciate the opportunity to express our opinion. 2|35

DR. SUMMERSON: Thank you.

MR. FASANO: Clay Fulton followed by Larry Tolbert.

MR. FULTON: Hello, my name is Clay

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Fulton. I'm an instructor here at ASU Newport. I teach high-voltage lineman technology. If you look in the back, I have quite a few of my students here, and I support this program -- support this project because of the opportunity for those guys to go out at work once it's complete. 1|35

I believe Pike Contractors is going to be doing a lot of construction work. I have several of my ex-students working for them, so talk about jobs. All those boys back there are from Arkansas, they'll be staying in Arkansas bringing all the money back to Arkansas. 2|24

So as far as I feel, the opportunities for them to make good jobs, good pay for a couple of years and even maybe staying on with Pike or staying on with Clean Line and doing the maintenance and everything else, so I'm surely for it. Thank you.

DR. SUMMERSON: Thank you.

MR. FASANO: Larry Tolbert.

MR. TOLBERT: My name is Larry Tolbert. I'm with C&I Electrical in Jonesboro, Arkansas, and I just wanted to say a few words because I'm not tied to any of this. But I've been in the electrical business for 20 something years, and I know we do supply variable frequency drives, soft

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starts and all this stuff for the farmer that we're trying to do now to save energy because we don't have enough energy to run what we've got.

In seeing coal-fired plants in Arkansas, we get power from two, the rest of it is sent out of state, and I think it's a great honor for the state of Arkansas to get a line through here because without a line coming through here it's like an interstate highway. If you don't have a way to get here, you can't get here.

I'm looking five, ten years down the road. Folks, we're going to have to cut carbon in Arkansas, and it's going to cost you. It's going to cost you heavily because we're building them in Arkansas and we're supplying other states. Anytime you can get something like this to come through and we can part of it, that's great. 1|35

I just want everybody to think five to 10 years out where we're going to be if we don't have energy. You've got to do it clean, and we've got to be smart about it and we need it, and we're going to need a lot more of it. Thank you.

DR. SUMMERSON: Thank you.

MR. FASANO: That's the last person who has officially signed up. Is there anyone else who

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hasn't spoken yet who would like to provide comments on the record? Come on up. Please state your name and affiliation if appropriate. Please respect the time limits; all the ground rules still apply.

MR. WARDLOW: Norman Wardlow. My mother-in-law is a farmer here in Poinsett County, and there's been a parade of businessman come up here telling you how this project would be good for them, which I don't doubt, but there's things you need to take into consideration. And that is, all these engineers out here, can anybody tell me if we're getting over ten percent of our energy out of natural, meaning wind, solar? Is it over ten percent?

I don't see anybody saying anything, so I'm assuming that we're getting less than ten percent of our energy out of green energy. Out of that ten percent or less, all of it is subsidized by the government. By the government I mean your tax money, my tax money.

This starts in Oklahoma -- this project starts in Oklahoma, Western Arkansas. It goes to Tennessee and it goes to the TVA. Does any of this power ever get back to Arkansas? Any comments? Local jobs. There will be some local jobs, but big

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corporations have a tendency not to hire local. Most of the jobs will be in here and gone as soon as the project is finished. Any comments?

MR. FASANO: Please continue with your comments. There's no interruptive dialogue.

MR. WARDLOW: Sir?

MR. FASANO: Continue with your comments, sir. There's no question-and-answer period during this time.

MR. WARDLOW: I'm sorry, I can't hear you. I'm sorry. I'm hard of hearing. My hearing aids are a little behind me.

MR. FASANO: I said continue with your comments. There's no interruptive -- there's no interactive dialogue.

MR. WARDLOW: Well, that's just about all I have to say. We have very little to gain from this. It would be great for the local businesses to profit from it, but as people on the land, the farmers, you and I and my family would have very little to profit from this short-term or long-term. Thank you. 1|34

DR. SUMMERSON: Thank you.

MR. FASANO: Anyone else who would like to provide comments on the record? Come on up.

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MR. SCOTT: Thank you. My name is Brian Scott. I'm from Dripping Springs, Texas currently. I grew up in Arkansas my whole life. Most of my family is here. This makes me a little emotional. I've left Arkansas twice, and it was for work over the years.

This is the type of work that I do. As a living, I've done it for over a decade. I'm not working on this project. As a matter-of-fact, my competition is working on it, and good for them. A lot of my good friends work there, and I support them a sport.

I support anything that's good for Arkansas and the country. I think green energy is good because of all of the above. Oil and gas is great, but we can export that to China, Japan, Europe. We can't export this. Let's use it here for our benefit. Thank you.

1|35

DR. SUMMERSON: Thank you.

MR. FASANO: Anyone else? Okay, then. With that, thank you once again for your courtesy, your participation, and your comments. Please remember that you can continue to submit comments on the Draft EIS until the comment period closes on March 19.

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DR. SUMMERSON: No, April 18.

MR. FASANO: It has now changed to April 18. An extension was given of 30 days. At this time I'm going to place the hearing in recess rather than adjourn it in case someone else would like to comment. Staff is going to remain for your convenience until 8:00 to continue to discuss the project and answer your questions.

If you would like to provide comments after we close down the mic here, just please come over and see the court reporter and you can give comments one-on-one right there. So with that, thank you very much, in this is in recess at 6:53 p.m.

(SHORT BREAK FROM 6:53 TO 6:55)

MR. NANCE: I just want to give them permission to go across any part of my land with the lines, so I approve of all of it. That's about it.

1|35

(NO FURTHER COMMENTS PROVIDED; HEARING ADJOURNED AT 8:00 P.M.)

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPTION OF PUBLIC HEARING
TAKEN AT THE CARMICHAEL COMMUNITY CENTER
ON FEBRUARY 10, 2015, BEGINNING AT 5:00
IN SEARCY, ARKANSAS

REPORTED BY MIKE WASHKOWIAK, CCR

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MR. FASANO: This portion of our meeting is officially designated as a Public Hearing for the Plains & Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on February 10, 2015 at the Carmichael Community Center Auditorium in Searcy, Arkansas. It is being held to receive comments on the Draft EIS.

We are commencing the public comments portion of this meeting at 6:30 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have approximately three minutes. We'll try to provide flexibility on the amount of time allotted based on the number of speakers that are registered; however, please be concise.

This meeting was preceded by a presentation by DOE's document manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

My name is Greg Fasano. I have been asked by the DOE to conduct this comment period as a neutral moderator. I'll ensure that the ground rules reviewed earlier in the evening are followed.

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The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings. The first speaker is Gregg Long followed by David Stevens.

MR. LONG: Thank you. My name is Gregg Long, and I'm vice president of civil engineering for Crafton Tull, a full-service architectural, engineering, and surveying company located here in Arkansas and in Oklahoma. I am vice president over the Russellville office and also work out of the Conway office.

We wanted to speak to the EIS basically on two areas very briefly, the socioeconomic area and the creation of jobs. And we're very glad to see that the study addressed those things because it will have a very positive impact in Arkansas in the creation of jobs that include industries that we're directly involved with in surveying and engineering but also with construction jobs, the transportation jobs. Those are jobs that will be created here in Searcy, Arkansas and throughout the River Valley area all across the state of Arkansas. 1|24

Also, the environmental aspect. It was

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pointed out in the presentation previously that this footprint is going to be a footprint that is going to become more necessary in the future as this country has more pressure to get away from the fossil fuels. We know that that is the direction that the country is headed. We know that it's something that we have to do is develop more clean energy options. And so on behalf of Crafton Tull, we support the project and support the findings of EIS. Thank you very much. 2|1

DR. SUMMERSON: Thank you.

MR. FASANO: Thank you. David Stephens followed by Stan Kennedy.

MR. STEPHENS: My name is David Stephens. I'm with the International Brotherhood of Electrical Workers, and I represent workers that would be -- that would be doing this type of work as far as linemen, operators, groundmen, guys pouring footers for the towers. It's not every day you get an opportunity for something like this to come close to your area where you get to work on this type of project. Our construction workers are usually working all around the country chasing these types of jobs, and it would be great for them to be able to work on a project in their area. 1|24

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My other concern in this project is I live in north Faulkner County in the city of Guy, and depending on the route this could go just north of me or just south of me, so it's going to be close to my house. I'm an alderman there at that city, and a project like this brings a whole lot of good, positive economic development as far as construction workers coming through eating at the local diners, the truck drivers getting to deliver the material, the local feed stores selling the barbed wire and gates and seed and that thing when the right-of-way comes through, not to mention the good, clean energy that Arkansas has an opportunity to get a hold of by adding the converter station, possibly in Pope County. 1|24 cont. 2|1

I think they've done a good job. I went to the first meeting on this in Greenbrier about two years ago. Clean Line has done a good job getting the information out there to us so we can comment on it, go to these meetings and let people know what we think about it in our area. They've also done a good job going around the populated areas in the community that I live in. 3|2C

DR. SUMMERSON: Thank you.

MR. FASANO: Stan Kennedy followed by Joe

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Kennedy.

MR. KENNEDY: My name is Stan Kennedy. I'm from Quitman, Arkansas, just a little town west of here, and I'd like to state my opposition to this project. This proposal, the way this line comes comes reasonably close to our school, and it comes through people's land. That's going to be detrimental to them, it's going to drive the prices of the land down, and it also is a health issue. 1|34

I'm not against clean energy. Where this comes through is in the Fayetteville Shale. Natural gas is clean energy, and people have supported that. We have pipelines that go through our land, so I just want to be on the record that I'm not opposed to clean energy, and I ask the Department of Energy not to partner with Clean Line. 2|1 3|4

DR. SUMMERSON: Thank you.

MR. FASANO: Thank you. Joe Kennedy followed by Chris Heaser.

MR. JOE KENNEDY: I'm Joe Kennedy, and I guess like my cousin I'm speaking for what I consider an endangered species in this, and that's the landowner. I'm not opposed to progress and I'm not opposed to clean energy, but the environmental impact it will have on my land is that it's coming

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through an 80-acre and it's going to almost split it, which will make the whole 80 acres as far as future growth of any kind will be limited. I mean, I know I can still cut hay off of it, I could run cattle, but it -- what suffers is my children because the land could be divided later on and it could be their future, and so this takes away from that. 1|6

Let me talk about the environmental impact. It will go through pastureland and it will go through some timber, and it will take out hardwoods that have grown for a long time that we have protected to protect the wildlife; the deer, the turkey, and the squirrels and the other wildlife that are in the area. It's going to take that away. 2|31

But it's also going to take away from my son and my brother-in-law hunting. It's going to go right through where they hunt. The pasture can be replanted. The trees are not going to be replanted. They're going to do whatever it takes to kill that area where nothing will grow there or somewhat along that line because they're not going to come through and bush-hog it or doze it down every year, and so there is an environmental aspect on my land and on some of your land. 3|23 4|28

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And I don't know how much timberland. I don't know how many hardwoods are going to be gone, but there's a lot of hardwood between the Tennessee line and the Oklahoma line, and I want to see that protected and I think most of you do as well. I'm opposed to do this, I'm opposed to eminent domain, I'm opposed to our Department of Energy partnering with a for-profit organization to take out private land.

4|28 cont.

5|4

MR. FASANO: Chris Heaser, followed by Randall Jackson.

MR. HEASER: Good evening. My name is Chris Heaser, and I'm part of LM Wind Power. I'm an engineer and work out at the Little Rock manufacturing facility, and what we manufacture is windmill blades, so you can see that we would probably be a direct beneficiary of a project like this.

So along the lines of what Mr. Long brought up, there is an economic impact in a positive way to central Arkansas. I'm a benefit of that. I was hired about 15 months ago in response to an emerging market of wind power in the United States for a particular customer, and our plant in central Arkansas has tripled in size in the last 12

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months.

A project like this, 2000 turbines in the Oklahoma plains, that's -- that would be something like tripling what we currently have, which was already tripled, so the economic impact certainly has a possibility of being positive to central Arkansas. And also as Mr. Kennedy pointed out, natural gas is clean, but it won't last forever. And correct me if I'm wrong, but I don't know that the wind will stop blowing in the Oklahoma plains anytime soon.

1|24 cont.

2|1

MR. FASANO: Randall Jackson, and then Connie Hill. Randall Jackson? Okay, Connie Hill.

MS. HILL: Good evening. Well, I don't have millions of dollars to spend on propaganda on this property, but what I do have, I have common sense, Christian values and morals, and I'm smart. I'm smart enough to know that Clean Line is only telling you one side of the story, only the positives, and they're not all true.

If I had more time, I would go in and connect the dots for you guys between the Clean Line investors, former Department of Energy employees, and this agency that's going to approve their request are their former colleagues. Something to

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think about there.

You know, about creating jobs and long-term, common sense tells us that's not true. Even the gentleman speaking talked about how they go state to state chasing jobs. So that's just -- it's going to be people coming in from out of state. The short-term benefits of the people that are going to work on this project, nowhere, I mean, it doesn't even come close to compensating the irreversible damage this is going to have to our state and to our environment. 1|24

They talk about, you know, the damage to the people, to your farm animals, to your pets, to your children, your grandchildren, trees. I can answer that gentleman's question on trees. It's going to take out acres of hardwoods on my property. It's going to devalue it. I mean, it is just unbelievable the damage it's going to do. So yeah, trees that I've manicured and taken care of for years are just going to be bulldozed over. 2|28

They don't talk about the health benefits because they don't know. If you go out there and read the literature, there's not a power line like this going through the United States. It's -- in the foreseeable future, we don't know. But I have

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common sense to know it's not healthy. It's not going to be healthy to live around these lines, not with all the chemical pollution that they're going to come by. I mean they're going to spray your ponds, your house, your yards. I mean that's how they're going to do weed control. The visual stuff, 3|19

the erosion, you know, the trees, the creeks, the watershed, the wetlands, the noise pollution, the air pollution, I mean the list goes on and on. 4|34

And they talk about water quality. Oh my gosh, radio and TV interference, the visual. Talk about long time -- I mean long-term air improvement; not on my property. The air on my property is nice, clean. I don't know what she's talking about there.

Ladies and gentlemen, neighbors and friends, don't be fooled by this propaganda. You will not be compensated for this damage. Sure, you'll get compensation for your little 200-feet right-of-way, but you're going to get nothing for devaluing the rest of your land and taking away all these things in our environment. You'll get nothing for the environmental damage this project is going to do. 5|6

They talk about having a good job communicating. I was -- I mean I was shocked to

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find out about this project the week before Christmas. I'm not -- of this, of 2014. I'm not sure I'd call that good communication, not in my case. Clean Line and the Department of Energy says this is clean, affordable, renewable energy. That's not true. When you read the literature, it's not clean, it's not green, it's not going to end up being affordable. I mean go out there and read it.

They're in a hurry to get this project approved because they know the window of opportunity is closing in on them. It's their window to make a profit on your private land, the land you worked for, the land that's been in your family possibly for generations. You know, if you go out there and look on the literature, the more current wind data shows there's no need for this 700-mile line that's cutting through our state. Even the green -- the people, the green environment have started doubting the value of this.

MR. FASANO: One-minute wrap-up, please.

MS. HILL: When you go out there, you know -- okay. The literature when you go out there and read it, they say this project will be obsolete in less than ten years; even some of the Department of Energy people say that. We're going to be five

6|2C

7|1

7|1 cont.

8|4B

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years into this project of the ten years before it's obsolete. Literature says solar is taking over. The East Coast where they're trying to sell it, if you go out there and read, the governors and stuff are writing letters saying we don't want this shoved on us; it's not affordable.

Also, you know, one of the things the gentleman mentioned, it's important to remember the granting of eminent domain where there's a public benefit, what is the public benefit to Arkansas? All these cooperating agencies that the lady showed up there, you notice they're all saying, oh no, not on my property. So if it's for the public benefit, why are they sticking it on the private landowners? Why don't they use public property for this public benefit?

MR. FASANO: You need to wrap up, please.

UNIDENTIFIED AUDIENCE MEMBER: She can have my time.

MS. HILL: Thank you.

MR. FASANO: Please wrap up.

MS. HILL: You know, when they talk about the solar taking over, it really makes you wonder what Clean Line will do with all these right-of-ways. Do you really think it's for this

7|1 cont.

8|4C

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wind transmission? If you do, you need to get out there and read the literature because I think you're going to be surprised.

They're trying to use governmental powers like this gentleman said that's never been granted before to override state rights, individual rights, your Fifth Amendment rights. It's never been granted before. Do you not think that's the politics in there, the politics of these agencies?

It's just -- it's taking away our freedoms, our liberties. It's just something that we need to stand up to and tell people at work, tell people at your churches. When I told people, they've been as outraged over this governmental overreach as I've been. We need to get the word out there. Write your congressman, write the government.

9|4

MR. FASANO: You're well over the five minutes, ma'am. Please.

MS. HILL: I'm sorry, I'm exercising my First Amendment rights, and I think we have enough time for everybody to speak.

MR. FASANO: I'm just saying that everybody --

MS. HILL: Everybody should be concerned

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with this. Not only the landowners, everybody should be concerned with this governmental reach, the Section 1222 powers. We need to take action.

9|4 cont.

MR. FASANO: Please wrap up, ma'am.

MS. HILL: We need to ensure that common sense prevails in this project. We need to protect our environment.

MR. FASANO: I asked for everybody's courtesy and understanding on the viewpoints and the time limits. So thank you, ma'am. Please respect the time limits. You may come up and speak again after everybody's had a chance to speak. Joe Hipp followed by Brad Hill, please.

MR. HIPP: I'm certainly not a public speaker, but I do say a big ditto here to everybody in opposition here tonight. They talk about an awful lot of studies up there, but they didn't talk about economic impact study on my hip pocket.

It's going to affect me substantially. I grew up in the country, moved away for 30 years and made a move back about 15 years ago, and I have been fighting easements from Lonoke White Water Company, natural gas, and now this for the last 15 years. It has never, never improved anything as far as my personal benefit, absolutely nothing.

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I fought the water company for well over ten years on a project that was supposed to have taken three. I think it ended up taking 13 or 14 to build that water line. I won't even go into what we've done with the natural gas. I was damaged greatly there on hay loss where they kept me off my pastures for an entire summer. They assured me in writing that they would pay me for my hay loss; they never did. They offered me a $190 off of a 60-acre pasture. I took it to court; the court sided with them. 1|6 cont.

If you think it will not affect each and every one of you whether it comes across you or not, you are sadly mistaken and you need to share it with everybody that you know. I own an 80-acre piece of property and a 30-acre piece of property in sections 28 and 35, both of which are in line with this project. It will run, if I'm not mistaken, just south. And whenever I say just south, from me to this lady over here from my property.

I guarantee you they're not going to want to give me anything for the damage that it's going to do to my 80 acres, but I don't want to live on it and I wouldn't blame anybody else if they didn't want to live on it. And if they make that little 1|6 cont.

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move in either direction like she spoke about it, it could very well come across my property and completely destroy it like Mr. Kennedy said on his.

The damage actually has already started. I've been looking at another piece of property that connects to my 130 acres. Well, I'm not about to go out and spend thousands of dollars on an adjoining piece of property if this line is coming through there. So it has a tremendous financial impact on this area here, and I do not feel that it's right to support a privately-owned company, for-profit company, off the backs of hard-working people. We're just normal, average, everyday people. I'm just opposed totally, completely. 2|24 3|34

MR. FASANO: Thank you. Brad Hill followed by Rick Culpepper.

MR. HILL: Can you hear me? Can you hear me now? I hope you can. The last gentleman said we're just ordinary people. The guys that run Clean Line Energy are not ordinary people. They're wealthy beyond your wildest doubt, and they're going to profit by taking our land through Section 1222. 1|4

For the record, I'm opposed to the Department of Energy partnering with Clean Line Energy. If you look at the data, there's a bunch of

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shale companies, and I'll tell you personally, and I've looked at it for a while because I don't know if any of you other guys got this Christmas card from the Department of Energy, it ruined my Christmas. And like he said also, the damage has already started.

I've never seen my family so upset as when we got this. But we're here to comment about the -- about the Draft Environmental Impact Study. Gosh, I just don't know where to start there's so much, and I guess it's fair for us to get three to five minutes and they go 24/7 with their propaganda machines. They're going to probably call us United Socialist America when this administration is done.

So it's a -- for the record, my first notice my family got of this, December 16 this year. Therefore, I'd like to say the scoping process was grossly inadequate. We had no idea. When you pull up the interactive map, guess what? It's on my house, it's on my barn, it's on my ponds. So I'm a little angry, but I've worked -- there's so many things I want you folks to know. 2|2C

First, don't sign anything. They can't make you sign anything. Don't do it. You cannot take that signature back. If you sign something,

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I'll guarantee you they'll pay you less than what it's worth. They're going to pay you much less than what it's worth. They kicked around a figure, ten percent. Ten percent? Listen, on my property that I've been working on for 15 years, it'll be totally useless for my purposes. It's not what I developed for. 3|6

How does it hurt it? Oh, let me tell you. So many ways. The Environmental Impact Study reads like a foregone conclusion. Did any of you guys catch the president talking about how we're going to build hundreds of miles of power lines? Sounds like a done deal, doesn't it? Is that objective?

No, there's a lot of politics going on here, and to put the landholders in perspective, we are next to last only behind the greater citizens of this state because everybody in the state's going to be affected. They're going to be the last ones to know. There's an article in the Democrat today just starting to get the word out. Tell everybody you know about it, tell them what's at stake here is more than my land. That's petty. Your land is petty.

There's an erosion of our American liberties and freedoms in the Department of Energy 1|4 cont.

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partnering with a private for company -- for-profit company made up of billionaires. Something not right there, folks, something not right there at all. But it's going on, and it's close and they will just go on with it if we don't take a stand.

My concerns break down into some of their little categories. It's going to be somewhat redundant, but like I say, it reads like a foregone conclusion. You know there's going to be heavy equipment and they're going to spill chemicals and yeah, we're going to permanently change the landscape, the watersheds, the forests. Those won't ever come back. You've got to have a pretty good imagination, folks, to be able to visualize what these things will look like. They're massive, they're huge, they're health hazards. I'll bet none of these folks with the Department of Energy or Plains & Eastern would want to live under one of these lines.

MR. FASANO: One minute wrap-up.

MR. HILL: They've got it overshadowing in many instances, and of course to their credit they say, yeah, we're going to wipe out some habitat, there's going to be some wildlife loss. You know, gosh, it's just so much. Recreational value, that's

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where all citizens of the state will lose. Noise, they're going to be noisy. Some of these houses and structures are going to have to be permanently removed. That sounds nice, doesn't it? We're going to have to permanently remove your house, yeah, where I live.

Migratory birds, bald eagles. This is permanent, folks. This is something that can't be undone. All Arkansans will have to live with this forever. We're the Natural State. I can't think of a more unnatural thing to put across our beautiful state. I drove over from Greenbrier, and I was thinking, man, this is so pretty out here. Many, many places I just pictured this monstrosity, this huge, metal unnatural structure. It's going to be visible to a lot of folks. Tourism is going to suffer, recreation is going to suffer.

Like I say, there's so many things. Of course the environmental impact study says, yeah, it's got to do all that but yeah we know so we're writing it down and that'll make it okay. It doesn't make it okay. You've all got to do something. Tell everybody you know. Don't knuckle under. I'm not signing anything.

MR. FASANO: Please wrap up, sir.

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MR. HILL: Surely.
MR. FASANO: Thank you.
MR. HILL: There's more I want to say. I know I've missed some things. Congress has oversight over this Section 1222. Write your congressman, write Tom Cotton. He's new, he's bold, he's creative, he's starting to talk out. Write to Boozman, write the governor. As a group, Arkansans need to say no. Just one more second because there's one more big point I want to make.
Plains & Eastern is the line in Arkansas. There are three others: Rock Island, Grain Belt, Centennial West. You know why they're doing this in Arkansas? So they can use 1222 so they can do this in other parts of the country. They tried four or five different things to get this to fly. They're undercapitalized. 5|4
If it works in Arkansas, the whole country is going to wake up to it. There's going to be a hell to pay. Arkansans have got to stop. Maybe if we get the awareness up, the rest of the country will jump in and say no, this administration has gone too far. We don't want this, we won't have this, maybe Arkansas can come to the rescue instead of letting this eat us. Thanks for your time.

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Please go out and do what you can.
MR. FASANO: Thank you Mr. Hill. Rick Culpepper, please, followed by Gary Bush.
MR. CULPEPPER: Good evening. My name is Rick Culpepper, and I'm glad to be here tonight. Let me go on the record as for this project, which is little bit different than what you've heard in last couple of speakers. But I'm the manufacturing manager for General Cable in Malvern, Arkansas, and on behalf of General Cable and the 328 employees we have here in the great state of Arkansas, I'm here to be in favor of this. 1|35
We have been manufacturing cable at the Malvern plant since 1965, and I take some personal pride that when I wake up in the morning and turn my lights on or I come home at night, my heater works. Or I'm in a room like this and it's lighted and we can have a conversation that in some way, shape, or form I've been a part of that because we manufacture all the conductor that gets power from where it's generated to where we like to use it, within our homes and in our workplaces.
As you have been informed, the goal of this project is to deliver up to 500 megawatts of renewable power produced in western Oklahoma,

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southwest Kansas and Texas to the panhandle area of Arkansas -- or the Texas Panhandle to Arkansas. This project has the potential to use more than 25 million conductor feet of our overhead conductor utilizing our assets in Malvern over a two-year period. So if we just turn that plant on and did nothing but produce for this project, it would take us two full years of continuous operation to make it all.

A big energy infrastructure project like this will help our company decide where to invest, where to hire. It's projects like this that continue to allow us to attract talent to our Malvern operation, and it's critical to our overall success. To support our agreement, General Cable will maintain and establish a supplier base within Arkansas. We purchase raw materials, as much as possible, from Arkansas entities. 1|24

Our employees in Malvern take great pride in knowing what they produce would be used in this project to delivering clean power at a competitive cost. Malvern is a manufacturing city. It has low energy prices, and that's an important part of the manufacturing infrastructure that's there. A project like Plains & Eastern Clean Line can move 1|24 cont.

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the whole Arkansas-based wind and electric transmission and distribution supply chain forward.

The Malvern, Arkansas plant has been manufacturing overhead aluminum conductors since the plant opened in 1967; that's 47 years. We're not new to this state by any means. That's one of the key contributors to the company's success as one of the largest manufacturers of energy cables in North America. I'm reasonably confident that each and every one of you in this room in some way, shape, or form without ever knowing it use one of our products every single day.

I want to thank you for your time this evening, but before closing I would like to once again invite the members of this committee and their staffs to visit our plant in Malvern. I think you'd be impressed to see what we do, talk with our associates who are Arkansas natives like many of you, who live, play, hunt, fish, and raise their children here and are looking forward to this project moving forward. Thank you.

MR. FASANO: Gary Bush and Joe Giroir.

MR. BUSH: My name is Gary Bush. I'm with the Arkansas Wildlife Federation. Like the gentleman before me, I would like to speak in favor

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of this project and would like to read into the record a board resolution adopted by our organization.

Plains & Eastern Draft Environmental Impact Statement, whereas the US Department of Energy is currently soliciting public comments under the NEPA process regarding the agency's Draft EIS for convertor stations and a proposed 600 kV direct current transmission line within Oklahoma, Arkansas, and Tennessee, and whereas this proposed 700-mile, 3500-megawatt Clean Line project is planned to transmit and share Texas and Oklahoma wind-generated energy resources with Arkansas power system consumers, and whereas Arkansas Wildlife Federation strongly supports this Clean Line project as a remarkable opportunity to capture wind energy and lower Arkansas dependency on non-renewable coal and other fossil fuels, and whereas Clean Line's preferred route avoids intensively managed Arkansas Game and Fish wildlife areas as well as other major floodplains and wetlands to the extent practicable, therefore be it resolved that the Arkansas Wildlife Federation at their January 31, 2015 board meeting held in Yell County, Arkansas respectfully requests that the above be considered by the US Department of

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Energy as our organization's findings that support this HV direct current transmission line project with the state of Arkansas. Be it further resolved whereas adverse impacts to the Arkansas Game and fish wildlife areas as well as other major floodplains and wetlands are unavoidable, we respectively request that such impacts be functionally quantified and mitigated according to the Corps of Engineers Charleston method. Thank you very much.

2|33

MR. FASANO: Thank you. Joe Giroir.

MR. GIROIR: My name is Joe Giroir.

MR. FASANO: Mr. Bush, can we get that statement that you just read?

(WHEREUPON, Exhibit 1 was marked for identification.)

Okay, thank you.

MR. GIROIR: I'm a landowner in this area, and my neighbors and friends here, the Kennedys, and others have spoken as landowners have spoken well to the detriment that the landowners will suffer when this project goes forward. When I say when it goes forward, I say I believe it will go forward.

The work that's been done, I have observed for two years alternative routes and proposals and

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environmental statements, and as far as I'm concerned, the train has left the station. So absent litigation or absent legislation, it's going forward.

So what is my question? My question is, where is the line going to be put? How do we determine where it's going to be put? We've been presented with alternative routes initially. Now we've been presented with a preferred route, which we don't know if that's the one that's going to be followed, we don't know who's going to decide it. Is that a decision, and maybe I can ask that question, is that a decision that the Department of Energy will make or is that a decision that the clean air people will make? May I ask that question?

MR. FASANO: Just keep with your comments. We want an uninterrupted record.

MR. GIROIR: Will you answer my question?

MR. FASANO: Afterward staff will.

MR. GIROIR: Afterwards, okay. You know, that then puts us all in the position of competition among each other to see who gets hurt the least. That's an uncomfortable position to be in. I'm sorry to be in opposition to what could be

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considered by some to be economic progress for the state, and undoubtedly there is some economic, maybe some substantial economic project, but on whose back is it being bought? Thank you.

MR. FASANO: Thank you. Okay, that's the total number of folks that have officially signed up. Is there anyone else in the audience who would like to come up and make comments on the record?

MS. HILL: If there's more time, I have a few more comments.

MR. FASANO: I want to make sure that other people who want to speak who haven't spoken, so is there anyone else who hasn't spoken yet? Come on up, sir. Please state your name and affiliation if appropriate also.

MR. SCOTT: My name is Brian Scott. I've lived most my life here in Arkansas, grew up in the Delta. At a young age I moved up, went to school in Fayetteville. It was the '80s, had a tough time making a living, couldn't pay for my school, so I took a job in California. In the '90s it was my dream; I was able to come back.

I work in the mapping surveying, ECO lead coordination. Sorry I'm a bit emotional; I'm not used to public speaking. In 2007 I left the state

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again for work. I still currently own land, and my wife owns a business here in Arkansas. I'm kind of an all above energy guy, not for any one particular type of energy. I think it's great for the country to explore all possibilities. 1|1

Yeah, there's impact. There's always impact, you know, and I'm heartfelt for those of you that it's going to impact. This is what I do for a living. I do it nationwide. These projects are big. They don't occur in any one particular spot very often. Look at the map of the country; there's not many big lines.

I'm in this industry, and I just want you to know I take it to heart. It is how I feed my family, and I don't take that lightly and I don't take impact on your families lightly either. That's all I have to say. Thank you.

MR. FASANO: Thank you. Is there anyone else who has not spoken yet? Come on up, sir.

MR. HOLMES: Ladies and gentlemen, my name is Jerry Holmes. I'm the Cleburne County judge over there. I've been a part of our county I guess all of my life since my grandparents took me back in 1959. I enjoyed growing up around there in the farming community and ranching community, and I just

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want to make a statement that personally I'm opposed to this project and let the folks at Cleburne County that's here know that there will be a resolution before our Quorum Court this next meeting to oppose this project. 1|34

MR. FASANO: Is there anyone else would like to speak for the first time?

MR. MILSAPS: Howdy, y'all. Can y'all hear me? My name is Gordon Millsaps. I'm from Dover, Arkansas. I'm also part of Block Plains & Eastern Clean Line, Pope, Johnson, Newton, and Conway counties.

I'm opposed to this project, especially the DOE partnering with Clean Line for this project, and for many, many reasons. But if you strip them all down, I think it comes down to one word and I think that's respect. Specifically the lack of it that has been shown to the people most directly impacted by this line by Clean Line. 1|4 2|2C

I still cannot get it through my head, why didn't you come to landowners first? There may have been many landowners that were more than happy to have this on their property. But that lack of respect not only extends to landowners, but now to the communities and even the states. The use of

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Section 1222 would be a precedent that has not been set before. It would be a very bad precedent to set. It would give private companies federal eminent domain powers to override not just your local communities' decisions but the state's decisions as well. 1|4 cont.

We have a problem with the federal government overstepping its bounds and getting into the state's business already. Now we're going to let private corporations partner with the federal government so they can overstep the state's decisions? For those touting jobs, I understand you've got to put food on the table. That I get, and I think everybody here gets that. But are you willing to trade your friends, your families, your neighbors, your communities and possibly all Americans' rights for temporary jobs? Temporary jobs. That's disappointing. 2|24

This project is a bad deal for Arkansas. Many of the quorum courts along the routes have drafted resolutions opposing the project, even though they should be the ones to benefit the most from this increased tax revenue, right? They take a closer look, they find out this is not a good deal. Anybody that does a little bit of research finds out

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this is not a good deal.

The reason for the extension for the comment period was because our entire Arkansas federal congressional delegation and the senior senator from Tennessee requested more time to look into this project. Yesterday the Arkansas Energy Committee unanimously condemned Clean Line circumventing the state's decisions and sent a letter to Department of Energy stating so.

We know that this project is not good for us. Now, my real issue is that, to me, this mess of a project stinks of collusion and corruption, and I feel it's going to set back true green energy at least a decade. Oh, by the way, the Arkansas Game and Fish Commission, they came out against this project a while back at a hearing in Little Rock.

Now, then, I encourage you all to comment with the Department of Energy, but don't let them box you into a three-minute comment. Write and call your federal representatives. See me if you need their addresses, e-mails or phone numbers because I've got them, and I'll be glad to give them to you. We've got to let them know how we really feel about it, pro and con.

I don't want to tell anybody how to think

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about this. If you're for it, that's great. If you're against it, that's even better, all right. Well, you know. Folks, I do have their addresses and e-mails. Just get with me, and I'll be glad to give them to you. Thank you for your time.

MR. FASANO: Thank you. Is there anybody else who has not spoken yet? Okay, come on up. Please respect the same time limits as before.

MS. HILL: I'll make it brief this time.

MR. FASANO: Thank you. State your name again, please, for the record.

MS. HILL: Connie Hill, and I'm a private landowner who is facing financial ruin on the backs of this private company partnering with the Department of Energy. I'd like to go on record if I wasn't clear before that I oppose this project.

I would like to comment on the gentleman from Dover. I understand, you know, it's just not right for Arkansas people to benefit -- for this private company to have benefit on our back. I'm sure the gentleman from Malvern, if those employees, 300 something employees, if this project was in their area and going through their homes and causing the health benefits and the negative environment, I'm pretty sure they may think twice about the

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short-term benefits of these jobs does not outweigh the long-term environmental damage.

When you go out there and look, there's more to this transmission line than Clean Line is telling you. There's other alternatives. I'm not against renewable, affordable energy. I've been studying up on it. I've been reading the stuff about the people on the East Coast where there's more wind. They don't need this 700 miles.

And one thing, you know, it's follow the money. You just think about this, the people who are for it, follow the money. Their short-term gain is our long-term loss. You know, there are security issues, there's privacy issues. I mean your land where I live I'll never enjoy my land again like I have in the previous decades.

It's just not worth it. There's no benefit to the state of Arkansas, very little. These short-term jobs, when you go out there and read you really read there's companies from North Carolina that's going to work on these projects. Companies from other states. The impact to Arkansas is very little. That's why our state legislature and stuff said no, we do not support this.

So I'm asking you again, please go out

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there and talk to your neighbors. Get your comments in. You know, you think common sense would prevail, but I'm just not sure when it gets wrapped up in federal politics. Please do your research, please comment, please, you know, for the sake of Arkansans, your neighbors, please put some thought in this. It's an important issue for the state of Arkansas, and it's an important issue for the United States. Thank you.

MR. FASANO: Thank you. Is there anybody else? Okay, with that, then, thank you once again for your courtesy, your participation, and your comments. Please remember that you may continue to submit comments on the Draft EIS until the comment period closes on April 20th.

DR. SUMMERSON: Eighteenth.

MR. FASANO: April 18. I'll get that right. That was extended from March 19 to April 18. At this time I will place the hearing in recess in case someone else would like to comment. If you do want to make a comment on the record, just come up and see the court reporter one on one and they'll record verbatim what you have to say. Sit right up there at the table with them. We're here until 8:00, so please ask staff additional questions if

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you have them. Hopefully they'll be able to get you some information. So this meeting is recessed 7:21 p.m.

(RECESS FROM 7:21 TO 7:45)

MR. REAPER: My name is Jacky Raper. We have a family farm that was established in 1949 in White County, Arkansas. The proposed -- the proposed route, if this line goes through, is the one we would like for y'all to take because our property on our farm is on the alternative route. 1|8A

We have a livestock operation, a farming operation. We have precision level ground. This line, if it did take the alternative route, which it'd go across our farm, would disrupt the flow patterns of the water of our irrigation systems. We have precision level ground. We furrow gate, and the towers would be in the way. We also have center pivot irrigation, and if y'all know anything about center pivot irrigation, it makes a circle. 2|13

The stretch of ground where the alternative route is would disrupt our center pivot operations through our farm. It's open ground, it's farm ground, and my mother and father started that farm and just added to it over the years. This has been in our family since 1949. We would encourage

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the Department of Energy to approve the proposed route. I don't know how else to express how much that it would disrupt our operations. 2|13 cont.

We have already sent a copy of the letter to Plains & Eastern. My attorney has sent a copy of this letter to them, and they have it on record. And I just -- you know, we don't want the line on our place, and we would highly recommend that you would put it on the proposed route instead of using the alternative route.

I don't know if I need to specify where that is as far as sections, areas. But the map, I can't remember which one it is, number 445 I believe up here, but it goes across sections -- I'll get it in a minute. It goes across section -- township range 88, section 12; 87, Township 87 range, section 13; section 18 in range eight north, seven west. It goes right across the middle of our property, the whole middle of it. 3|8B

We just don't want it because we've got a beautiful farm, and we've worked a lifetime at it, my father has and I have and my son's third generation and his son is the fourth generation that will work that property. We just don't want to have to work around power lines, and we've already got a 2|13 cont.

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small power line that goes across the farm that we have to work around, and this would just be devastating to our farm.

I would encourage the Department of Energy and whatever I need to do to try to persuade them and Clean Line or Plains & Eastern, whoever, I'd be glad to do that, and I appreciate your time.

(DEPOSITION CONCLUDED AT 8:00 P.M.)

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C E R T I F I C A T E

STATE OF ARKANSAS)
) SS:
COUNTY OF WASHINGTON)

I, Mike Washkowiak, Certified Court Reporter within and for the State of Arkansas, do hereby certify that the above-named PUBLIC HEARING was by me first duly sworn to testify the truth, the whole truth, and nothing but the truth, in the case aforesaid; that the above and foregoing deposition was by me taken and transcribed pursuant to agreement, and under the stipulations hereinbefore set out; and that I am not an attorney for nor relative of any of said parties or otherwise interested in the event of said action.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 16th day of February, 2015.

Michael A Washkowiak

MIKE WASHKOWIAK, CCR
State of Arkansas, No. 654

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

_____

TRANSCRIPTION OF A PUBLIC HEARING
TAKEN AT THE STUDENT CENTER, ASU-NEWPORT, MARKED TREE BRANCH
ON FEBRUARY 11, 2015, BEGINNING AT 5:00 P.M.
IN MARKED TREE, ARKANSAS

REPORTED BY MIKE WASHKOWIAK, CCR

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MR. FASANO: This portion of our meeting is officially designated as a Public Hearing for the Plains & Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on February 11, 2015 in the Marked Tree Student Center of Arkansas State University in Marked Tree, Arkansas. It is being held to receive comments on the Draft EIS.

We are commencing the public comment portion of this meeting at 6:28 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have approximately three minutes. We will try to provide flexibility in the amount of time allotted based on the number of speakers that have registered; however, please be concise.

This meeting was preceded by a presentation by DOE's EIS document manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

My name is Greg Fasano. I've been asked by the DOE to conduct this comment period as a neutral moderator. I'll ensure that the ground

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rules that were reviewed earlier in the evening are followed. The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

The first speaker is Ron Bolhofner, followed by Michael McGuinness.

MR. BOLHOFNER: Good evening, and thank you for giving me the opportunity to speak to you tonight. I'm Ron Bolhofner, and I'm quality manager at the General Cable Malvern plant. On behalf of General Cable and in particular the 146 associates at our Malvern plant and 182 at our Paragould plant, a total of 328 of us who live and work in Arkansas, I am here to speak in favor of the Plains & Eastern Clean Line Transmission Project. 1|35

As you know the goal of the project is to deliver 500 megawatts of renewable power from Western Oklahoma, Southwest Kansas, and the Texas Panhandle area to Arkansas. This project may be more -- may represent more than 25 million feet of conductor for General Cable's plant, utilizing manufacturing assets in Malvern, Arkansas over a two-year period. Big energy infrastructure projects 2|24

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like this help our company decide where to invest and when to hire. It's times like these and types of projects like these which continue to attract Malvern -- talent to the Malvern team and are critical to General Cable's overall success. To support this agreement, General Cable will establish a supplier base here in Arkansas to purchase as much of the raw material as possible from local companies. 2|24 cont.

Our employees in Malvern take great pride in knowing that the products that they're going to be manufacturing for this Clean Line project will stay right here in Arkansas, delivering power at competitive costs. Malvern is a manufacturing city, and low electric prices are important to manufacturers currently here and those considering coming to Arkansas.

A project like the Plains & Eastern Clean Line can move the whole Arkansas-based wind and electric transmission and distribution supply chain forward. The Malvern, Arkansas plant has been manufacturing overhead aluminum conductors since the plant opened in 1967. It is one of the key contributors to General Cable's success, and it's one of the largest manufacturers of energy in North

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America. Thank you for your time this evening. I would also like to invite the members of the committee along with their staffs to visit the plant in Malvern, Arkansas. I think you'd be impressed to see our manufacturing operations and speak with our associates there and see how important this project is to them.

DR. SUMMERSON: Thank you.

MR. BOLHOFNER: I give the podium back to Greg.

MR. FASANO: Thank you. Michael McGuinness, followed by John Hutchinson.

MR. McGUINNESS: As Greg said, I'm Mike McGuinness. I'm a land surveyor and a minister. As a minister since 2010, I've served as a pastor in a maximum security prison, state prison. I've also been a land surveyor for 44 years and I've managed surveying for environmental studies, route determination, land acquisition, and construction on numerous corridors and energy-related projects over the years.

I believe that this Plains & Eastern Clean Line will have numerous benefits for the folks that live in Arkansas, the most significant of which is the economic impact it will have in its contribution 1|24

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to energy independence. According to a recent Gallup Economic Confidence Index rating, Arkansas is ranked as one of the lowest in the United States. In addition, Arkansas is ranked as having the 12th highest unemployment rate in the country at 34.9 percent. The economic benefits in my opinion will be huge to the population located near to the proposed transmission line. 1|24 cont.

Some of the positive impacts include jobs, income revenue for communities, and improved infrastructure. In the EIS for this proposed project, Dr. Summerson said that approximately 26 percent of the construction workforce is expected to be hired locally with the remaining 74 percent temporarily relocating to seven communities along the region of influence for the duration of the employment -- of their employment.

Jobs would likely include trucking and hauling, equipment operation, fueling, site grading, framing and drilling foundations, pouring concrete, building temporary access roads and more. We just heard about the cable. In addition to jobs, there will be likely millions of dollars paid annually to communities that host the transmission line. That revenue can be used to support local schools and 1|24 cont.

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other community services. Additional funds for schools would improve the quality of Arkansas children and youth for decades to come. 1|24 cont.

Finally, this transmission line, if it's built, there will be improvements to the infrastructure along the route that probably would have not normally taken place.

In closing, I'd like to share also that there are many other positive points but are not limited to improving our national movement towards energy independence, strengthening our national security by providing a more robust power grid, an ultimate reduction in pollution by reducing the need for fossil-fuel-driven power generation. I support the Plains & Eastern Clean Line and urge the Department of Energy to provide the regulatory approvals required to move this important project forward. Thank you for your time. 2|35

MR. FASANO: Thank you. John Hutchison, followed by Lisa Carson.

MR. HUTCHISON: Three minutes, three minutes. I am you guys' former state representative that represented District 52 here, and I oppose this power line. I respect these people for their jobs that they're doing, and I hope they do me. I've 1|34

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kind of been a -- maybe a thorn in the you know.

But anyway, I'm against this because -- and I feel for the company in Malvern. I just wish you could manufacture underground cable, and I'd be all about it, you know. Why would Arkansas -- I look at it like this. A 3500-megawatt power line, there's not one built carries that kind of electrons on it in the United States today. Why do we in Arkansas want to be the guinea pigs of that?

I have done personal research that tells me that it can cause leukemia in children. It can alter flyway patterns in migratory, like the Mississippi Flyway. And I have found research where the wind farms is themselves can kill hundreds of thousands of migrating birds. The transmission line itself can kill tens of thousands of birds from electrocutions and collisions. 2|19 3|31

I researched this all the way to the Department of Interior. By an executive order signed by the secretary telling the US Fish and Wildlife Service that they had to sign a memorandum of understanding with their partners Ducks Unlimited, Audubon, Nature Conservancy, et cetera, and the Game and Fish, and I was wondering why, you know, they're the protectors of our wildlife, why,

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you know, are we going to risk a $2.1 billion industry for it crossing the very -- we live in the very bottleneck of that flyway.

Also, terrorism. It looks like to me that that would be one of the first things hit, that big of a transmission line. They have what they call micro-grids, and I could talk on and on. And they also they formed what they call an Avian Interaction Committee, which is made up of 100 energy companies and the US Fish and wildlife to do research on the death of the birds. Are we going to get a fair assessment? I don't know. 2|19 cont.

As far as you as a landowner, private landowner, if it crosses your property you can request assistance right now from the state agencies. You can request that. Also, you know, in Poinsett County for instance, I'm not sure that it mention rice in their environmental study. 4|13

MR. FASANO: One minute wrap-up, please. Thank you.

MR. HUTCHINSON: They're going with the 2007 Census when they talk about compensation on the eminent domain. Currently in 2012 Arkansas Public Service Commission, they declined Clean Line's -- they declined them from crossing Arkansas. I tried

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to propose a resolution, couldn't even get that passed, to stop it. Well just recently last week, the House and Senate Joint Energy Commission passed a resolution stating that 122, what do you call that, the 122, saying they were totally against Clean Line crossing the state of Arkansas. Thank you.

MR. FASANO: Thank you.

DR. SUMMERSON: Thank you.

MR. FASANO: Lisa Carson, and then April Ambrose.

MS. CARSON: Hi, I'm Lisa Carson. I'm originally from Northeast Arkansas. I live in Little Rock now. I am a patient advocate. I am here for you, our children, the future, and my clients, my patients that I take care of and are wondering.

One major concern, I have one of my best friends that has a defibrillator, pacemaker. She gets just so far in some of these smaller lines, and her defibrillator will go off. What does, you know, what is she going to do and what is everyone else going to do? What are the effects going to be of this, something of this size with this much power that has not been tested? 1|15

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Also, as far as security, I would think, I don't know, I'm not an expert, but this is a big line. What about wind, I mean going right through tornado alley. That would seem like, okay, we've got a bigger transmission line, what happens when that goes out? What happens when something does happen? The whole -- everybody is blacked out. You know, I don't know. I haven't seen that mentioned anywhere. 2|19

As far as Texas possibly participating, I didn't really understand that. The way I understand it in Texas it's been denied and no possible -- I mean they refused it. That's why it's coming through our area. Another problem or question is that's our economy. That's our economy in this area. Whether it's fishing, whether it's hunting, whether it's property values, and those properties are our heritage, our roots, and we've had them for generations and they're going to be just taken away from us. 3|24

Why is it only going through privately-owned property and no federal, no state property? It seems to go around all of that. I don't know. You know, I'm just wondering. Basically one of my, other than the health concerns, 4|8D

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one of my personal concerns is the eminent domain or easements. That is a right, an American right. You know, what precedent does this set and what does it do for the future? To have your land taken away from you is not easy in any way. We had a small farm between Jonesboro and Harrisburg, and we just had a little piece, you know, taken away when they built Number 1. That was devastating to my family, to my father, to my grandfather, and it's devastating to me. 5|6

MR. FASANO: One minute wrap-up, please.

MS. CARSON: Thank you. So my question or my thoughts would be just keep an open mind. I am. Think about what you want for your families, for the health of yourselves and what is going to be, since we don't know the effects. We don't know the effects. Is it worth it? I don't think so. Thank you.

MR. FASANO: Thank you.

DR. SUMMERSON: Thank you.

MR. FASANO: April Ambrose, and then Brian Imboden.

MS. AMBROSE: My name is April Ambrose, and I'm here to speak on behalf of the project. I am -- I'm glad that the landowners are here to talk

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about the impact on their land. I am here to talk about the benefits on our economy and the environment state wide. 1|24

I had the great pleasure not too long ago speaking to a number of our military generals, and it was nothing for them to tell us that water and energy convoys to some of their remote bases are the hardest things that they have to defend. They are the ones that they have more convoys of those, and the less energy they use the more lives they can save. So it was nothing for them to extend that to the boundaries of our country.

We need clean energy like this in order to be independent and to offer national -- to improve our national security. Five hundred megawatts is 160,000 homes. That's 85 percent of Little Rock, our largest metropolitan area. That is a lot of clean energy.

I work in energy efficiency. My goal is to reduce how much energy we use without sacrificing our comfort or our economy. My job is to consult with building owners to help them find the most cost benefit and cost-effective ways to reduce energy uses. This, in my opinion, is the most cost effective and realistic way for Arkansas to be 2|35

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supplied with this much clean energy. This is cleaner than burning coal in our state, it is cleaner than extracting oil and natural gas from under the ground, and it is cheaper than building nuclear facilities. 2|35 cont.

In addition, it is going to bring us local jobs during the construction of the project. So I understand that there are other impacts. I'm not speaking to those. I'm speaking to the environmental impacts and to the energy and economic independence of our state, so I support this project. Thank you. 1|24 cont.

MR. FASANO: Thank you.

DR. SUMMERSON: Thank you.

MR. FASANO: Brian Imboden has passed. Tim Wood, please.

MR. WOOD: I'm just going to e-mail you too.

MR. FASANO: Marshall Hughes.

MR. HUGHES: My name is Marshall Hughes, and I'm here to speak in opposition to this project. 1|34

It's wrong on so many levels. Act 1222 has never been used; this is a test case for it that will set a horrible precedent for the state. It's basically a seizure of our private property by a for-profit 2|4C

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company.

Another thing wrong with this is they claim that it will not devalue the adjacent land. If this goes right by your house, your house value will go down. For everybody here, it's very important. There have been five or six counties in the western part of the state that have adopted resolutions opposing this project. A couple more are considering it. Talk to your county reps here. Encourage them to do the same. Call your legislators in DC. Bother them, call them. That's our only true hope at justice. Thank you very much. 3|6

DR. SUMMERSON: Thank you.

MR. FASANO: That completes the list of folks that have signed up. I would now like to ask if there's anybody else who hasn't spoken yet in the audience that would like to come up now and provide comments. You don't have to be signed up. You can just raise your hand and let me know, come on up, and you can provide comments on the record. Come on up, sir. Please state your name before you start.

MR. STEPHENS: My name is Dennis Stephens, Cherry Valley, Arkansas. I farm in the Cherry Valley area where this line is proposed to cross. I am speaking in reference to map number 50 and where

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it crosses there. I'm all about energy efficiency too, Ms. April. We have to be that way in agriculture in order to make ends meet anymore.

Our country there and Map 50 in particular, it crosses the L'Anguille River and it goes east to Crowley's Ridge down County Road 210. That property in the last three years has taken a substantial change in format and how we farm to make a living. We're no longer able to grow rice in that country. My water table is 140-foot deep. I can't pump. We're going to a second aquifer, $120,000 for a well. So we have converted over to a row crop situation of corn and milo and furrow irrigated soybeans. So everything is furrow irrigated. 1|8A 2|13

If we put this transmission line in there, it's going to interrupt and interfere with my irritation capability and capacity on my farms. It's going to enhance erosion on those farms with those poles and things. It's also -- that dirt there, the proposed route is AR 6-C coming just south of Highway 214 in Poinsett County. 3|17 1|8A cont.

Should this transmission line have to come through, I'm totally opposed to it myself, but that would be a better alternative route. And the FONSI, the finding of no significant impact, on the 4|34

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environmental, if you look at that there would be less impact in the rice country than there will in my country where we're no longer able to grow the rice.

It's still going to impact the rice producers, don't get me wrong, but it would be less because of the type of soils they're able to grow the rice on. They're able to hold the water there. They're able to flood irrigate as opposed -- you can flood irrigate around a pole where you can't furrow irrigate through the pole. 2|13 cont.

So those are the issues, I think, that may have been failed to look at, but I would encourage to listen to all the comments that were opponents to the proposed draft to the proposed line, so that takes care of me.

MR. FASANO: Thank you for that input.

DR. SUMMERSON: Thank you.

MR. FASANO: Ma'am.

MS. WAGNER: I don't know about the rest of you, but we only got this last invite to this. That's the first time we knew of it. I'm Jerri Wagner. We farm out Highway 75 in that direction, and whenever you talk about causing cancers, leukemia, we've been down that road with our 1|2C

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families. We lost two young men with a special kind of leukemia, and I read about it every day in the paper where other people have children, and let me tell you something. You can't get me stirred up any more than that.

Money ain't worth a life, and I don't want it coming down there. I don't like to see anybody forced to do something when they've got it fair and square, worked hard to get it. I want them to enjoy it while they can. You wouldn't be farmers if you didn't enjoy working the land. And this you've got to dodge all of the bureaucracy or whatever you call it. I'm not good at pronouncing no more. But the politicians, we get stuff rammed down our throat that we shouldn't have to put up with. 2|34

For myself, we're too old. We planned on passing what we've got down to our children, grandchildren, and with something like this if it's even partially true what the gentleman said that used to be a representative or whatever, a politician, they I need to look further because usually we pay the bill, somebody else gets the free electricity or the benefits. I've seen it happen in too many parts of the country where I have had relatives live and they've had these big,

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high-powered electrical generators, you know you've heard about them where they went bad. They had to buy out the people in different parts of the country. People was dying from some of the effects.

Think about it. Money ain't worth it. They come here and they talk a good talk, but they don't walk a good walk. That's all I got to say.

MR. FASANO: Thank you, ma'am. Is there anyone else who's not spoken yet that would like to provide comments? Anybody else? Come on up, sir.

MR. STUCKEY: I'm John Stuckey. I'm from the Trumann area. I feel the same way as that young lady that just got up here. I think that this transmission line will have a negative impact on our agricultural economy, on our recreational economy in Northeast Arkansas. They benefit from duck season. We have a lot of people come out of state in here to duck hunt. I think that the Department of Energy needs to really look at this before they make a decision because it's going to affect everybody in here negatively. That's all I've got to say. 1|24

DR. SUMMERSON: Thank you.

MR. FASANO: Thank you. Is there anyone else at all I would like to provide comment?

MS. CARSON: It's Lisa Carson again. One

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thing that I failed to bring to your attention that I have researched and found out while talking to the different legislators or different public elected officials, I'll say, in Kansas where this originated they say the wind is going to come, the wind farms will make the energy and, you know, it will bring down costs.

Okay, right now, Kansas energy prices have gone up at least 40 percent. Kansas has -- the legislature and elected officials now are moving to do something to stop this.

Okay, anyway. As far as it's going to bring jobs into Arkansas, I mean, I'm all about anything that will help Arkansas move ahead. I believe in renewable energy, clean energy, but I just don't think this is the way to do it. Also, I don't -- as of today I didn't see where Arkansas had access on or off. This is just going to just go through our state, destroy our landscape and our farms and our heritage, and we don't even get the benefit of energy or anything, at least getting paid for it? I don't -- I don't get that. 6|34

Also I think it's supposedly to connect to TVA or someone in Tennessee, and I don't think a contract has been signed. The last I checked with 7|12

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TVA no one had purchased or signed a contract to buy this. So what if it starts, gets all the way and no contract is signed? It's like the bridge to nowhere. That's all I've got. Thank you very much, and I appreciate, I respect both sides. That's it. 7|12 cont.

DR. SUMMERSON: Thank you.

MR. FASANO: Thank you, ma'am.

MR. HUTCHISON: I'm former Representative John Hutchison again, and what she was referring to in the state of Kansas was I visited with Representative Hedke, and he was telling me that the state of Kansas and the Senate, this was a year ago, repealed the renewable energy mandate and they were planning on to in the House. And that he advised me as a representative that represents you people to do everything in my power to stop that line from coming through my state. I mean, that kind of said it all.

He did say that the cost of electric power to their citizens had risen 40 percent in the last five years. Is all of this going to be clean energy that they're proposing? I don't think so. I don't think so because I -- it's my understanding that it's not.

Also, one of the strongest laws that's still in effect is the Migratory Bird Treaty, and

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it's roughly almost 100 years old, and they say it's still stout. Well, as of today, they're talking about allowing the US Fish and Wildlife Service to give out deformation permits, which means you're going to be allowed to kill endangered species. That's interesting. That's interesting. You as a landowner, you might want to make sure that it's in your contract so you won't get, you know, so the federal government don't come to you and charge you for the killing of one those eagles. I don't even know if the eagle is on the endangered species now. But anyway, there's almost 300, almost, species of birds that travel through the Mississippi Flyway, and we as a state we just don't -- we don't need to allow it. 5|25

Also, I talked to the person whose name is Mike Hightower. He is the person that's in charge of the federal grid of the protection over terrorism. He recommended -- you know, I asked him, I said, well just how big is a 3500-megawatt power line? He looked at me like -- he said he wasn't really sure. He wasn't really sure. He ain't never -- he ain't seen one in the United States. They're in Europe. Please, Clean Line, take us to Europe and let's see one. Let's see what it's all

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about.

MR. FASANO: One minute.

MR. HUTCHISON: Thank you, thank you.

DR. SUMMERSON: Thank you.

MR. FASANO: Okay, last call. Any other -- anyone else that would like to provide comment? Okay, thank you once again for your courtesy, your participation, and your comments. I appreciate very much that you followed the ground rules that we talked about beforehand; it's very much appreciated. Please remember that you may continue to submit comments on the Draft EIS until the comment period closes on April 18.

At this time I'm going to place the hearing in recess at 7:04 p.m. rather than adjournment in case someone else would like to comment. Staff will remain for your convenience to answer questions and to interact. If you do want to provide comments, we're here until 8:00. If you want to go on the record and provide comments, see the court reporter one on one. You can sit there and get your comments into the record, but this portion of presenting up here is now in recess. Thank you very much.

(RECESS FROM 7:02 TO 7:04)

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MR. STUCKEY: John Stuckey again. I failed to mention when I was talking about negative impacts on agriculture in my area, we still have a lot of center pivot irrigation, and if a power line goes through there with the transmission poles, it could disrupt the center pivot irrigation systems that we have because they cannot make their full circles to properly irrigate the crops. 2|13

That's what I meant by its negative impact. That's one of the negative impacts I was talking about. It can also disrupt the irritating -- other methods that we have that it could also disrupt it, too. It could affect the way -- the location of the irrigation well in regards to where the waterfall flows through the field. If you have this transmission line come across with poles, it could affect that too. And that was one of the negative impacts I was talking about when I said that, and also the land values, too. It could affect the land values. That's what I was -- that's what I meant when I said negative impact as far as agriculture. Thank you. 3|6

DR. SUMMERSON: Thank you.

MR. NORCROSS: My name is Herrick Norcross. I'm from Tyronza, Arkansas. My family is

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a landowner and farmers in the Tyronza area, have been since the early 1920s. The Clean Line Energy project is currently slated to come through our area. It traverses all the way across our property, impacting eight different center pivots, over 500 acres of precision level farmland that we have spent a lot of money over the last 15 years getting in the condition it's in. 1|13

I'm not opposed to clean energy. As a farmer, you know, I consider myself an environmentalist, but this project I think is wrong for Arkansas. As far as I know, there was a little mention of a substation in Conway or Pope County tonight, but that's the first mention of any kind of substation in Arkansas where power would be sold here. We're just a transit, so there's no benefit to the state to have this come through. 2|9C

I think if it is going to come through, then I think some consideration should be given. I was concerned to hear about potential health effects tonight. I didn't realize this was such a large line that nobody's even really had these in the country before to even know what this thing could do to not only people living in proximity to it but to the wildlife that's living around it to the crops

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that are growing underneath it. All those things I think have to be factored in.

Also, on our property back in about the late '50s, early '60s my family had a transmission line come through and bisect our property at that time. At the time after speaking to my dad and granddad over the years, they didn't fight that process. They went ahead in the interest of progress, so we've already given to something like this before, and I think it's kind of unfair to keep coming back to the same areas and asking people to give again and again and again. At some point in time, a different direction either has to be taken, or I don't understand why we can't follow the existing right-of-way.

If you've already got lines there and they do absolutely have to come through, why can't we bisect my property in the same place that it's been bisected before instead of striking out in a completely different direction? These are all things that have occurred to me over the last year or so as I've heard about this project. I have written comments, sent them in, talked to people at these meetings before, haven't received any feedback, never had anybody contact me. I've 3|8D 4|2C

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offered to meet with these people to drive them around my farm to show them the property where they're thinking they're going to easily come through. I've offered to do that on numerous occasions, again tonight. I doubt very seriously I'll ever hear from them. 4|2C cont.

So I hope the Department of Energy as they study this will look at all of these things. Again, I'm not opposed to projects that benefit the state of Arkansas and benefit the country, but I think this project is wrong for us and wrong for our area, and unless it can be shown that there are some benefits to us, I don't see why we have to keep giving our land for these types of things. So that would be my comments. Thank you. 5|34

DR. SUMMERSON: Thank you.

(DEPOSITION CONCLUDED AT 8:00 P.M.)

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C E R T I F I C A T E

STATE OF ARKANSAS)
) SS:
COUNTY OF WASHINGTON)

I, Mike Washkowiak, Certified Court Reporter within and for the State of Arkansas, do hereby certify that the above-named PUBLIC HEARING was taken and transcribed pursuant to agreement, and under the stipulations hereinbefore set out; and that I am not an attorney for nor relative of any of said parties or otherwise interested in the event of said action.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 17th day of February, 2015.

MIKE WASHKOWIAK, CCR
State of Arkansas, No. 654

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UNITED STATES DEPARTMENT OF ENERGY

PLAINS AND EASTERN CLEAN LINE
TRANSMISSION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC HEARING

HARVELL CIVIC CLUB
8077 WILKINSVILLE ROAD
MILLINGTON, TENNESSEE 38053

5:00 P.M. - 8:00 P.M.

GREG FASANO, FACILITATOR

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PUBLIC HEARING

(On Thursday, February 12th, 2015, a public hearing commenced with an open house at 5:00 p.m., and recessed at 5:53 p.m. for the public presentation. Then the formal public comments commenced at 6:31 p.m.)

MR. FASANO: This portion of our meeting is officially designated as a public hearing for the Plains and Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on February 12th, 2015 at the Harvell Civic Center Auditorium in Millington, Tennessee. It is being held to receive comments on the Draft EIS.

We are commencing this public comment portion of this meeting at 6:30 p.m., and are scheduled to adjourn once all participants have had a chance to make their comments.

Each speaker will have three minutes. We will try to provide flexibility in the amount of time allotted based on the number of speakers that are registered; however, please be concise.

This meeting was preceded by a presentation by DOE's EIS Document Manager, Dr. Jane Summerson. Dr. Summerson will represent

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the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

My name is Greg Fasano. I've been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

The first speaker is Rick Maynard, on behalf of Congressman Steve Cohen, and then Charles Reed after that.

MR. MAYNARD: Thank you. I'm not a politician so I'm going to try to keep this brief. The Congressman asked if I would come here tonight to express our support for this project. We are looking forward to the jobs that 1|35
will be created as it is being constructed, and to the positive environmental impact we have here with the production of renewable energy. We have

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contacted the DOE several times to express our support, and just wanted to thank you for joining us here as we talk about this important work. Thank you. 1|35 cont.

MR. FASANO: Thank you. Charles Reed, followed by Tim Saylor.

MR. REED: My name is Charles Reed, and I'm a resident of Millington. I live at 4693 Cedar Ridge Drive. And I, for one, am very enthusiastic about this project for a number of different reasons, but one, simply because it is a renewable resource. We have one of the main truck lines. Railroad runs through our city, the Canadian National, which usually you can see a coal train in the morning going south, and then an empty one going north later that day. I counted the cars on the train. It was 166 cars of coal that goes down somewhere below here. I don't know to what station. 1|35

But with the wind farms that are generating the electricity and bringing it here to this part of the world, I think, is a very, very good thing. I, for one, am very, very positive about it, and I'll support it, and I'll do it any way that I can. Thank you very much. 1|35 cont.

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DR. SUMMERSON: Thank you.

MR. FASANO: Tim Saylor, followed by Sandy Saylor.

MR. SAYLOR: Good evening. My name is Tim Saylor. I live on Merrill Road. That's just north of Orgill Golf Course. I have a farm there, and the transmission line will go through that property. So as they say, I have got a dog in this hunt.

I first of all want to thank Clean Line for being as forthright as they have been. I realize that they could have just come in and sort of bulldozed their way over everybody, but they didn't do that. They addressed our concerns, and I just want to take a moment and, you know, thank the Clean Line folks for, you know, being as good as they have been to help us understand what is going to happen.

Also, I did notice in the EIS one specific thing that really wasn't addressed, and that was that the corridor will limit the uses of the property, you know, you can't build structures, all that stuff. And my specific comment to that is that I like that. It's going to limit development around me, and most folks 1|21

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see that as a detriment. I see it as a plus. So I noticed in the EIS that you really didn't address that, and maybe you want to give a thought to the fact that you're going to be keeping that corridor free and clear. Okay. 1|21 cont.

DR. SUMMERSON: Thank you.

MR. SAYLOR: Thank you.

MR. FASANO: Sandy Saylor, followed by Charles Gulotta.

MS. SAYLOR: I am Sandy Saylor, and I'm related to this fellow who spoke with you. I agree with everything he said. We are landowners who will be impacted by the project, actually on two different parts of our property.

The Clean Line people have been, as he said, very forthright in working with us. They've been fair. They've been honest. They've been good listeners, as a matter of fact, in our dealings with them putting together a very successful transition document that has guided us towards agreements that were actually to our benefit rather than theirs.

I am looking forward to a very good experience with them as we go through this project. If it does get approved and go through,

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I do not have really any concerns about working with these people because, although I'm the same kind of person as those who say, I hope it's not in my backyard, I'm finding that my backyard is doing pretty well with these people as they work with us. So I would say to you that you shouldn't have a lot of concerns about the dealings with them because they've been very upright, and we've been very pleased with their honesty.

DR. SUMMERSON: Thank you.

MR. FASANO: Charles Gulotta, followed by Rita Harris.

MR. GULOTTA: Good evening. I'm Charles Gulotta, director of the Millington Industrial Development Board. The Industrial Development Board is tasked to create economic development opportunities in and around Millington. The Board has unanimously endorsed and supported this project for a number of years. The Board feels like the availability of green energy coming from the shores of the United States will help stabilize if not lower energy costs. As we deal with business and industry, that is one of the very, very significant factors 1|35

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of trying to recruit business, is low cost and reliable energy. We feel that the project will create local job opportunities in and around the Millington area, both full-time. We think that it will create contracting jobs for a wide, wide range of occupations. 1|35 cont.

And also, on an overall national objective, I think it's a patriotic project. The project will help us remove foreign oil supplies and foreign energy supplies from our shores, and will help the United States be a stronger place.

So in conclusion, the Industrial Development Board has enthusiastically endorsed this project. Clean Line Energy has made a strong, strong effort to make sure that local businesses and industry know about the economic development opportunities that exist in the area. And as the Saylors have indicated, they have been very, very forthright with us. Thank you very much for this opportunity. 1|35 cont.

DR. SUMMERSON: Thank you.

MS. HARRIS: Good evening.

MR. FASANO: Ms. Rita Harris, followed by Paul Shafer -- or Shaffer.

MS. HARRIS: Good evening. My name

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is Rita Harris, and I'm here representing the Sierra Club Beyond Coal campaign. I am here to offer a few brief comments, but please expect our written technical comments that will be submitted later.

I'm here to encourage the DOE to approve the Plains and Eastern Clean Line Wind project. We're generally supportive of renewable energy projects and applied projects that are not wishful thinking but are actually ready to serve customers. Wind power is one of the most abundant sources of low cost reliable and climate-friendly electricity in America. That's why utilities across the country are taking advantage of record-breaking wind output to keep the lights on and prices down this winter. 1|35

Sierra Club believes the Plains and Eastern Clean Line Wind Project will help communities across the southeast access clean energy and assist our region in transitioning away from aging, dirty coal plants. It's also important that this project be sited, designed, and constructed in a manner that protects our environment and preserves our community so everyone benefits from clean power and welcomes

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the change that is obviously on the way.

In Memphis and west Tennessee area, in general, we have been burdened for over 50 years with huge amounts of toxic pollution from the TVA coal plant in Memphis. Many people, including environmental justice activists and health professionals, are excited about the possibility of clean wind energy, which will undoubtedly lead to cleaner air and better health for Tennesseans.

In looking over the environmental justice section of the Environmental Impact Statement, it appears Clean Line has considered various impacts and that a project of this magnitude and the -- project of this magnitude could have on local folks, both in Arkansas and Tennessee, along the transmission line route.

However, I would like to encourage that the final route be one that avoids and minimizes impacts to property owners, sensitive environmental resources, and other land uses. It is my understanding that this can largely be done by using existing rights-of-way and access roads. 2|8D

Once the project is approved, I believe it will generate increased excitement and renewable energy, and will lay the foundation for

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other clean energy projects to take root in our state and in our region.

As I take my seat, I want to again say I encourage the DOE to accept and approve the Clean Line EIS with special consideration of our written technical comments, which will be mailed before the comment deadline. Thank you 1|35 cont.

DR. SUMMERSON: Thank you.

MR. FASANO: Thank you. Paul Shaffer, followed by Joseph Trotter.

MR. SHAFFER: Good evening. I'm Paul Shaffer. I'm with the International Brotherhood of Electrical Workers. And while my main motive is to rise in support of this project because of the job creation and the increased industrial opportunities it will produce, and also in favor 1|35 of the generation of clean energy through the wind power and the environmental impact it'll have on our area by helping to replace the coal fire generation that we currently use, but I'd also like to encourage the Department of Energy to approve this project and to continue to work with Clean Line to select the final route that has the least impact on the landowners, and the environment, and in particular, historical sites 1|35 cont. 2|8D

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within the route. Again, just like to encourage Department of Energy to approve this project. 1|35 cont.

DR. SUMMERSON: Thank you.

MR. FASANO: Joseph Trotter, followed by Susan Routon.

MR. TROTTER: My name is J.B. Trotter, and we are here -- I'm here on behalf of BBA of Shelby County, and we would like to support, and hopefully, the Department of Energy approves this plan, but also include the minorities part of it so we can see jobs not only in Shelby County but throughout the transmission line that you are trying to get done. So thank you very much. 1|35

DR. SUMMERSON: Thank you.

MR. FASANO: Thank you. Susan Routon.

MS. ROUTON: My name is Susan Routon, and I live right here in Atoka. I was born and raised in Memphis, but militarily gone almost 30 years before we moved back here to Tipton County.

We really need something positive, and this can be an extremely positive step forward with short-term problems in the building of the line itself.

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I do also ask that everyone who's sensitive to the farming, to the land and -- to recognize that anything that is unsightly is temporary. I would so much rather have a clean line coming through my front yard, if necessary, than a pipeline that can be absolutely devastating, if at all compromised. Please do support the Clean Line for all the reasons I have heard tonight. 1|35

DR. SUMMERSON: Thank you.

MR. FASANO: Thank you. That was the last person that officially signed up beforehand, but we obviously have time left, and I would like to call on some folks. If you'd like to provide a comment on record, then come up and do so. Please state your name, also, and -- for the record, and your affiliation.

MR. GUZMAN: My name is Eddie Guzman, and I'm a member of the Tourism Board in Millington, Tennessee. I'm thankful of Clean Line Energy. They're already laying footprints in the area. They're being good stewards of our community. Personally, they're going to bring -- if the DOE approves this project, they're going to bring a lot of jobs, a lot of temporary labor

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here. I'm hopeful that some of the temporary labor that comes here, who shops at our stores, stays at our hotels become members of our great community.

On a personal basis, I have two young children that depends on foreign oil. I think this is a real opportunity for us to alleviate that stress that we have, depending on foreign countries who are not appreciative of what the U.S. offers. Thank you very much.

DR. SUMMERSON: Thank you.

MR. FASANO: Is there anyone else that would like to provide a comment?

(No verbal response)

MR. FASANO: Okay. I don't see any raised hands. So I'd like to say thank you, once again, for your courtesy, and your participation, and your comments. Please remember that you may continuously make comments on the Draft EIS until the comment period closes on April 18th.

At this time, I'm going to place the hearing in recess at 6:48 p.m., rather than adjournment, in case someone else would like to comment. If you'd like to comment, the court reporter will be here until 8:00 p.m. You can

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comment one-on-one right where they're sitting there (indicating), and she'll record what you have to say. So please feel free to approach her and do that.

Staff will be here for your convenience until 8:00 p.m., and you may continue to work with our folks out in the lobby area like we did beforehand to ask questions and get some more information on the project. So with that, thank you very much.

(The formal comments were concluded at 6:48 p.m., and the open house continued as follows:)

OCIE HUTCHISON: My name is Ocie Hutchison. I am a resident here in Millington, Tennessee. I live at 7258 Armor Cove. And I guess I have a comment, and follow-up my question. I bought where I live now eight years ago, and I bought what I thought to be my retirement home. And the reason why I bought there, because it was a rural area, very beautiful area, and there weren't any buildings, towers, and electrical lines, and very peaceful place, very quiet, and that's how I will like for it to remain.

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The proposed line is going to run within a few hundred feet of my property right behind my property line, and it's going to affect maybe six or seven other houses on my block. And we've all had a -- we've all had our concerns, but I just don't want to look out my back door or sit on my patio and look at towers, electrical towers. I pretty much like the way that it is now. And what I have now is the reason why I bought where I live. 1|29

I'm concerned with the radiation that comes from the towers. I'm concerned with the trees that I have on my property because it did say that it -- the implementation of the towers will affect vegetation, and will affect soil. And with me being within a few hundred feet where the transmission line is going to go, I'm definitely -- I definitely have concerns with the water table and the noise that the lines are going to generate. I'm not sure what you mean by clean power. 2|15 3|28 4|17 5|18 6|22

And also -- and the question that I have: How many feet apart are the towers? When I walk into my backyard, will I see one tower within a few hundred feet of my property or will I see 1|29 cont.

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many towers within a few hundred feet of my property?

And I'm also -- I have concerns about the property value. Will there be a decrease in my property value? And if so, will I be compensated? 7|6

Those are my concerns. And once again, I'm at 7258 Armor Cove.

COURT REPORTER: Thank you very much, sir.

MR. RHODES: I'm Kevin Rhodes. I live at 7282 Armor Cove. And like some of the other people, I do have a dog in the hunt. I -- the line is going to go into my backyard. I moved to the country on purpose. And basically, where I'm going to be living now, the lines are going to run right across my backyard. I know that that's for a personal reason, but that's why I moved there. I moved to the country so that I wouldn't have the city moving in next to me. So now with this power line in my backyard, they're moving right back in.

Based on what I paid for my house, when they put that line behind it, it's not going to be nowhere near worth what I paid for it. So 1|6

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does it have an impact on me? Yeah. I have -- in my backyard, I'm looking at owls, and woodpeckers, and the little animals and critters. 2|31
But when they knock all those trees down and bring that power line through there, I'm not going to see that.

Then on top of that, maybe a mile, if it's a mile away, to my east, is the substation, and behind me is going to be the wires. We're 3|22
going to be caught in this big hum, if you will, power lines on the -- my rear, and the substation on my left. And we're going to be caught -- it's going to be like a magnetic field down in there for us. So I'm not sure that they've definitely determined that these things do cause some kind 4|15
of cancer. Plus, I don't like the fact that I'm going to have a power line behind my house, and a power station having -- less than a mile from my house. So the impact is personal, but it is an impact. But I just wanted to put that on record. It is an impact. Thank you.

COURT REPORTER: Thank you, sir.

(The public hearing adjourned at 8:00 p.m.)

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C E R T I F I C A T E

STATE OF TENNESSEE:

COUNTY OF SHELBY:

I, CINDY SWORDS, Licensed Court Reporter (#438), Certified Electronic Reporter and Transcriber, Internationally Certified Digital Reporter and Transcriptionist, and Notary Public, in and for the State of Tennessee, do hereby CERTIFY:

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPTION OF PUBLIC HEARING
TAKEN AT THE LAKE POINT CONFERENCE CENTER
ON FEBRUARY 17, 2015, BEGINNING AT 5:00
IN RUSSELLVILLE, ARKANSAS

REPORTED BY KERRI PIANALTO, CCR

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MR. FASANO: This portion of our meeting is officially designated as a Public Hearing for the Plains & Eastern Clean Line Transmission Project Draft Environmental Impact Statement. The meeting is being held on February 17, 2015 at the Lake Point Event Center in Russellville, Arkansas. It is being held to receive comments on the Draft EIS.

We are commencing the public comment portion of this meeting at 6:25 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have three minutes. If time permits, we will try to provide flexibility in the amount of time allotted based on the number of speakers that are registered; however, please be concise.

This meeting was preceded by a presentation by DOE EIS document manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

My name is Greg Fasano. I have been asked by the DOE to conduct this comment period as a neutral moderator. I'll ensure that the ground rules reviewed earlier in the evening are followed.

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The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

The first speaker will be Chris Callahan followed by Dr. Robert Fraser. You don't need to lean into the mic. It ought to pick you up just fine.

MR. CALLAHAN: Thank you. My name is Chris Callahan. My address is 701 Hickey Town Road, London, Arkansas 72847. I have three primary comments that I want to make about the EIS. The first one is socioeconomic impact. I believe there is a great departure from what's mentioned in the EIS and the actual impact on landowners. I'm going to reserve my comments to only those landowners who are adjacent to but not in the right-of-way. These are people that will not receive any payment for the damages that they suffer whether it's eminent domain or any kind of a negotiated settlement. 1|4

In the EIS it's stated that nearby property values in rural areas will be impacted negatively by about 20 percent of their value. These towers are 120 to 200 feet tall and a quarter 2|6

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of a mile apart and they're bigger than any power lines that are in this area, even those coming out of ANO. These things will be visible for a great distance and they'll be an eyesore to our beautiful state. Just estimating the direct impact a half a mile either side of the right-of-way, there's an effect. For each acre of right-of-way, there are 25 acres adjacent to that that are harmed. If you take those 25 acres and conservatively estimate that they're worth $2,000 per acre and devalued by 20 percent, that's $25,000. For every acre of right-of-way, there's $25,000 of harm to the adjacent landowners and the value of their property that they won't receive any benefit. There are 25 acres of right-of-way per mile, so that means there are 625 acres damaged per mile. That is -- oh, where's my numbers here, $5,000 per mile.

3|29

2|6 cont.

MR. FASANO: You need to summarize and wrap up, sir.

MR. CALLAHAN: Okay. The total, though, is $87 million of damage in the state of Arkansas alone on those conservative estimates, $100 million in Oklahoma.

2|6 cont.

I would like to say my next topic, cumulative impact, the lady called it connected

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impact. Under cumulative impact you need to address all of the foreseeable impacts of this action. She mentioned that there was the impact of the wind farms in Oklahoma. Mr. Skelly, who is the president of Clean Line, in a recent interview said that it would require 3,000 generators to power this line at a half square mile each, that's 1,500 square miles of wind farm in Oklahoma, Texas and Kansas. The EIS does not mention Kansas and it doesn't mention 150 square -- 1,500 square miles.

4|12

The last item I have is alternatives. The alternatives under NEPA are alternatives to the proposed action, not alternatives within the action. The no action alternative is the only alternative that was discussed. There are a multitude of other reasonable alternatives for this action, AC power, many others that would make it less harmful. Thank you.

5|11

MR. FASANO: Thank you. Robert Fraser followed by Emily Brown. Every once in a while glance in this direction for your one minute -- for your one minute notice. Thank you.

MR. FRASER: Thank you, Dr. Summerson. I'm Dr. Robert E. Fraser. My address is 5456 County Road 3451 in Clarksville, Arkansas 72830. I oppose

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this transmission line because it will adversely affect the natural beauty of Johnson County, Arkansas. I oppose this transmission line because it will adversely affect the natural beauty of Pope County, Arkansas. I oppose this transmission line because it will adversely affect the natural beauty of Franklin County, Arkansas. I oppose this transmission line because it will adversely affect the natural beauty of Conway County, Arkansas. 1|34

I'm disappointed in the Clean Line Draft EIS not being available at the Johnson County Public Library as well as not available at the Franklin County Public Library as listed on the DOE website for review before this public meeting. I contacted them, they haven't got it. They've tried to e-mail, call and they haven't got this. The Draft EIS was only available at Pope County Public Library as of February 13, 2015, only five days before this public meeting. This indicates to me that Clean Line, the Clean Line organization is not really interested in our public comments at these meetings. 2|2F

My property where I live, have lived for 38 years, is one-half mile from the proposed transmission line and my family does not want our property value in our beautiful area degraded by 3|6

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this project. We have on the National Register of Historic Places on our place on our land called King's Canyon and it has Native American rock art and it's on the National Register for that. Between our place and the proposed line, there are Native American burial sites and they may be impacted by this. 4|20

The other thing that I'm concerned about is the amount of herbicides that will be used on this Clean Line right-of-way just to keep it -- keep the brush down and what -- how that will impact our water, our environment and I'm concerned about this for all of us and I thank you so much for coming out tonight. We have a good crowd and I want you all to talk about this. Thank you. 5|8

MR. FASANO: Thank you, sir. Emily Brown followed by Dr. Alan Mantooth.

MS. BROWN: Hello, my name is Emily Brown. I live at 3303 Pine Hollow Road in Van Buren, Arkansas 72956. I have recently become a member of the Sierra Club. I am opposed to this project and I'm opposed to cutting down 8,000 acres of trees. 1|28

An engineer from Clean Line stated that in the event of a tornado, these towers will fall inward, yet there are a ton of pictures on the Internet showing 2|19

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smaller towers that were laying on their side, not inward.

I will personally live 400 feet from the proposed route which scares me. These transmission lines are only made to withstand an EF -- or, I'm sorry, yeah, an F3 tornado. How can they predict that there -- that nothing bigger will come along? 2|19 cont.

Also, if the majority of Arkansas counties in the state of Arkansas has passed a resolution opposing this project, why are we here? No one wants it to come through. What is the purpose of this meeting and why is the DOE putting landowners like all of us here through this? Thank you. 3|6

MR. FASANO: Thank you. No applause, please. Dr. Alan Mantooth followed by Herman Luebker.

MR. MANTOOTH: Alan Mantooth of 6430 Wheeler Road, Fayetteville, Arkansas and I'm with the University of Arkansas. I'm a Distinguished Professor of electrical engineering. I'm also the Executive Director for the National Center for Reliable Electric Power Transmission and a group connected to Advanced Power Electronics Center which is a global initiative with research sites in Korea, Germany, South Carolina and the head is here in

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Arkansas. I also direct two solar electric power centers and as a result of all of this activity through the last two decades one of the things that we've learned is that everything comes with a cost.

I'm in favor of this transmission line for the simple reason that we already have rulings by the EPA that mandate that we have to start focusing a lot of our energy in Arkansas in more clean sources and one of the ways we can have that energy brought to Arkansas is with this transmission line. The fact that we are so far behind the curve as it stands today with so much coal-fired generation in Arkansas makes this pretty compelling. And, in fact, we're starting to see -- and I had lunch just last week with people who are proposing more wind and hoping to connect it to this transmission line. It opens up the possibility for that wind to be right here in Arkansas rather than western Oklahoma. 1|35

The economics, I'll let others argue that because of the fact that, you know, the jobs and the revenue from the construction and so forth, but I think the compelling thing also is that Arkansas is one of the nation's energy states. When you look at all the electric power companies and oil and gas companies that operate in Arkansas, there's no 2|24

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question that it is a vital part of our economy and so it's good -- as a professor, one of the things I'm looking at is opening doors for my students and so what I'm trying to do is educate them on all the opportunities available in the energy sector. As a result of this work, this is an opportunity for our young folks, particularly in this corridor, but also in the northwest part of the state, to realize the benefits of that. 2|24 cont.

Then finally, I guess it's energy reliability. When we think about the mix of fuels that we want to have to have a really resilient grid, the wind power that this project affords and the fact that a converter station would be in Arkansas providing 500 megawatts of megapower to our state is something that provides the resiliency and the capability that we want to have and so as a result, from a power perspective I'm certainly behind this project. 3|9C

MR. FASANO: Herman Luebker followed by Ron Hairston.

MR. LUEBKER: I am Herman Luebker. I live at 35960 Highway 164, Lamar, Arkansas. I'm a professional engineer and I understand what they're doing up here. Somehow, the clarity of all this got

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clouded because I didn't learn until about three months ago that I was living -- going to be living in the shadow of these power poles.

I have a further concern that we are still reeling from the problems with the Fayetteville Shale drilling. They destroyed the highway system over there. This type of project will probably destroy the highway system in our area and we're all going to be stuck trying to find our way to work through the potholes and whatever else is out there. 1|27

Believe me, Dr. Summerland, when the boots hit the ground, the shit hits the fan and this is not going to be fun after that time. Take care of us on all of our roads, everything that we have existing here, take care of it. You've got to protect our water system, they are our water supplies. We need help. We don't need a problem. Thank you. 1|27 cont. 2|18

MR. FASANO: Ron Hairston followed by Cynthea Callahan.

MR. HAIRSTON: Thank you. Dr. Summerson, Distinguished Guests, my name is Ron Hairston. I live in Clarksville, Arkansas. I'm a retired electrical engineer with 35 years of design, sales, management and strategic planning experience in the

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energy industry. I hold both bachelor and master degrees. I rely on facts and numbers to lead me to conclusions. I deeply care about the environment and I support clean energy initiatives. I believe it's in our national interest and that mankind has been given a sacred trust to care for this planet. However, I'm against this Clean Line project. Let me try and explain why. 1|34

First of all, Clean Line is not really as clean as advertised. Examination of wind power characteristics and Clean Line's financial model shows that 70 percent or more of the electricity generated will have to come from fossil fuels.

The footprint of physical destruction is described as a mere 200 foot wide right-of-way, but then when you look at the combined effects, kind of like rolling up a 700 mile long hose, it's no longer a small thing. Private property razed by Clean Line consumes 18,000 acres, equivalent to a four megaton bomb taking out half of Fort Smith. Then there are the irradiating effects of corona noise. The constant hissing and crackling will make homes impossible to sell as far as 1,000 foot to either side of the line. No buyer wants to live where he has to listen to this noise every time he goes

2|8

3|22

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outside or opens a window. This will financially devastate many who receive no restitution from Clean Line because their property is not squarely under the right-of-way. Where average family incomes are $33,000 a year, absorbing a 100 to $200,000 loss is no small thing. How far reaching is the potential of financial damage caused by this noise? Think of an area 50 percent bigger than Tulsa. Similar financial damage irradiates from the effects of visual pollution extending over an area larger than Oklahoma City, but the dirtiest part of Clean Line is the human toll. There are real people being ignored whose lives and futures are being destroyed so a few investors can make a buck. 4|6

I'm going to wrap up. This country was founded on the principles of equality and justice. This may not mean that our outcomes will be equal; however, it does mean that our outcomes should be just. When Clean Line forcibly takes the value from property owners without restitution, the outcomes are criminally unjust. 4|6 cont.

Let me ask four rhetorical questions. On whose back will $100 million or more of uncompensated property damages fall? Who will make financial gain off of our losses? Is the transfer 5|36 cont.

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of wealth from the poor to the rich acceptable to you? And finally, for those who support Clean Line, will you demand just outcomes for your friends and neighbors? Thank you very much for the opportunity to speak here today. 5|36 cont.

MR. FASANO: Thank you. Cynthea Callahan followed by Debbie Moore.

MS. CALLAHAN: Cynthea Callahan, 701 Hickey Town Road, London, Arkansas 72847. I teach at Arkansas Tech University, chemistry. I taught high school physics. I know a little bit about some of this stuff. Okay, louder. This is -- I'm going to give you a bunch of bullet points, months and months of research. Research on wind generation in general by people who are doing the research who don't have a buck to be made will tell you that local generation and local distribution is the best way to utilize wind, not transporting it halfway across the country. Because of its intermittency, it's not going to be more reliable. All we have to do is look at Germany who has rushed into this renewable and rushed into wind and just go Google that, wind Germany, and you will read article after article after article about the havoc it has caused in their country and their economy and in the energy 1|12

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sector. It's costing them a lot.

I wish Clean Line's promises could be delivered. If they were -- if I believed they could, I wouldn't be here. Big picture, my research says this is a net negative, that whatever benefit will come out of it will not compensate or come close to the destruction and the damage that it will cause. It is ethanol all over again. 2|34

It disturbs me this project is not a part of any regional transmission authority plan. They want to jump in front of everyone else who is working to upgrade the existing grid and is working to get renewables online. Entergy is doing it, everybody in the country is doing it, but they want to just jump up here and say, no, we're going to build this line and let us do it. 3|3

Again, these are not all well-connected, but I don't think the people who did the EIS or Clean Line understand that in rural America land is our investment. Blood, sweat and tears for generations have gone into our land. Our wealth is not in banks, it is the land. For instance, in the EIS they estimate a home depreciation value property will be ten percent and that's based on research in Seattle in an urban environment. I'm sorry, that 4|6

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doesn't affect -- it's not applicable to rural property values in Arkansas where the view is a huge part of the value of the property. 4|6 cont.

Is this for the public good? Is this for the greater good? I have to say no. Many of us have sacrificed for the greater good through eminent domain for other projects and we have already had to suck it up for other things, but this is not for the greater good. 5|4C

The EIS --

MR. FASANO: Please wrap up. Thank you.

MS. CALLAHAN: -- also quick -- pardon?

MR. FASANO: Please wrap up.

MS. CALLAHAN: Okay. The EIS dismissed underground cable bearing as an alternative. They wouldn't even look at it where the testimony of one person was cited and that person just happened to work for Clean Line. According to IEEE bearing HVDC is a very good idea. You can use existing right-of-ways and it will greatly reduce the environmental impact. 6|10

Do I have any more time?

AUDIENCE MEMBER: I'll forfeit my time.

MR. FASANO: One second. Thank you.

AUDIENCE MEMBER: I'll forfeit my time.

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MR. FASANO: That's not the way it works, I'm sorry. Please continue.

MS. CALLAHAN: Okay.

MR. FASANO: We can get more if we have time at the end.

MS. CALLAHAN: The cumulative impact was not adequately taken a good look at, but we cannot industrialize the plains. There's a limit to how many windmills you can put up and we cannot just turn the Great Plains of the United States into a giant wind farm. Also, the technology is constantly 7|32

changing and I believe that the windmills that they're trying to put up now are going to be obsolete very soon. Once again, all we have to do is look at other countries for the mistakes that they have made. I see no demonstrated need, I see no proof of a need for this line in the first place. Just saying so doesn't make it so. 8|12

Another thing about the EIS and the health effects. They pulled some old data from World Health Organization, even the World Health Organization has new data that says, yes, there's cause for concern. Even -- if you want an FHA loan, they come out and do an inspection and on their checklist under hazards is high-power voltage lines, 9|15

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so you can't even -- you know, they care if they want to loan you money.

MR. FASANO: Okay. Ma'am, we have to wrap it up, please.

MS. CALLAHAN: Okay.

MR. FASANO: Thank you. If you have more written comments, please submit them. We'll get them in the record --

MS. CALLAHAN: Okay.

MR. FASANO: -- or you can speak again at the end --

MS. CALLAHAN: I will.

MR. FASANO: -- if there's time.

MS. CALLAHAN: I will. Thank you.

MR. FASANO: Thank you, ma'am. Debbie Moore and then H.K. Albert.

MS. MOORE: I yield my time.

MR. FASANO: Okay. H.K. Albert.

MR. ALBERT: I yield my time.

MR. FASANO: Okay. Haley Hall followed by Charles Stockton.

MS. HALL: My name is Haley Hall. I am from region four, Rudy, Arkansas. The line goes about three fourths of a mile from my house. I am also a member of the Sierra Club and I oppose Clean 1|34

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Line because of the 8,000 acres that they will be taking from Arkansas and the herbicides they will be using and the blasting and the interference with our bird migration and possible well water contamination. 1|34 cont.

This is the highest DC line to ever be built in the U.S. The next one underneath is I think 500 kilovolts and this is a 600 kilovolt line. Clean Line claims there's no health concerns and when I went to their Muskogee meeting, they handed me this little pamphlet which I've also done a lot of research on my own reading medical journals and stuff. In their own little pamphlet it says that the panel classified power frequency EMF as a possible carcinogenic to humans based on fairly consistent statistical association between a doubling of risk of childhood leukemia and magnetic field exposure. And aside from that, this is from 2002. They gave me outdated stuff. I mean, that's almost 15 years ago and then their own EIS talks about pacemakers and it says fixed pacing mode, even brief periods of interference could be life threatening. So the fact that they're claiming there are no health concerns is simply not true. 2|15

And getting back to the EIS sheet when she

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was talking about property values, I looked at the references that they used for the property values in the EIS and they were pulled from the early '90s. So they don't even have up-to-date references on a lot of the stuff that is in the EIS. 3|6

So about the EIS, also why are we not receiving our EIS whenever we're requesting it through e-mail? They say that they're on backorder, that they ran out, but we're in the comment period right now and we cannot even get them in our hands to study them. Luckily, I ordered mine early on and so I did, but there are many in my community who have not received it. 4|2F

In the EIS, they are very careless about locating schools. Why was the EIS study done so carelessly? They failed to locate the schools on the proposed route, but they located schools off of the proposed route. They located the cemeteries, they located churches, they located houses, but they didn't locate our schools. We have two schools in Alma -- no, three schools in Alma. They're 2,600 feet from this line. We have two schools in Mulberry that are 1,300 feet from this line. The school administrators didn't know anything about this line until I went and talked to them last week. 5|24

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I want to know why the Department of Energy also wrote a letter asking for applicants to use -- to propose a project using section 1222 and I want to know why Glotfelty, who was one that helped write section 1222, was the one who responded to the letter and started a company called Clean Line. 6|4

MR. FASANO: Please wrap up.

MS. HALL: This project is only about greed. They don't -- they don't see our green trees, our land, they don't see our life, they see a different kind of green and that's money. We don't want the route changed. We want it completely stopped. We don't want it in Arkansas and I'm not going to stand here and beg you to oppose Clean Line, I'm simply going to tell you that you should be ashamed that you even entertained it this long, and that's all. 1|34 cont.

MR. FASANO: Charles Stockton followed by Nicholas Stockton.

MR. CHARLES STOCKTON: Charles Stockton, 329 County Road 3510, Clarksville. I'm here primarily because I recently found out that this proposed power line will virtually destroy an 80-acre family farm in Crawford County. You talk about socioeconomic impact, five generations on this 1|6

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farm. The proposed route will start at one southeast corner and end up on the northeast corner -- or southwest quarter, end up on the northeast corner, zigzagging, totally destroying all the trees on the property, no value left on this 80 acres. That's totally unacceptable, but that's the way things seem to work in our country now. 1|6 cont.

On November 19, 1863, President Abraham Lincoln made a speech. The closing words of this great speech were that government of the people, by the people and for the people shall not perish from the earth. It sure looks to me like it has. Thank you.

MR. FASANO: Nicholas Stockton, then Brad Hall.

MR. NICHOLAS STOCKTON: My name is Nicholas Stockton. That was my father, Charles Stockton. I live in Rudy, Arkansas. Talk about property value, I was declined my home loan because of this power line proposed route coming through. 1|6 I'm the fifth generation trying to raise the sixth generation on my farm. I'm missing Cub Scouts meetings, I'm missing Little League. When I get home, I have to explain to my boy that I'm trying to save the family farm instead of making it to the

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things that I should be making it to. This is a waste of my time and your time.

The majority of Arkansas, the counties this goes through have voted against this. Our state has voted against this. I'm against a private company getting eminent domain to pay us pennies on the dollar to make billions on the dollar. It is morally wrong that this is even thought of in our state and in our country. I urge you to comment, to get this out of our state. I don't want it moved, I want it stopped. 2|4 3|34

MR. FASANO: Brad Hall followed by Louis Schmoll.

MR. HALL: My name is Brad Hall. I'm from Rudy, Arkansas. My address is 2311 Highway 348. That was my wife earlier, so she -- I told her everything to say. No, we're against this Clean Line project. It's hard to believe in 2005 when we were fighting a war in Iraq and Afghanistan that our Congress can say, hey, let's steal 8,000 acres from Arkansas. It's just unbearable to us. 1|34

I'm not going to use my three minutes, so you don't have to worry about raising your card. The last thing I would say is that these guys walking around in the white shirts, if you stole 1|34 cont.

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their wallet out of the back of their pocket, they would have one of these deputies arrest you and they want to take our land from us, so thank you. 1|34 cont.

MR. FASANO: Louis Schmoll, then Ray Wewers.

MR. SCHMOLL: My name is Louis Schmoll. My address is 1308 West Main, Atkins. I'm a landowner, a cattle farmer and my property will be affected by this. Years ago, the Interstate 40 came through behind my house and separated our farm. I was bitter for that for a long time, but I thought about so many times even today if all that traffic that was on Interstate 40 was coming down Highway 64, it would be a bad deal. It has helped -- helped us. It hurt us at the time, but it helped us for the future.

We're going to have to have electricity. The way it sits right now with everything being generated coal-fired here in Arkansas, I know that the rules are saying that's going to have to be cleaned up more and I don't know how long we can stay within that, but we need cheap electricity. It's not a high-paying state, but there will be several thousand jobs created with this initially. 1|24

MR. FASANO: Please folks, let him speak.

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MR. SCHMOLL: Anyway, I know from the comments that these are not popular comments I'm making here, but when I looked at this, I seen the -- I asked what the -- what they would pay, they're going to pay 100 percent according to them of the land value. I said, I can't argue with that, but one of the things I really looked at because I've got grandchildren that are going to school and I worry about them. I worry about them having a job later, but I worry about the education today. I worry about some of the schools here in Arkansas are in financial distress. It's hard to keep -- they keep wanting to raise taxes on the landowner. This will be -- generate, the way I understand it, about $15,000 a month for ad valorem tax. That would help a lot of these schools, so for that, I'm for it. Thank you. 1|24 cont. 2|35

MR. FASANO: Ray Wewers and then Doug Skelton.

MR. WEWERS: My name is Ray Wewers and I live at 918 Barborek Lane, Russellville, Arkansas and my wife owns some property inside the big circle you saw on the map. Our concerns are how are we going to control the undergrowth under these power lines or in this right-of-way and if it's chemically 1|8

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controlled, what effect is it going to have on wildlife, grazing cattle and our groundwater? 1|8 cont.

Another item is what is the reliability and stability of wind generation? I've talked to many dispatchers. I worked at Arkansas Nuclear One out here for years and they hate wind generation because it is not stable, it is not reliable. It's just about as reliable as sunshine is in the state of Arkansas in wintertime. 2|12

Another idea -- comment, is work opportunities for the local laborer. Is Clean Line going to bring their own people in to do this work or are they going to hire local labor and for how long will that job opportunity last? Probably only for a couple years during the construction. After that, you may have five or six people that may be involved. 3|24

And I have a real complaint with the federal government. They subsidize these wind and solar objectives, but they do nothing to support or subsidize the construction of nuclear power plants which are the cleanest and probably the safest way to produce energy in the country. We produce over 1,700 megawatts of power at ANO out there on an acre and a half, not the 1,500 acres for 500 megawatts. 4|36

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Thank you.

MR. FASANO: Doug Skelton and then Rhonda Freeman. Doug Skelton?

Okay. Rhonda Freeman, then Karen Haralson.

MS. HARALSON: I'm Karen Haralson and I'll just pass.

MS. FREEMAN: I'm Rhonda Freeman and I live at 124 -- 1256 SR 105 North, Russellville, Arkansas and I'm sure not a public speaker and I'm scared, but this is a thing that's going to affect my family in a way that could cause a death. My husband has a pacemaker defibrillator and there is no alternate route through my area and it could absolutely kill him and others if any of you have pacemaker defibrillators.

This is such a large magnetic field, that it's detrimental to your health and I didn't know anything about this until September. They told us about it at the fair, a week later we received a letter. I called Bob Woods to talk to me, called me back once, has never contacted me again, tonight told me that he would talk with me now. That's been almost five months that I've been wondering and wondering and trying to contact representatives in 1|15

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writing and trying to get help about this.
We don't need this in our natural state. We don't -- we don't need all of this, the health problems this will cause, the environmental problems. This is something that our state and our future generations -- think of your -- just don't think of money, all of you don't think of money. This is going to affect generation after generation after generation that lives here in Arkansas. Do you want to do this to your children and grandchildren? Do you have a heart? Realize that this going to affect the lives for generations and generations. Please, don't put this through our state. Have a heart. Don't think about the money, think of the lives. Thank you. 2|34
MR. FASANO: J.E. Harry followed by Louie Leeds. No J.E. Harry. Okay. Louie Leeds followed by Gordon Millsaps.
MR. LEEDS: Thank you. My name is Louie Leeds, 993 CR 3550, Clarksville, Arkansas 72830. Excuse me. You know, number one, I'll just say that I'm flat opposed to this project. I don't think the Department of Energy should partner with this project. You know, there's a jillion ways you can beat a dead horse and we're doing a good job of that 1|34

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tonight and, you know, I have a lot of these comments on what's been said already, so I do have a site specific thing or two that I'm going to address.
And back a few months ago I received a packet from Clean Line stating that my property was going to be involved in this project. In reading through this, there's a statement on page two that said, "We are available to meet with you to discuss the project and gain your input regarding the location of this line." I talked to Jerry Moran about some of my concerns. He said, we definitely need to come to the ground to talk to you. We have called this number for Andrew Ure a jillion times, never have gotten to talk to anyone and finally we did get to talk to someone and they said, have you been to a DOE meeting? We said, no. They said, then you have to attend a DOE meeting before we will come and talk to you. So that's going to put a bind in trying to get everyone's concerns met if you've got, you know, 30 to 90 days to respond to this deal. 2|2D
So I'm going to talk about a site specific thing or two. Where I live, it's 900 feet to the largest substation in Johnson County. In front of

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my house, Southwestern Power has a line that's got 161,000 volts on it, it's 590 feet. The Clarksville line is 409 feet, it's got 161,000. REA has 67,000, 350 feet. Clean Line wants to put their line 450 feet behind my house. My concern is health concerns. Have they done studies to know what's going to be the accumulative effects on my family? 3|15

My mother lived there. We didn't have a say in the property to the south of us where all this other power was. She died of breast cancer. We have lived there 11 years now. My wife has had breast cancer twice and we have not even yet seen the effects from this line. Is there health concerns? Someone needs to come and talk to us.

This is a 40-year-old -- or a 75-year-old farm that we have had. I would like to be able to say what happens on this farm, not the government or Clean Line telling me what I'm going to do on my farm. If I want to leave this to my grandkids to build homes on, I would like to do that. Thank you very much. 4|6

MR. FASANO: Thank you. Gordon Millsaps followed Wayne Shewmake.

MR. MILLSAPS: I'm Gordon Millsaps. Jerry, did you have a comment?

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AUDIENCE MEMBER: Go ahead and do yours.

MR. MILLSAPS: All right. All right. You all, I'm going to try and be quick. My name is Gordon Millsaps. I live at 3224 Walnut Valley Road in Dover, Arkansas. I am definitely opposed to this and, guys, this -- this game has been over a decade in the making, so I don't know if three minutes is going to work or not. 1|34

All right, first things first. I'm all for green energy, but something in Clean Line's wind stinks. All right. I have lots of reasons for opposing this project that I'm not going to talk about. The one thing I'm going to talk about, grossly inflated job numbers that shrivel up when Clean Line has to testify. And for those that were hoping for jobs, it looks like Clean Line made you all promises that they couldn't keep. You all are just trying to put food on the table and I understand that and I'm sorry they messed it up so badly for you. 2|24

This whole project is purely speculative. Of course, that's not surprising given that ex-Enron folks are executives of Clean Line. I'm not going to talk about the incestuous relationship between Clean Line, specifically Mr. Glotfelty, and the DOE,

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you all can look it up. I'm not going to talk about the arrogance of Clean Line, all right, or how 122 was always part of their business model. Now, there's two things are big around here and that's honesty and respect and not only did they not treat landowners with any, I don't even think Clean Line knows what they mean. I'm not going to talk about Mr. Skelly's lies about this project not setting a precedent. We've never used section 1222 before. We have used eminent domain before, but never this, never. The private property and property rights of not just us, but all American citizens are potentially up for grabs if we start letting private corporations use federal eminent domain. And again, same folks, multiple easements. How much does a small number of people have to give. This will be the fifth energy easement on my mother's property. How many of you all have multiple energy easements on your property? Let me see a show of hands, please. Thank you. How many of you all are opposed to this? Thank you.

What I do want to talk about is the notice of intent in the initial scoping period. And I do have a couple things I want to submit. One of them is Executive Order 12898 which was from the Clinton

3|4

4|6

5|16

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administration and it talks about socioeconomic and environmental justice and it talks multiple times about the people having an opportunity to comment. Federal agencies will hold public meetings as required in section five of this order, ensure greater public participation, each federal agency shall conduct programs, policies and activities in a manner that ensures that they do not have an effect in excluding persons including populations for participation in them. There is that.

MR. FASANO: Can we wrap up?

MR. MILLSAPS: Not a chance.

MR. FASANO: I would -- I would ask you to respect the time limits.

MR. MILLSAPS: I understand that, sorry.

MR. FASANO: Okay. Thank you.

MR. MILLSAPS: All right. I'll get it quick. Notice of intent, what notice of intent? As far as notification for the initial EIS goes, it was abysmal, disturbingly inefficient, criminally pathetic. The magic postcard that we call the unicorn because more people claim to have seen Bigfoot than claim to have received the postcard. And people are still finding out to this day. Debbie Moore found out just about two weeks ago. I

5|16 cont.

6|2

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was in line signing up to talk tonight and there was a couple in front of me who was trying to find out if they were on the line tonight. People do not know about this line. 664 comment documents in three months on the initial scoping period. We got over 1,000 signatures in less than one and a half months on our petition. We don't have postcards, we don't have deep pockets, we don't have access to the media. What happened, we've looked at this from several angles and we can only come up with three possibilities; utter and total incompetence, a flawed NEPA EIS process or corruption, all of which would call for the entire process to be restarted starting with the notification of intent. 6|2 cont.

The DOE only needs one reason, one reason not to partner. Landowners are against it, most counties are against it, the Cherokee are against it, the states are against, our federal regulate -- delegation is against it; how many reasons do you need? If you decide against the will of the people and decide to partner with Clean Line on this project, you have lost the trust of the local people and given them another reason to mistrust their own government. 1|34 cont.

I'm almost done. I have one more thing to

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say. It would reflect poorly on the DOE, the executive branch and the federal government in general. How much is the DOE willing to risk for a private corporation? Who does the DOE work for? Two billionaire families and a foreign corporation or the 320,361,750 or so taxpaying citizens? 1|34 cont.

In closing, if Clean Line or the DOE thinks that the resolutions opposing this project from the counties affected or the unanimous letter of condemnation by the state energy committee or the Approve Act introduced in the federal senate is the -- I mean, to gut section 1222 is the final blow, you all don't know us rednecks at all. We ain't even started fighting yet.

MR. FASANO: Would you like to submit anything?

MR. MILLSAPS: Also, lessons learned, where it says multiple times, make sure to let people know. 7|2F

MR. FASANO: Thank you. I'm going to take J.E. Harry now followed by Wayne Shewmake.

MR. HARRY: I don't need the topics. Real quickly, you talk about fair land value. I own land. I live at 3851 Melody Lane, Alma, Arkansas. My daughter and son-in-law have about 1,300 acres.

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One of their properties is getting wiped by this. We don't buy our property to sell it. We buy our property for the investments, the future value not the present value. If I want to sell it, then I'll make the determination of what price I sell it for, not somebody in an appraiser suit. 1|6

Their advertising on the radio needs a lot of truth in lending. Truth in advertising. There are no 5,000 jobs. There's 963 or 965 scattered over three states. 2|24 There is not going to be any improved value in the property. Your property value is going down. What they're going to do is you can go to the public service commission and they'll show you that whatever is owned by the DOE, Southwest Power or whatever, that part of this project is free from taxes. Once it becomes a utility status that services the municipalities and so forth, the DOE is involved, we're going to lose that revenue. You're not going to lose just that, you're going to lose a whole lot more than ten percent. Numbers can range all the way up from 40 to 91 percent. I didn't buy my property to give it to somebody else. I bought it for my kids and my grandkids and I don't need the government's help spending my money. 1|6 cont.

MR. FASANO: Wayne Shewmake followed by

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David Murphy.

MR. SHEWMAKE: My name is Wayne Shewmake, 21756 Dardanelle, Arkansas. I am here in support of Clean Line Energy. The Arkansas Wildlife Federation passed a resolution here at the end of January in support of this resolution or for Clean Line's line simply because it is a renewable resource and gets away from the fossil fuels that we're burning today. 1|35 We have at least four or more coal-fired plants in Arkansas and, of course, energy nuclear plant in our community and if you know it or not, all those are privately owned subsidiaries. They are not publicly owned either. The project will not be funded by any federal dollars. The taxpayers are not going to be at any risk on their part of the line itself. The review is being done by DOE and that's one of the reasons for the meeting tonight to discuss your feelings on the program overall and Clean Line has -- it's going to have 260 miles across Arkansas, with their lines going across Arkansas, and right now, many of you may not know it, but in just in our four county area, Polk, Yell, Johnson and Conway counties, there is already over 420 miles of transmission lines. I heard several of you talking about some of them has come across your place

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already.

MR. FASANO: Folks, I ask for respect and courtesy to listen to everybody's viewpoints, so please let him speak.

MR. SHEWMAKE: The new investment that's going to be in Arkansas will help produce some jobs. It will also help the communities in which they go across in support. Tax dollars will help support our schools and things of that nature and, again, we are in support of it. Thank you. 2|24

MR. FASANO: David Murphy, then Leo Knoernschild.

MR. MURPHY: Dave Murphy, P.O. Box 10490, Russellville, Arkansas 72812. I appreciate all the very --

MR. FASANO: Excuse me, could you repeat it one more time. She didn't get it.

MR. MURPHY: Dave Murphy, P.O. Box 10490, Russellville, Arkansas 72812.

MR. FASANO: Thank you.

MR. MURPHY: I appreciate the very intelligent discussion and conversations and the young lady who brought up the fact that this -- you know, just listening, I mean, I'm really learning, you know, about the tornado issue. That is a

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concern to you when you talk about it's only being up to an F3. My first comment is if this were to be done, it does not seem reasonable that that should only be an F3. We've already had more than F3 tornadoes in Arkansas, so I don't see how that could be allowed. 1|19

You know, when I was looking at this, so it doesn't cross my property, it looks like it will come near. A couple questions is, one, have we looked at if they're going to put this in, why are they not trying to keep it on current power line areas? In other words, people already have power lines on their property, why aren't they requiring this company to go and lease some of those other holders of those things to use that same land so you don't take someone's land twice? That does not seem reasonable. 2|10

The other thing is, it was brought up by a gentleman about the collateral damage and the imaging. You know, you think about like are they going to be forced to paint these green? But he brought up -- you know, I grew up in New York and I always hate to bring up New York, but in big cities they have to bury everything. If they're doing this, why aren't they required to bury this line? 2|10 cont.

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And my assumption is it's a lot more expensive to bury this line, but if this is supposed to be some environmental friendly project, right, that this is the whole idea of this, that we're spending all this money, and I have questions about how effective, you know, wind power is, but why aren't they being required to bury this line. That's all I'd like to say. 2|10 cont.

MR. FASANO: Thank you. Leo Knoernschild and James Taverner.

MR. KNOERNSCHILD: I'm Leo Knoernschild of Lutherville, Arkansas 72846. I am a retired state employee. My wife, Sharon, and I have raised our family and lived on our third-generation farm which was homesteaded in 1886 in western Pope County. I've been living there since my birth.

Most of my opposition will be centered on Clean Line's transmission EIS summary notebook referred to as AR-4E, the alternate route. This route will be 50 feet or closer to two historic sites that concern my family and myself. The first is the St. Paul's Lutheran schoolhouse and cemetery is where my family worshiped and most of my immediate family are buried. The one-room schoolhouse was built in 1904 and is listed on the 1|20

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National Registry of Historic Places in February of 1999. It is the only surviving building related to the German community at Lutherville. The second is a residential rock house owned by my nephew. It was enlisted in the mid 1990s. Groups of people frequent or live and our concern is the EMF efforts -- effects, safety issues, the noise, the construction damages. These are old buildings, and 1|20 cont.

the runaway fires underneath the power lines. I am one of your 600 respondents to your EIS scoping process that I returned to you on March the 18th, 2013. My concerns were not ever addressed in your EIS that I received last December the 14th. 2|2

First, my concern is health concerns, the EMFs. Please read, "Living Close to Power Lines." There have been concerns over power line radiation and its effects on human health over 40 years. Living close has been shown to increase the risk of leukemia and other cancers, especially brain, the risk of Lou Gehrig's disease, Alzheimer's, sleeping disorders, breast cancer in men and women and birth defects. Powerwatch UK has identified over 300 papers related to EMF and 200 are specific to this. Are they all wrong? Powerwatch also stated EMF radiation can extend to about 300 meters past the 3|15

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right-of-way. Our home is 300 feet from an existing REA power line. Clean Line wants 200 feet and Diamond Oil line wants 100 feet. This is a bottleneck. 3|15 cont.

The second comment is bats. A colony of bats must exist close because of the number seen at dusky dark in the summer catching and eating how many pounds of insects, mosquitoes, midges and et cetera. Again, in your summary notebook, S61141, line 34 and 35, "The gray and the Ozark big-eared bat use caves. This project would not impact known caves." I'm telling you that caves exist, overhangs exist, waterfalls exist in this part and there are people here that can verify that. 4|31

And I'm very disappointed that some organization I joined while I was at Arkansas Tech, the Arkansas Wildlife Society, that they have now fallen apparently in bed with the Sierra Club in this decision and I will tell you what, they will not a get another red dime from me. But you have not and you will not get our permission to cross our property. We plan to save it safely for the fourth generation. Remember, Arkansas is a natural state. 5|34

MR. FASANO: Thank you. James Taverner and then Bob Allen.

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MR. TAVERNER: Thank you. I'm James Taverner, 483 Woodpecker Lane, Lamar, Arkansas 72846. We were only notified in March of 2014 about this project is the first that we'd ever heard of it. A gentleman from Clean Line came out, did not know who owned the property, did not know anything about the property, only had used Google maps to survey this property to draw their line on. Our house which was under some trees at the time while we were constructing a new house is directly -- was directly underneath this line, I mean directly underneath the line. Our new house which we had completed construction on, again, before we had ever known about this line, is -- and I pulled the tape from where the line would have to be, we are 200 feet. If the tower did topple, it would fall on our current house that we had just finished constructing, less than three years old. So that is a concern. 1|19

In this process, I also wanted to make sure that the crew that came out, the survey crew, I did sign up for it which I have now rescinded, they never showed up as scheduled. I took a day off of work, I was there. They were supposed to have showed up. No one ever came by to survey my 2|36

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property as they scheduled, so they do have -- they have no clue of where my house is located, they have no clue of the special circumstances, the ag disturbances, the hillside slope that also exists there, the erosion that will take place from this hillside and this watershed that will fill up in sediment in my pond which I utilize for irrigation. 2|36 cont. 3|6

I still have one of the families that grows sorghum -- grows sorghum and cook the molasses down, another cultural identity of the local area that is going to be hugely impacted, let alone the fact, again, 200 feet from where the center pole would have to be, the corona noise that exists, the electronic interference in my house, all of these things before we even get to the aesthetics of the view from my porch, the lifestyle and to think that there is a dollar value that can be associated with this. This is a place that my wife and I, we've moved back. My family's from here. My mother and father are going to retire. We want to carve out our own small little piece. It will all be taken away on our 43 acres. And we still have neighbors that are within 1,000 feet, they still do not know of this project. Thank you. 4|13 5|22 6|15 7|29

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MR. FASANO: Thank you. Bob Allen -- Bob Allen and Mark Gotcher.

MR. ALLEN: Good evening. I'm Bob Allen, 576 Silex Road, Dover, Arkansas. I'm a retired chemistry professor and member of the Sierra Club. In fact, I'm the past president of the Arkansas chapter of the Sierra Club. I have spent a good portion of my professional life studying global warming and alternatives to the use of fossil fuels for energy production. The Sierra Club, and me personally -- I personally support an array of alternative energy sources including utility scale wind and distributed solar. My wife and I operate our home on solar panels. I'm a net power producer. I understand distributed energy. The problem is, that's not for everybody, not everybody wants to do it, not everybody can do it. We need additional alternative energy sources.

2014 was the hottest year in recorded history on this planet. On the planet, planetarily (sic).

MR. FASANO: Please continue your comments.

MR. ALLEN: Thirteen out of the last 15 years were the hottest years on record on this

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planet. We have got to stop burning fossil fuels, there's just no question about it. Midwestern utility scale wind is the most economic way to avoid burning fossil fuels. We need the transmission line because where the wind blows the people don't live. There's an abundant source of wind in the midwest, enough to power 30 percent of the country's needs, but we've got to move that power to where the people are or alternatively move the people to the midwest, but that's not going to happen. High-voltage direct current power lines are the most economic way to move that power over a distance. 1|35

All scientific bodies who have reviewed the safety of power lines concur that there is no compelling evidence of harm from living near power lines. There is anecdotal evidence, but that's not scientific evidence. 2|15

The crux of the issue is where does the power line go? Everybody in this room gets power from the grid. We have the lights on in this room because we're getting power from the grid. That means that everybody that gets power from the grid had to have somebody up line from them give up a right-of-way to get the power to their home.

In conclusion, I would ask that Clean Line

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and its partners treat the landowners with respect and do everything within their power to come to an amicable agreement as to the siting of the right-of-way. Thank you. 3|8

MR. FASANO: Thank you. Mark Gotcher followed by Don Richardson.

MR. GOTCHER: Good evening. My name is Mark Gotcher, 276 Crossgate Drive, Russellville, Arkansas. I have the privilege of being charged as the superintendent of the Atkins School District by my wonderful board and I'm charged with providing my students with a quality education as well as to equip them for college, career and citizenship. I am most interested in the economic -- the potential positive economic impact that this project may have with my district and my community. School districts are funded three ways, by the personal property, the real estate property and the utility assessments of any given district. The potential building of this conversion station -- converter station in my district could have a great impact on the kids of my district and their economic -- excuse me, their educational growth. Therefore, based upon tonight's comments, I'm remaining open-minded to this project going forward. Thank you. 1|15

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MR. FASANO: Thank you. Don Richardson and Frank Mayfield.

MR. RICHARDSON: My name is Don Richardson. I live at 267 Fayes Forest Road in Clinton, Arkansas 72031. I'm a lifelong resident of Arkansas and have spent a 40 year career involved in conservation and environmental work. I may be a bit more familiar with the Plains & Eastern environmental impact study than most. My consulting company did the agricultural study included in the EIS. I believe the EIS shows that the impacts are minimal enough to warrant going forward with the project, but that's not the reason I'm supporting the building of the Plains & Eastern Clean Line transmission project. My concern is not what's right for my county. The project does go through the bottom of Van Buren County where I live. My concern is not what is right for the state, although I'm glad that the converter station is proposed for Arkansas to allow us to use cleanly generated wind power. My concern is not what's right for this country. Moving clean power from where it is, where it exists in isolated spots to where population is and overhead transmission lines are the best and most cost-effective way to move that power. My

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concern is for the planet. This project will provide a significant amount of clean power to the grid and will replace dirty coal plants. The Plains & Eastern project takes us in the right direction towards preventing catastrophic damage to the planet caused by global warming and climate change. The sooner we move to wind and solar power and away from fossil fuels, the sooner all our lives will improve for the better.

1|35 cont.

MR. FASANO: Frank Mayfield, then Lou Nell Davis.

MR. MAYFIELD: My name is Frank Mayfield. I live at 292 West Mountain, Fayetteville 72701. I'm here to speak in favor of the project. I'm an HVAC contractor and we are utterly dependent on electricity for comfort, for keeping jobs, for adding value to the agricultural products that are so prevalent in our state. We are challenged environmentally, that can be argued, but we cannot argue with the EPA and the upcoming restrictions on coal generation. We have to have some alternative sources in Arkansas. We don't have a lot of money to get them. When the private sector comes to help us with that, I'm in favor of it and I think that we should -- with the concerns that have been expressed

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here tonight, of course, need to be mitigated, but we need the line. We need to bring that power east to the load centers and we need to get it from wind and not from coal. Thank you. 1|35 cont.

MR. FASANO: Lou Nell Davis, then Jackie Leavell. Lou Nell Davis? Jackie Leavell?

MS. LEAVELL: My name is Jackie Leavell. My address is 594 Pollard Cemetery Road, Dover, Arkansas 72837. We are opposed to this proposed transmission line for numerous reasons. 1|34 This project is wrong for Arkansas from the adverse long-term health effects, the exaggerated numbers of 2|15 jobs being created and the underwhelming monetary compensation offered for Clean Line's towering monstrosities, not to mention the issue of 3|24 plummeting land value that landowners and their neighbors who don't even host the lines would incur. 4|6

It would be inappropriate for the DOE to act as a land agent for any private Clean Line project. 5|4 My mom and dad bought the land that I and my husband live on and the other 100 or so acres in the early 1950s. Most of my family lives on this land and these are our forever homes. My father and a nephew are buried in the cemetery just about a mile from our homes. My brothers baled hundreds of

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square bales of hay from this land, rode their horses in the fields and slept in a little bunkhouse just behind our own farmhouse. Family heritage and culture means something to us. It is not to be taken lightly. It appears that Clean Line and the DOE think that they can discount all of these things for the public good, as they call it. We're just collateral damage.

It was -- if this were really a needed project, that would be one thing, but the truth is there is no real need here. The Southwest Power Pool has said that there is capacity on the grid, Arkansas is a surplus state. Also, as you're probably aware, the SWEPCO project evaporated because there was admittedly no need there either. The Clean Line project is obsolete before they even 6|1 get constructed. If you're honest, you would admit that local generation makes much more sense than a long haul transmission line that would be subject to many unfavorable scenarios like weather interruptions to the line, possible terrorist attacks, the close proximity to some homes and the resulting aesthetics.

Clean Line would have you believe that their project would benefit Arkansas exponentially

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more than it hurts it, but that's from their perspective. In my opinion, the landowners would suffer at the hand of this unmerited project more than Arkansas would gain. Landowners lose their land to a 200 foot wide easement that they will essentially not be able to do anything with for 80 plus years or as long as the lines are on your land. 4|6 cont

They tout thousands of jobs would be created when in truth, and I'm quoting the Draft EIS, "Total employment by month is expected to range from 565 workers in month 24 to a peak of 290 workers in months four, five and six with an average monthly employment of 207. The share of nonlocal workers is assumed to be 74 percent for the full duration of the project. Nonlocal employment is expected to range from 41 workers per month in month 24 to 215 -- 215 workers per month in months four to six with an average monthly employment of 153." 2|15 cont

Please don't forget that our forefathers penned our Constitution based on the principle of for the people, by the people. By allowing this for-profit privately owned company to gain eminent domain status, you will be insulting and ignoring the spirit of the law in which this principle is drafted. Our Fifth Amendment rights are being

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infringed upon by what Clean Line calls a fair price. We disagree with their assessment. Our lands do not need to be sacrificed for an unneeded transmission line. They are not for sale. 4|6 cont.

MR. FASANO: Phil Jacobs and then Monica Price.

MR. JACOBS: I'll pass.

MR. FASANO: Okay. You're Phil Jacobs. Monica Price followed by Brad Hill.

MS. PRICE: My name is Monica Price. My address is 356 County Road 3611, Lamar, Arkansas. My husband and I learned about the line two weeks ago. We saw it on the news. We live in Lamar with our two children and I didn't plan on speaking tonight, but I feel that it's very important because we are opposed. We shopped for months to find the place where we live and we have a view of the River Valley, the Piney River Valley, the Arkansas River Valley and we love it there and we plan on retiring there. We spend all of our money there. We vacation there. We canoe on Piney River. We take our children and do everything in our area and the line will be a little bit less than a mile from our house. We'll be able to see approximately 15 miles of it and it isn't that we want to be compensated, 1|34 2|29

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we just don't want to see it. It's not something that we feel will benefit Arkansas and our children for the -- you know, for the amount of time that we plan on being there which is the rest of our lives. That's all I have to say. 2|29 cont.

MR. FASANO: Thank you. Brad Hill and then Wayne Miller.

MR. HILL: It's hard to mess up Brad Hill, isn't it? We've had a lot of good speakers tonight and my comments, a lot of them have already been touched on. I'm against the line. I talked in Searcy. There's a lot of things that everyone needs to know, so I encourage you to look at some of the other sources of energy other than what Clean Line puts out. I even hate saying Clean Line. It's not a clean line. The FERC, or the Federal Energy Regulatory Commission, says there is no specified amount of wind energy that's supposed to go through there, that has to go through there. Coal energy is going to go through there, natural gas generated energy can go through there. I mean, any energy can go through there. It's not as clean as they would have you believe. 1|34

Getting specifically to -- I've just got a lot to say. I mean, is it okay if I have like two

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hours instead of three minutes? I mean, I could go on and on. I read one quote, the gentleman started out, "We the people." It wasn't we the billionaires, it wasn't we the bureaucrats or we the politicians, but we the people and that's important to remember as you're educating yourself about this.

I believe that this section of EPA act of '05, this section 1222 which has never been used to take private land, has never been granted from our government to a private company. You know, I wonder by what authority does the Department of Energy assign the power of our government to work against our citizens and take our land? By what authority? I believe that that act is unconstitutional as it is against public policy. You're the public. It's the government working against you. I also believe that the merchant power lines, the whole idea I believe is unworkable as to the conflicts of interest between the for-profit enterprises and those interests befitting the public health and well-being. 2|4

Front to back, I think this is an ill-conceived project. That's not to say there isn't some larger agenda here. Do you know that there are three other extensive power lines to go

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along with this Plains & Eastern line and you know they're all laid across middle America? I mean, I'm not a conspiracy theorist, but wouldn't that be a marvelous way to break the back of middle America? Our country is under a lot of threats right now and what a way to do it.

Regarding the impact statement --

MR. FASANO: Your summary, please.

MR. HILL: -- the enumeration of the various and significant damages acknowledged in this impact statement does not equate to a quantified dollar amount or impact. What are the accumulated potential losses to be borne by the unwilling participants or resistant landowners of which I count myself? Is the company adequately capitalized to compensate these costs as well as the various other significant costs, construction, startup, operation, or is it the intention of the company to shift these costs to other parties such as the ratepayers, our state, our great state of Arkansas or other parties, ratepayers? You know, it seems like all they're concerned with doing is getting it done. What's the true cost of this energy if all these things that you read about is going to hurt everything, what if we put a dollar amount on all

3|6

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those items? I don't think that's been done. I mean, there's a lot of words in 3,700 pages and I'll confess I haven't read all of them.

MR. FASANO: Can we wrap it up, Mr. Hill?

MR. HILL: I didn't see any dollar signs anywhere. I mean, if you are a company proposing a project like this, where's your feasibility study? Where's your -- where's your -- your industry --

AUDIENCE MEMBER: Cost benefit analysis.

MR. HILL: Yeah, where's your cost benefit? Very good. Where -- there's so many gaps in this. I mean, I was a CPA before I retired to a farm and you would never even conceive of trying to get something like this to fly without a further detailed analysis. Perhaps, though, they do have all those figures. Perhaps the balance sheet just shows some things that they don't want to share. For instance, the company --

MR. FASANO: Can you please wrap up, Mr. Hill? Please.

MR. HILL: I will.

MR. FASANO: Thank you.

MR. HILL: Just very shortly.

MR. FASANO: Thank you.

MR. HILL: The company has put up some

4|8

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great amount of money, say two billion, so it capitalizes this company for two billion. Maybe they don't want to know that the -- want us to know the cumulative costs of all of our sacrifices in all its different forms is more than what the company is putting up. This is a taking. I believe the company was formed simply to acquire the land. I won't be signing any easement. That's giving control of your land. You might as well sell it. If you sign an easement, you might as well just remember that day as the day you gave the farm away. You will lose control forever if that happens. I've got many more points, but I will -- I will let the moderator do his job.

MR. FASANO: Thank you. Wayne Miller, then Fritzie Vammen.

MR. MILLER: My name is Wayne Miller. I live at P.O. Box 33, Coal Hill. There is property east of Hagerville which is on the proposed primary route of Clean Line. It is owned by my daughter and son-in-law. My daughter has a pacemaker. She went to her cardiologist last -- or it's been two weeks ago she went to her cardiologist, Dr. Wilson Wong in Little Rock, and he informed her that she could not be around that line because that line would cause

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her pacemaker to be nonfunctional. The pacemaker would pick up the current from the line, it would not -- that current would override the current from her heart and it would not monitor her heart at all. So to argue with the gentleman that says it has no health risks, it is a major health risk for anybody who has a pacemaker. 1|15

And furthermore, I would also like to say that from everything I can read and understand, the primary purpose of this line is to take power from the Panhandle of Texas and Oklahoma to Tennessee, so I would like for somebody to explain to me where all the great benefits for Arkansas are. We're just a route, period. Thank you. 2|8

MR. FASANO: Fritzie Vammen and then Patricia Patterson.

MS. VAMMEN: Thank you. My name is Fritzie Vammen. I'm from Conway, Arkansas. 1912 Washington Avenue, Conway, Arkansas. May I ask that you roll back a couple of slides, ma'am, on the projector to the summary of impacts and major conclusions? And I have a question, is this the criteria that's going to be used to determine in the environmental impact study recommendation that will result in whether Clean Line is here or not? Does 1|2A

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that --

MR. FASANO: There's no interactive. We would like to just get your comments, so just please go on.

MS. VAMMEN: Okay. Well, because this is what you're showing so what I'm saying is -- would you go to the slide before that, please? Okay. So there are two slides and one is showing temporary disturbance of active agricultural lands, I won't take the time reading it, temporary soil and vegetation disturbance, increased traffic during construction, potential shortages in housing during construction and the second one, if you will, please? Again, there's some short and long terms, so my question is and I guess I'm not going to get an answer here, but I'll just ask the question, do these carry equal weights, all of these points? Are these the points that are going to be used to decide? Because I've been listening and that's not what I'm hearing the concerns are. I'm hearing the concerns are socioeconomic impact, adverse impact on natural beauty, fear for personal safety, health concerns, leukemia, heart defibrillation, visual pollution, auditory pollution, so I'm -- if this is the criteria, it's just not addressing the concerns. 1|2A

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So I have one minute and I would like a show of hands. I'm going to ask the question and then I'll ask it again and ask for a show of hands. Who here is more interested in the short-term impact, who is equally interested in short and long-term impact and who is more interested in the long-term impact? So who is more interested in the short-term impact, would you raise your hand, please? Who is equally interested in short and long-term impacts? Okay. I'm going to guess that was like maybe 25. Who is more interested in the long-term impacts? And I would just say that's the majority. And that's not what I'm seeing. This slide is -- has some of this, but the other slide, that's just not what I'm seeing the criteria is. It very much worries me.

MR. FASANO: Thank you.

MS. VAMMEN: Thank you.

MR. FASANO: I thought she was giving the presentation for a second there. That was good. Patricia Patterson and then Harve Taylor.

MS. PATTERSON: I am Patricia Patterson and I live at 9177 Highway 164, Clarksville, Arkansas. I have gone to the University of Arkansas and met with the representatives from Clean Line and

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every time that I go I mention something like there's some strange land formations on my property that possibly could be Indian mounds, prehistoric Indian mounds, and they sort of roll their eyes like, well, we'll check into that. I haven't heard anything. And addressing the Department of Energy, I wonder who's responsible for an archaeological study to determine if those truly are prehistoric Native American mounds. That is a question that has not been answered for me. 1|20

To my knowledge, no one from Plains & Eastern Company has been on the property and how can you do a survey if you have never physically stepped foot on the land? I have never agreed for a study to be taken -- to take place and if a study has taken place, would that mean they've trespassed on private property to do a study of my private farm?

Those are just questions and really tonight I came because I thought I was going almost to have a committee of people from the Department of Energy to talk to because I'm really simpleminded when it comes to democracy and I thought I need to address somebody from Washington, DC or somebody and tell them my concerns. And is this our representative, is this just one person here this

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evening from the Department of Energy? See, I don't -- I guess I need to look at a graph to show me the hierarchy of power concerning the Eastern & Plains.

Next, I want my great-grandchildren to know that I publicly stood to say I oppose this project. The natural beauty of the farm that I'm referring to is in Franklin County and it's been in my family since 1879. Now, my daddy went to World War II. My uncle was killed in Italy. They gave a great part and we have been a wonderful American supporter and I believe in this country, but to think that a private company could take private property is just really hard for me to grasp. I can't wrap my mind around that exactly. The natural beauty of this farm would be destroyed. The lines run parallel to the old wire road which was a military road which was the telegraph line. It was -- the property had an old stage stop there. The stock well is still there where they watered the animals as they traveled from Little Rock to Fort Smith. Not only the natural beauty of that farm that I'm referring to that's so near and dear to me, but the natural beauty of that valley. 2|34

Now, if I can identify with this, the majority of the people in this audience are opposed

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to the green line or clean line and I, like the other fella, I hate to use that term because I don't think there's anything that's too clean about what's happening to this area of Arkansas.

Okay. Then I had this question, my final question was we always are so interested in biodegradable. Let's do everything -- and I agree with this. Let's do everything we can to preserve this planet and be good stewards of the earth, but once these steel towers are built, there will sometime, maybe not in my life, but in my grandchildren or great-grandchildren, they're going to be obsolete. There's going to be a new mode of transmission of electricity. I can't conceive what it is, but I carry a little cell phone in my pocket that I couldn't conceive of in 1990. So there will be a new mode of transportation to transmit electricity and what will happen to these scars that are placed from the Panhandle to Tennessee? Will those be -- and maybe that's addressed in something that I haven't been able to read, but again, I just want to go on record that I'm totally opposed. Thank you very much.

3|37

2|34 cont.

MR. FASANO: Thank you, ma'am. Harve Taylor and then Dwight Dicus.

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MR. TAYLOR: Thank you. My name is Harve Taylor. I live at 1345 County Road 3546 in Clarksville. That's about six miles north of Clarksville about 1,000 feet, best I can tell, from the proposed route of this line and, you know, I've -- I came down here tonight to find out more information, find out whatever I could and it's been pretty interesting. And one of the things I found out is there just has not been enough information put out about this project and to think that they're going to run this by the people of -- the landowners and citizens of Arkansas, Oklahoma, the affected parts of Texas and Tennessee without more information is inconceivable to me.

1|2F

I know, I think most everybody here, I think we all consider ourselves to be patriotic Americans. I know that we've got to preserve the planet. We've got to cut down on, you know, the coal-fired generation, those kind of things. We've got to go with cleaner, renewable energy, but at what cost? And that's what has got me concerned. I wasn't even prepared to come down here and speak tonight, but after hearing these questions it has really got me wondering about some of the ramifications of this, some of the consequences.

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I heard most people speak against the project, a few for the project, but I am wondering how many of the speakers for this project are going to have the line run in their backyard, not like in my backyard. So now, I think we're all willing to sacrifice some, I certainly am, but how much? So my thought would be the department of -- DOE and Clean Line, I suggest that if there is such a project already built in the United States of this size of tower and this type of tower and that capacity of direct current some other place in the United States or the world, then tell us about it and tell us what the pros and cons are, tell us about the benefits of it and if there are health -- if there are health consequences, then inform us and let us make intelligent, informed decisions. Thank you. 2|1

MR. FASANO: For the record, he pointed at me. I don't work for Clean Line. Dwight Dicus followed by Bridget Freeman.

MR. DICUS: I'm Dwight Dicus. I live at 515 Walnut Valley Lane, Dover, Arkansas. You know guys, I think we're in trouble. The last couple of elections Arkansas and Oklahoma probably didn't vote the right way. You know what happened in the IRS, so, anyway, hopefully we're not there. I'd also

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like to say I don't see our public officials here tonight, guys. Where are they? Their supposed to be representing us. I am very displeased in that tonight. 1|36

Another thing I want to ask, is this power line and this energy generated subsidized by the federal government? My understanding is it is, so what makes it compete against private industry with our tax monies? 2|1 Secondly, I like the gentleman before, why don't we bury this line? 3|10 And what's wrong that we've got to go up to the edge of the National Forest and then come down and go through my property and your property and we don't go through the National Forest? I need some shooting lanes for deer up there that this would provide a great thing for, okay? I mean, if the government wants it, then let's use their land and I read where it goes around all of their land instead of going through their land. 4|8 We own the land. And who's going to return my compensation for my damages for my home? 5|6 I did the labor myself. You know, a poor boy from Perry County, I had four counties to choose from and I chose this one. I went back there where I could be myself because my business is in Russellville. I have a small business. I'm already fighting the

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federal government already. And I want to know how many employees work for Plains & Eastern, Clean Line or whatever this is, okay? And if any of them have a home underneath the line because I'll sell you mine. Tonight. I'll make you a heck of a deal, what I've got in it.

And the loss of devalue, I keep hearing this talked about tonight, oh, we're going to create money. Oh, yeah, we got some money. Guess what? My property's going to be devalued -- devaluized and guess what? There's less tax money going to be involved I'm paying for personal properties to build these school systems that they're talking about they're going to make all this money. Guys, I'm just a poor old trash man, that's all I am, but you know what? I'm a free American and I'm from Arkansas and I live in Pope County and I'm against it.

5|6 cont.

6|34

MR. FASANO: Bridget Freeman.

MS. FREEMAN: My name is Bridget Freeman. I'll be honest, I don't own land in Arkansas. Arkansas is my home. I should have a say in what goes in my home, the whole state, anywhere because you never know where you're going to end up from day to day. They want to move it to an alternate route.

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There is no alternate route. If it's still in Arkansas, it's still in our home. It's not going to go through any of their backyards because they don't live where it's going through. Earlier, they seemed to be interested in the fact that the house we live in is going to be at the end of that 1,000 foot line. Now, I have a hard time believing that because a man got up here and said he lives 200 feet from the center of one of their towers. How interested can they be that we're in their line, we're in that 1,000 foot, when he's 200 feet from a power pole?

1|8

It's going to be a huge eyesore. We've had nuclear power here since the '70s. They supply thousands of jobs to the counties surrounding us. Clean Line isn't even going to supply us jobs. Maybe in the beginning for the construction period, but what happens to all those jobs they're talking about when it's built? A couple here and a couple there? Why not build something they can use in the area that they're needing power that doesn't affect so many people.

2|29

3|24

4|11

And again, I would like to end by saying I don't own land yet. This is going to make a big impact on where we can buy. It's going to go

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through Pope County. Everyone has got up here and said their address. Well, here's the thing, we are Arkansas and Arkansas needs to be heard.

MR. FASANO: Okay. That was it. That was the last speaker.

MR. PETERS: I would like to speak for a minute.

MR. FASANO: Please state your name.

MR. PETERS: Okay. My name is Brad Peters. I didn't come here to speak tonight. I had an unexpected death in the family today, so I'm kind of not in a real good mood, but I do oppose this power line completely, totally. It's -- it's just a waste of our -- of everything. And I would like to point out we had an expert here, he seems to have left, that was speaking about climate change. How was this summer? Pretty darn cool, wasn't it? Okay. Now, had anybody heard of Climategate? As it turns out, global warming is a bunch crap, okay, and that's why they're now trying to call it climate change and they're trying to associate this cold winter we're having, it's because of global warming. It just doesn't add up, okay? And not adding up is pretty much everything that you hear out of these people from Clean Line's mouth, okay? They should

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all be ashamed of themselves and I bet if their mothers knew what they did for a living, they wouldn't be home for Thanksgiving, that's for sure.

They can bury this line, okay, and I even told them if they would bury it, I would support them. Okay. It takes four foot right-of-ways if they bury it and they do it -- they've done it in Rhode Island, so when they stand up and say, oh, we can't do that, the technology does not exist, yeah, it does exist, okay, and it's being used at this time.

2|10

Another thing, as far as the high-voltage DC, well, years ago there was Tesla and there was Edison and they were having a little battle, which was better, AC over DC, okay? AC won out because it can be transmitted long distances without the huge loss that is associated with DC and these guys want to have DC power around. And I'm definitely not smarter than Tesla, but, you know, it don't seem to make sense to me.

And that's all I've got to say. I've got to go. I've got things to take care of and I wish I had something better prepared, but like I said, I did have a death in the family today. Don't believe anything these Clean Line people say, don't sign

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nothing they've got and let's not let them build that stinkin' power line because we don't need it. 1|34 cont.

MR. FASANO: Okay. We have time for a few more. State your name, please.

MR. HERTZ: My name is George Hertz. You'll probably tell by my accent that I'm not from these parts.

MR. FASANO: Could you spell your name, please?

MR. HERTZ: George, G-e-o-r-g-e, H-e-r-t-z.

MR. FASANO: Thank you.

MR. HERTZ: And I live on Walnut Valley Lane just north of Dover right next to the transmitter and that line is going to affect land. Like the last gentleman that spoke, I don't believe in climate warming. I do believe in climate change. The climate has been changing for billions of years. I remember back in the '60s we were buying new coats because we were going into the big Ice Age and then in the '70s it changed and it flip-flopped. Right now over those billions of years we are still below the global mean temperature over the years. Now, the thermometer was only invented in the 1700s, so we haven't been keeping track very accurately.

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One gentleman mentioned that 2014 was the hottest year on record. That is not true. It is the hottest year on record in America, not worldwide. He also mentioned 13 of the last 15 hottest years were the last 13. Well, yeah, we go back 100 years, go back a billion years and 10 billion years, no. America was tropical at one time, that's why we have coal, that's why we have oil. Oil, coal, diamonds come from what? Wood, tropical rain forests, so we actually are a whole lot cooler than we have been.

Now, let's go back to climate change. Climate change does exist. How much of it has man caused? Well, I don't know. Nobody really knows, but it's probably very infinitesimal. You know, so we shouldn't be blaming ourselves for climate change, that's a natural phenomenon.

We do want to take care of the environment, so what should we be doing. Forget this, it's a waste of money. We should be developing more nuclear plants. We should be developing technologies to clean up our coal burning power plants and oil burning and natural gas. The technologies are there. If we want to do it, we can do it. Coal burning is a lot cleaner now than it was in the '50s and the '40s. Let's put the money

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there to produce energy locally, we won't need these lines. Thank you.

MS. RAMEY: My name is Debbie Ramey. I live in Ozark, Arkansas, 4706 Plantation Road. I didn't plan to speak either. I didn't even know this was happening and canceled a scout meeting to get here. I'm a mixture of worried and excited. People got a card that said this is going through their land. I didn't get a card, so I'm almost really excited. I thinking maybe it's not really going across me, but when I look at the map, both of them make an X over my land, so I'm kind of worried.

So my first message, and Ms. Summerson, I think you tried really hard to boil this down for us because it's complicated. I compliment you on that, but I still am confused. I have a degree in physics and an MBA, so I shouldn't be confused at this point, you know, and I am. I take exception to those people who think that just because we're against this it must mean we're not for the planet. All right, I'm for the planet and I was for all that stuff way back when I was in college. And, by the way, when we came out with what Nixon did, the environmental protection, it was to protect the people, not just the plants and animals and the

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rocks.

All right. And then the environmental study, I didn't see people in there unless we're under socioeconomic, but it needs to say people and I'm worried about that. So my concern is, first of all, I'm still confused. I don't know if it's going across my land. I didn't get a card, no one has called me. I sent an e-mail back in September and I said I'm confused, is this going across my land? 1|8
And nobody has called me, I don't know. But when I look at the map, there's a big X over my land. I put everything into that land when I moved back here and left the defense industry in 2000, so I'd really like to know and I don't know how to find out.

I heard a lot about what the EPA's responsibilities were. Did I hit a minute yet? I'm going to be good for this guy because he's been really trying hard. But I heard a whole lot about what the EPA has to do and I hope you'll do a good job of that. What I don't understand is what my rights are and I don't know what's going to happen to me and I shouldn't be in those shoes and I want you to know that I am and I want you to take the message back that in this study that's going on in the last two years, there's an X over my land and I

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still don't know and maybe I'm just too stupid, but I haven't gotten a postcard or anything that I would understand. Thank you.

MR. WOOD: I'm Dale Wood and I serve as a director at large for the Arkansas Wildlife Federation and I also live up here on the Delaware Bay on Lake Dardanelle. I get to see this power line every day up there and it shines in the morning sun, you know. Gee, I thought it was remarkable technology, you know, 500,000 volt line and so I'm dismayed at people who think we've all got electricity, where did it come from? Well, it didn't just happen, you see. Somebody had to make it happen and after five years of review, the Arkansas Wildlife Federation voted at a January board meeting to support this Clean Line Energy proposal and we have a one-page resolution.

"Whereas, AWF strongly supports this Clean Line project as a remarkable opportunity to capture wind energy and lower Arkansas dependency upon nonrenewable coal and other fossil fuels." And AWF, Arkansas Wildlife Federation, which is the state's largest conservation organization, they organized in 1936. "AWF supports purpose and need for this DC energy project and appreciate the opportunity to 1|35

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comment on the DEIS and find the project to be environmentally sound, minimize adverse impacts, and a remarkable opportunity for Arkansas power consumers to benefit from Oklahoma and Texas wind energy." 1|35 cont.

All of you have different views about wind energy, so when you have the opportunity to comment on the final EIS, take that opportunity and send in your comments, write them down, participate in your government. Arkansas Wildlife Federation does. Thank you.

MR. FASANO: Thank you.

MS. HAIRSTON: My name is Polly Hairston. I live at 1786 County Road 3456 in Clarksville, Arkansas 72830. My husband and I lived in big cities our entire life and when we retired we didn't want to be there anymore. We moved to the country. We bought 30 acres three miles north of Clarksville that backs up to a bluff and we thought we were golden. We're not golden. This project will probably slash our property values by a good 30 percent, maybe more. We'll be lucky to be able to give it away. 1|6

The other thing I'd like to say is what do you think the words to take by force mean, to take

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by force? If you're checking with Webster's, it defines rape.

MS. LOVEJOY: I'm Virginia Lovejoy. I live at 15532 State Road 124, Russellville, Arkansas 72802. I have done a little bit of public speaking, but this was not planned. I did pray about it and that's one thing I'm asking, I am a Christian. I am asking that everybody -- I'm asking that everybody pray about this that is a Christian. I am and I have been praying and I will continue to pray. I have personal reasons. I have health reasons. I have a port in my chest. I have been fighting cancer strongly for five years. I will never know what caused it, but I do know that all the reports that have been involved and what this can bring so I have understood that it will come fairly close to our property, so I'm just asking that everybody -- and like the young lady said earlier, I love this state. I was born here. I was born at Dover at home and I love this state and I want it to stay our state. I don't want -- I want us all to remember what this United States was built on and everything that started out with it was in God we trust and that's where we need to be. Thank you. 1|15

MR. FASANO: We have time for two more.

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Anyone else?

MR. SCOTT: My name is Brian Scott. I live at 1076 Hidden Hills in Dripping Springs, Texas. My wife and I also own a home, a business and property in Farmington, Arkansas. I grew up here. My kids, I raised them here and I did have to leave the state seven years ago. The industry I work in is the power industry. I don't work for these guys, never have, but I do support this project and projects similar to it. I put, you know, food on my family's table. We do work in the wind industry. I've got 40 fellow Arkansans that work with me that live in the state, but they don't get to live with their families. They're on the road working on pipelines, working on transmission lines, working on wind projects. I can tell you they'd be the one first ones to sign up to come back here and be close to their families as they work on a project like this. That's kind of what this is like, it's not unlike the military. We travel a lot. I'm here tonight, I'm not in Dripping Springs with my family, but I'm here to support this project and projects like it. Thank you. 1|35 1|35 cont.

MR. CLAIRE: My name is Steve Claire. I live at 992 Walnut Valley Lane, Dover, Arkansas.

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Just I'm going to be real brief. There's a lot of topics tonight, but to clarify -- I'm sorry, to clarify about TVA, Tennessee Valley Authority, is a government-owned utility. They also own multiple nuclear power plants. The Clean Line Energy coming from Oklahoma is government-subsidized, will be government-subsidized, that's our taxpayer money. I don't understand why we're -- the government is -- the people are supporting it. Of course, it's Clean Line, TVA, which is a government authority, and also the Arkansas Game and Fish which is part of the government. I'm not trying to make this a people against Arkansas or people against the government thing, but I think it's really time for us to reach out to our representatives and let them know how we feel. There's not one out here tonight and that's wrong, so we need to make sure. It's fine to speak up, that's the reason we're here is to make sure that these people understand, these people being Clean Line, understand that there is a proper process to go through. Eminent domain is not a proper process to go through. That's all I've got to say. 1|4

MR. FASANO: Last speaker right here. One more.

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MS. MOORE: My name is Debbie Moore, 3827 SR 164 W, Dover, Arkansas. I can relate to everything everybody's saying here pro and con. I understand there are some pro. We have a canoe rental on Big Piney Creek north of Dover. We've been doing them for 37 years now. This line is going -- I haven't heard from Clean Line and I think I figured out tonight that I'm just on the edge of it. We're not going to be compensated. I don't care. All I want to do is look out for our land, look out for Big Piney Creek. It is on the National Scenic Rivers list. When they come in there, they will use herbicides to control that will run off into our water. This would not be going on if it was on the Buffalo National River, but it is going through Pope County and it is going to affect our livelihood, our home place and everybody else's home place and I am very disappointed that we have none of our representatives here tonight and that's all I have to say. Thank you. 1|6 2|8 1|6 cont.

MR. FASANO: Okay. With that, I as the moderator, the facilitator of this meeting, I understand the passion and viewpoint that was expressed here tonight and I just want to thank all of you very much for your participation, your

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courtesy and your comments on the record.

AUDIENCE MEMBER: You've done a great job moderating.

MR. FASANO: Thank you. Please -- please, remember that you can continue to submit comments on the Draft EIS until the comment period closes on April 18th.

DR. SUMMERSON: 20th.

MR. FASANO: April 20th.

DR. SUMMERSON: That's what's in the federal registry notice.

MR. FASANO: At this time, the meeting is adjourned at 8:21 p.m.

MR. KNOST: My name is Ron Knost. I live at 930 Barborek Lane in Russellville, Arkansas. I'm a member of the Elk County Wildlife Federation. I just sort of wanted to rebut what Jim Woods says. He's the director with -- in the state wildlife federation and I'm a member of the Elk County Wildlife Federation. They did not vote to support the proposal that the state wildlife federation brought forward. Matter of fact, the club has not even seen that recommendation and I just wanted to make that as far as the members of the Elk County Wildlife Federation, I would guess that we don't 1|34

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support. We have not discussed and probably will not support that resolution from the state wildlife federation. And another comment, also Clean Line 1|34 cont.

did contribute money to the state wildlife federation and advertise in their publication. Don't know if that has any bias with it or not, just a fact. So thank you very much. 2|36

MR. THOMAS: I live here in Russellville, 2123 Marina Drive in Russellville 72802. I'm 37 years in conservation. I'm a retired Arkansas State Parks superintendent. I'm also a member of the Elk County Wildlife Federation which is the largest wildlife federation and the oldest in Arkansas. We are definitely opposed to the Clean Line Energy plan on several factors that were covered here tonight, but mainly the eminent domain. We have problems with people that we know that have family farms here that the thing is going right through the middle of it and we feel like that is unfair. We feel also like this communication about this whole project has not been brought to the citizens of Pope County and we are strongly against it. Our organization is against it and we feel like that it can be -- all the issues, the health issues, the electrical demands, we don't feel like the demand is there. We 1|34

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feel like that -- that at first Arkansas wasn't getting any of the electricity, they saw it wasn't going to fly, so they've come back and done some alternate things, so my family, my friends, my organizations are against this project. Thank you. 1|34 cont.

(HEARING CONCLUDED AT 8:21 P.M.)

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C E R T I F I C A T E

STATE OF ARKANSAS)
) SS:
COUNTY OF WASHINGTON)

I, Kerri Pianalto, Certified Court Reporter within and for the State of Arkansas, do hereby certify that the above PUBLIC HEARING was by me taken and transcribed pursuant to agreement; and that I am not an attorney for nor relative of any of said parties or otherwise interested in the event of said action.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 23rd day of February, 2015.

KERRI PIANALTO, CCR
State of Arkansas, No. 651

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EXECUTIVE ORDER
12898

THE WHITE HOUSE

WASHINGTON

February 11, 1994

MEMORANDUM FOR THE HEADS OF ALL DEPARTMENTS AND AGENCIES

SUBJECT: Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

Today I have issued an Executive Order on Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. That order is designed to focus Federal attention on the environmental and human health conditions in minority communities and low-income communities with the goal of achieving environmental justice. That order is also intended to promote nondiscrimination in Federal programs substantially affecting human health and the environment, and to provide minority communities and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment.

The purpose of this separate memorandum is to underscore certain provision of existing law that can help ensure that all communities and persons across this Nation live in a safe and healthful environment. Environmental and civil rights statutes provide many opportunities to address environmental hazards in minority communities and low-income communities. Application of these existing statutory provisions is an important part of this Administration's efforts to prevent those minority communities and low-income communities from being subject to disproportionately high and adverse environmental effects.

I am therefore today directing that all department and agency heads take appropriate and necessary steps to ensure that the following specific directives are implemented immediately:

In accordance with Title VI of the Civil Rights Act of 1964, each Federal agency shall ensure that all programs or activities receiving Federal financial assistance that affect human health or the environment do not directly, or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin.

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Each Federal agency shall analyze the environmental effects, including human health, economic and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. section 4321 et seq. Mitigation measures outlined or analyzed in an environmental assessment, environmental impact statement, or record of decision, whenever feasible, should address significant and adverse environmental effects of proposed Federal actions on minority communities and low-income communities.

Each Federal agency shall provide opportunities for community input in the NEPA process, including identifying potential effects and mitigation measures in consultation with affected communities and improving the accessibility of meetings, crucial documents, and notices.

The Environmental Protection Agency, when reviewing environmental effects of proposed action of other Federal agencies under section 309 of the Clean Air Act, 42 U.S.C. section 7609, shall ensure that the involved agency has fully analyzed environmental effects on minority communities and low-income communities, including human health, social, and economic effects.

Each Federal agency shall ensure that the public, including minority communities and low-income communities, has adequate access to public information relating to human health or environmental planning, regulations, and enforcement when required under the Freedom of Information Act, 5 U.S.C. section 552, the Sunshine Act, 5 U.S.C. section 552b, and the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11044.

* * *

This memorandum is intended only to improve the internal management of the Executive Branch and is not intended to, nor does it create, any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person.

/signed/

WILLIAM J. CLINTON

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Federal Register
Vol. 59, No. 32
Wednesday, February 16, 1994

Presidential Documents

Title 3—

The President

Executive Order 12898 of February 11, 1994

Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1-1. *Implementation.*

1-101. *Agency Responsibilities.* To the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the National Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States and its territories and possessions, the District of Columbia, the Commonwealth of Puerto Rico, and the Commonwealth of the Mariana Islands.

1-102. *Creation of an Interagency Working Group on Environmental Justice.* (a) Within 3 months of the date of this order, the Administrator of the Environmental Protection Agency ("Administrator") or the Administrator's designee shall convene an interagency Federal Working Group on Environmental Justice ("Working Group"). The Working Group shall comprise the heads of the following executive agencies and offices, or their designees: (a) Department of Defense; (b) Department of Health and Human Services; (c) Department of Housing and Urban Development; (d) Department of Labor; (e) Department of Agriculture; (f) Department of Transportation; (g) Department of Justice; (h) Department of the Interior; (i) Department of Commerce; (j) Department of Energy; (k) Environmental Protection Agency; (l) Office of Management and Budget; (m) Office of Science and Technology Policy; (n) Office of the Deputy Assistant to the President for Environmental Policy; (o) Office of the Assistant to the President for Domestic Policy; (p) National Economic Council; (q) Council of Economic Advisers; and (r) such other Government officials as the President may designate. The Working Group shall report to the President through the Deputy Assistant to the President for Environmental Policy and the Assistant to the President for Domestic Policy.

(b) The Working Group shall: (1) provide guidance to Federal agencies on criteria for identifying disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(2) coordinate with, provide guidance to, and serve as a clearinghouse for, each Federal agency as it develops an environmental justice strategy as required by section 1-103 of this order, in order to ensure that the administration, interpretation and enforcement of programs, activities and policies are undertaken in a consistent manner;

(3) assist in coordinating research by, and stimulating cooperation among, the Environmental Protection Agency, the Department of Health and Human Services, the Department of Housing and Urban Development, and other agencies conducting research or other activities in accordance with section 3-3 of this order;

(4) assist in coordinating data collection, required by this order;

(5) examine existing data and studies on environmental justice;

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(6) hold public meetings as required in section 5-502(d) of this order; and

(7) develop interagency model projects on environmental justice that evidence cooperation among Federal agencies.

1-103. *Development of Agency Strategies.* (a) Except as provided in section 6-605 of this order, each Federal agency shall develop an agency-wide environmental justice strategy, as set forth in subsections (b)-(e) of this section that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations. The environmental justice strategy shall list programs, policies, planning and public participation processes, enforcement, and/or rulemakings related to human health or the environment that should be revised to, at a minimum: (1) promote enforcement of all health and environmental statutes in areas with minority populations and low-income populations; (2) ensure greater public participation; (3) improve research and data collection relating to the health of and environment of minority populations and low-income populations; and (4) identify differential patterns of consumption of natural resources among minority populations and low-income populations. In addition, the environmental justice strategy shall include, where appropriate, a timetable for undertaking identified revisions and consideration of economic and social implications of the revisions.

(b) Within 4 months of the date of this order, each Federal agency shall identify an internal administrative process for developing its environmental justice strategy, and shall inform the Working Group of the process.

(c) Within 6 months of the date of this order, each Federal agency shall provide the Working Group with an outline of its proposed environmental justice strategy.

(d) Within 10 months of the date of this order, each Federal agency shall provide the Working Group with its proposed environmental justice strategy.

(e) Within 12 months of the date of this order, each Federal agency shall finalize its environmental justice strategy and provide a copy and written description of its strategy to the Working Group. During the 12 month period from the date of this order, each Federal agency, as part of its environmental justice strategy, shall identify several specific projects that can be promptly undertaken to address particular concerns identified during the development of the proposed environmental justice strategy, and a schedule for implementing those projects.

(f) Within 24 months of the date of this order, each Federal agency shall report to the Working Group on its progress in implementing its agency-wide environmental justice strategy.

(g) Federal agencies shall provide additional periodic reports to the Working Group as requested by the Working Group.

1-104. *Reports to the President.* Within 14 months of the date of this order, the Working Group shall submit to the President, through the Office of the Deputy Assistant to the President for Environmental Policy and the Office of the Assistant to the President for Domestic Policy, a report that describes the implementation of this order, and includes the final environmental justice strategies described in section 1-103(e) of this order.

Sec. 2-2. *Federal Agency Responsibilities for Federal Programs.* Each Federal agency shall conduct its programs, policies, and activities that substantially affect human health or the environment, in a manner that ensures that such programs, policies, and activities do not have the effect of excluding persons (including populations) from participation in, denying persons (including populations) the benefits of, or subjecting persons (including populations) to discrimination under, such programs, policies, and activities, because of their race, color, or national origin.

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Sec. 3–3. *Research, Data Collection, and Analysis.*

3–301. *Human Health and Environmental Research and Analysis.* (a) Environmental human health research, whenever practicable and appropriate, shall include diverse segments of the population in epidemiological and clinical studies, including segments at high risk from environmental hazards, such as minority populations, low-income populations and workers who may be exposed to substantial environmental hazards.

(b) Environmental human health analyses, whenever practicable and appropriate, shall identify multiple and cumulative exposures.

(c) Federal agencies shall provide minority populations and low-income populations the opportunity to comment on the development and design of research strategies undertaken pursuant to this order.

3–302. *Human Health and Environmental Data Collection and Analysis.* To the extent permitted by existing law, including the Privacy Act, as amended (5 U.S.C. section 552a): (a) each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income. To the extent practical and appropriate, Federal agencies shall use this information to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority populations and low-income populations;

(b) In connection with the development and implementation of agency strategies in section 1–103 of this order, each Federal agency, whenever practicable and appropriate, shall collect, maintain and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding facilities or sites expected to have a substantial environmental, human health, or economic effect on the surrounding populations, when such facilities or sites become the subject of a substantial Federal environmental administrative or judicial action. Such information shall be made available to the public, unless prohibited by law; and

(c) Each Federal agency, whenever practicable and appropriate, shall collect, maintain, and analyze information on the race, national origin, income level, and other readily accessible and appropriate information for areas surrounding Federal facilities that are: (1) subject to the reporting requirements under the Emergency Planning and Community Right-to-Know Act, 42 U.S.C. section 11001–11050 as mandated in Executive Order No. 12856; and (2) expected to have a substantial environmental, human health, or economic effect on surrounding populations. Such information shall be made available to the public, unless prohibited by law.

(d) In carrying out the responsibilities in this section, each Federal agency, whenever practicable and appropriate, shall share information and eliminate unnecessary duplication of efforts through the use of existing data systems and cooperative agreements among Federal agencies and with State, local, and tribal governments.

Sec. 4–4. *Subsistence Consumption of Fish and Wildlife.*

4–401. *Consumption Patterns.* In order to assist in identifying the need for ensuring protection of populations with differential patterns of subsistence consumption of fish and wildlife, Federal agencies, whenever practicable and appropriate, shall collect, maintain, and analyze information on the consumption patterns of populations who principally rely on fish and/or wildlife for subsistence. Federal agencies shall communicate to the public the risks of those consumption patterns.

4–402. *Guidance.* Federal agencies, whenever practicable and appropriate, shall work in a coordinated manner to publish guidance reflecting the latest scientific information available concerning methods for evaluating the human health risks associated with the consumption of pollutant-bearing fish or

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wildlife. Agencies shall consider such guidance in developing their policies and rules.

Sec. 5–5. *Public Participation and Access to Information.* (a) The public may submit recommendations to Federal agencies relating to the incorporation of environmental justice principles into Federal agency programs or policies. Each Federal agency shall convey such recommendations to the Working Group.

(b) Each Federal agency may, whenever practicable and appropriate, translate crucial public documents, notices, and hearings relating to human health or the environment for limited English speaking populations.

(c) Each Federal agency shall work to ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public.

(d) The Working Group shall hold public meetings, as appropriate, for the purpose of fact-finding, receiving public comments, and conducting inquiries concerning environmental justice. The Working Group shall prepare for public review a summary of the comments and recommendations discussed at the public meetings.

Sec. 6–6. *General Provisions.*

6–601. *Responsibility for Agency Implementation.* The head of each Federal agency shall be responsible for ensuring compliance with this order. Each Federal agency shall conduct internal reviews and take such other steps as may be necessary to monitor compliance with this order.

6–602. *Executive Order No. 12250.* This Executive order is intended to supplement but not supersede Executive Order No. 12250, which requires consistent and effective implementation of various laws prohibiting discriminatory practices in programs receiving Federal financial assistance. Nothing herein shall limit the effect or mandate of Executive Order No. 12250.

6–603. *Executive Order No. 12875.* This Executive order is not intended to limit the effect or mandate of Executive Order No. 12875.

6–604. *Scope.* For purposes of this order, Federal agency means any agency on the Working Group, and such other agencies as may be designated by the President, that conducts any Federal program or activity that substantially affects human health or the environment. Independent agencies are requested to comply with the provisions of this order.

6–605. *Petitions for Exemptions.* The head of a Federal agency may petition the President for an exemption from the requirements of this order on the grounds that all or some of the petitioning agency's programs or activities should not be subject to the requirements of this order.

6–606. *Native American Programs.* Each Federal agency responsibility set forth under this order shall apply equally to Native American programs. In addition, the Department of the Interior, in coordination with the Working Group, and, after consultation with tribal leaders, shall coordinate steps to be taken pursuant to this order that address Federally-recognized Indian Tribes.

6–607. *Costs.* Unless otherwise provided by law, Federal agencies shall assume the financial costs of complying with this order.

6–608. *General.* Federal agencies shall implement this order consistent with, and to the extent permitted by, existing law.

6–609. *Judicial Review.* This order is intended only to improve the internal management of the executive branch and is not intended to, nor does it create any right, benefit, or trust responsibility, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies, its officers, or any person. This order shall not be construed to create any right to judicial review involving the compliance or noncompliance

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of the United States, its agencies, its officers, or any other person with this order.

William J. Clinton

THE WHITE HOUSE,
February 11, 1994.

[FR Citation 59 FR 7629]

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NEPA
National Environmental Policy Act
LESSONS LEARNED
U.S. DEPARTMENT OF ENERGY QUARTERLY REPORT
December 1, 2014; Issue No. 81 Fourth Quarter FY 2014

What Didn't Work – and Making It Work Next Time: Scoping Process

By: Ralph Barr, Office of NEPA Policy and Compliance

From the first issue of *LLQR* in 1994, the Office of NEPA Policy and Compliance has encouraged NEPA practitioners to share their experiences of "What Worked and What Didn't Work in the NEPA Process." We hope that this information has been helpful to our readers.

As *LLQR* enters its third decade, we are expanding our discussion of common "Didn't Work" issues. With this article, we are launching a series that highlights the reasons why things didn't work, and what can be done to avoid such problems in the future. We begin with a common issue encountered in the public participation process.

What Didn't Work: The public was not aware of upcoming scoping meetings and what scoping involves.

NEPA Document Managers have reported concerns from members of the public who were not aware of scoping meetings in time to attend or comment. The effectiveness of scoping meetings was also reduced when attendees misunderstand the purpose of scoping.

Scoping

"DOE shall hold at least one public meeting as part of the public scoping process for a DOE EIS." (10 CFR 1021.311(d))

Why It Didn't Work

LLQR questionnaire respondents have suggested possible explanations for why the scoping meeting process didn't work.

- Insufficient publicity:
  - Advertisement of scoping meetings was at the last minute or did not occur.
  - The meetings were advertised, but not in the right places to reach potentially interested members of the public.

(continued on page 4)

Using an open-house style format with charts, posters, and other displays stimulates discussion between the public and project staff and technical experts. This can lead to better informed scoping comments.

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Inside *Lessons Learned*

Welcome to the 81st quarterly report on lessons learned in the NEPA process. This issue features tools to help NEPA practitioners perform NEPA reviews: MapWarper, EERE's Environmental Questionnaire for funding proposals, and a sustainability rating system. Thank you for your continued support of the Lessons Learned program. As always, we welcome your suggestions for improvement.

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Carol Borgstrom
Director
Office of NEPA Policy and Compliance

Printed on recycled paper

Be Part of Lessons Learned

We Welcome Your Contributions to *LLQR*

Send suggestions, comments, and draft articles – especially case studies on successful NEPA practices – by January 21, 2015, to Yardena Mansoor at yardena.mansoor@hq.doe.gov.

Quarterly Questionnaires Due February 2, 2015

For NEPA documents completed October 1 through December 31, 2014, NEPA Document Managers and NEPA Compliance Officers should submit a Lessons Learned Questionnaire as soon as possible after document completion, but not later than February 2. Other document preparation team members are encouraged to submit a questionnaire, too. Contact Vivian Bowie at vivian.bowie@hq.doe.gov for more information.

LLQR Online

All issues of *LLQR* and the Lessons Learned Questionnaire are available on the DOE NEPA Website at energy.gov/nepa under Guidance & Requirements, then Lessons Learned. The electronic version of *LLQR* includes links to most of the documents referenced herein. To be notified via email when a new issue of *LLQR* is available, send your email address to yardena.mansoor@hq.doe.gov. (DOE provides paper copies only on request.)

NAEP 2015 Conference: April 13–16

The National Association of Environmental Professionals (NAEP) will host its 40th annual conference April 13–16 in Honolulu, with the theme *Mauka to Makai: Environmental Stewardship from the Mountains to the Sea*. The conference will offer presentations and panel discussions on NEPA regulatory developments, guidance, litigation outcomes, public involvement, and analytical techniques. In addition to covering broad environmental topics – e.g., climate change, protection of sensitive environmental resources, and sustainability – the agenda will include diverse case studies. Two full-day training workshops are offered on April 13: topics on career development for environmental professionals (creating and responding to requests for proposals, top client skills, and job market challenges) and NEPA basics (attaining a working knowledge of NEPA regulations, legal interpretations, and typical federal agency practices).

Registration is open to environmental professionals in all levels of government, academia, and the private sector. Early registration rates are available, and discounts are offered to speakers and government employees. Additional information will be available on the NAEP website in early 2015.

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NEPA Thoughts on Quality, Training, and Schedules: Deputy GC for Environment and Compliance

In his capacity, since August, as Deputy General Counsel for Environment and Compliance, Kedric Payne oversees the work of the Office of NEPA Policy and Compliance and the Office of the Assistant General Counsel for Environment. Among other responsibilities, he briefs the General Counsel on requests for approval of DOE NEPA documents. The NEPA Office recently asked him to share with *LLQR* readers his insights on how we can help NEPA practitioners accomplish their goals.

At the October NEPA Compliance Officer (NCO) web conference, you emphasized that the NCOs have an important role to play, for example, in maintaining NEPA document quality. How can we back them up?

We should reemphasize that the Office of the General Counsel (OGC) and NCOs share a common goal of producing NEPA documents that comply with the letter and spirit of NEPA. The OGC recognizes that NCOs face challenges maintaining NEPA document quality, while adequately addressing stakeholders' concerns and meeting decisionmakers' needs under stringent time constraints. The OGC values the expertise and judgment of the NCOs and welcomes questions, concerns, and constructive criticism that yield quality and compliant NEPA documents.

What do you envision as the role of training in maintaining a strong NEPA Community? What methods have you found to be successful?

During the recent NCO web conference, it was encouraging to see the value the NEPA Community places on sharing experiences and lessons learned. I believe training plays an essential role in supporting a culture of compliance in the NEPA Community. Training can be most effective for the staff when tailored to their specific career stages. A relatively junior NEPA staffer may benefit from training in areas that are not necessary for seasoned experts. Effective training should be concise, mandatory, and accompanied by detailed reference materials. I encourage the use of web-based training, such as podcasts and exercises, to make training more affordable and available on demand.

What are your views on the importance of schedules in the DOE NEPA process? Preparing a realistic schedule for an environmental impact statement (EIS) seems especially challenging. Do you have any recommendations to help with the process?

I agree with the OGC policy that a schedule accompany notices of intent and draft EISs. Without a schedule for completing an EIS, it is more difficult to anticipate when the Department may make its decision. Ironically, unrealistic schedules may have the same result as having no schedule at all. Schedules may become unrealistic when potential delays are not taken into account. Many NCOs have learned to expect the unexpected and build some additional time into the schedule. After developing a realistic schedule, another concern is ensuring there is sufficient time to discuss the content of the EIS. Certainly, there is no simple solution for balancing the dual concerns of high quality and timeliness, but one guiding principle is that a deadline should not detract from NEPA compliance.

What experiences from your previous positions can be applied to the DOE NEPA program as new approaches?

Actually, I have noticed approaches from the NEPA program that would have been beneficial in my previous positions, such as the open discussions about lessons learned. One approach from my prior experience that may be helpful is the use of written summaries of precedent. Many conversations during preparation of NEPA documents concern whether additional information and analyses are prudent. When dealing with similar decisions in the past, it was useful to have relevant precedent readily available. Such precedent included summaries of internal decisions and recent court cases. The NEPA program may find that compiling and widely distributing such precedent, especially recent court decisions on the sufficiency of NEPA documents, provides persuasive guidance during daily conversations.

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Scoping Process

(continued from page 1)

- Incomplete mailing list:
  - The project mailing list did not include all landowners, tribes, and other interested parties.
  - The landowner scoping list was from the last project at this site and was out of date.
- Poor public understanding of the NEPA process:
  - Attendees did not understand what scoping is, resulting in comments that simply expressed support for or opposition to the proposal instead of identifying environmental issues and alternatives to analyze.
  - Interested members of the public did not know that scoping meetings can be an effective way to participate in the NEPA process.

Approaches for Making It Work

Experienced NEPA Compliance Officers and the NEPA Office staff are helpful resources for NEPA practitioners.

Lessons learned in a nutshell: Include public participation in the schedule, and identify potentially interested groups at the outset. This is the first opportunity to build a transparent and amiable relationship with stakeholders that will benefit DOE later in the process.

Well-planned communication can help make scoping a valuable public participation process. This includes the key first step of identifying interested local groups and landowners to ensure that publicity is targeted to reach as many as possible. Good publicity should include: (1) project-specific details, locations, and dates; (2) an explanation of the public's opportunities to participate in the NEPA process; and (3) the purpose of scoping meetings.

Make sure publicity for the scoping meeting is part of a coordinated communications plan for the project. All members of the project team and all public statements, including advertising, must be consistent to avoid confusing the public.

– Drew Grainger, NEPA Compliance Officer, Savannah River Operations Office

The following are suggestions for each stage in the scoping process:

1. Before scoping begins

- Identify who on the NEPA team will coordinate stakeholder communication.
- Include information on the project schedule, not just the dates for the scoping meetings. Allow time to prepare handouts, posters, and similar materials for the meetings.
- Identify local landowners, governments, tribes, nonprofits, and other stakeholders to build a current and comprehensive mailing list. NEPAnode can assist in the collection of this information.
  - Talk to others who have recently conducted NEPA processes in the area.
  - Check the distribution lists of recent EAs and EISs in the region.
  - Work with your organization's tribal contact to ensure that the tribal contact list includes both tribal officials and the administrator who typically works on NEPA issues.
  - Do not rely on mailing lists that were prepared more than a year ago.
- Schedule scoping meetings.
  - Allow enough lead time to advertise in weekly local papers and send letters to local stakeholders.
  - Avoid religious holidays and other culturally significant dates and days of the week that would discourage attendance.

2. Involving the public

- Identify the most effective ways to reach the public in that region. Talk to people who have conducted scoping in the area and find out what worked best for them. Make sure that DOE's Office of Tribal Affairs or your organization's tribal coordinator is actively involved from the start.
- Possible places to advertise a scoping meeting include:
  - Local newspapers – These are often more widely read than the regional daily papers. Note that they are often published weekly or biweekly; schedule your publicity to catch their deadlines
  - Local government websites
  - The site's and agency's website news page and/or newsletter
  - Public service announcements at local radio stations, and
  - *Federal Register* – This is required for EISs, but don't rely on it as your sole publicity, as few members of the public read it.

(continued on next page)

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Scoping Process

(continued from previous page)

Bonneville Power Administration prefers to hold open-house style scoping meetings – it tends to diffuse grand standing and help foster real conversations between the public and engineers or technical specialists.

– Stacy Mason, NEPA Compliance Officer, Bonneville Power Administration

- As early as possible, set up a project webpage with an easy-to-find link from the agency home page. Consider setting up a unique "NEPA" email address as well.
- Include options for people to register to receive documents and information.
- In your meeting publicity, include the following:
  - A simple explanation of scoping – Assume that some members of the public will be unfamiliar with the NEPA process. Use lay terms rather than technical or regulatory language. A "NEPA 101" poster is a good place to start a conversation with participants
  - A description of what DOE wants to do and why
  - An explanation of the kinds of comments you need from the public during the scoping phase
  - Information about later opportunities for public comment on the project
  - How to submit comments without attending the scoping meeting, and
  - A web address, if the scoping meeting will be available by webcast.

3. Scoping meetings

- Before and during the scoping meeting:
  - Make available to those attending the scoping meeting copies of "DOE, NEPA, and You: A Guide to Public Participation." Copies of this pamphlet, prepared by the NEPA Office, can be obtained on request or printed from the file on the DOE NEPA Website under Guidance & Requirements.
  - Use an optional address sheet at the entrance of the meeting room to collect mailing or email addresses for people interested in receiving project updates and/or a copy of the draft when it is available. Record names and add them to the project mailing list.
  - If you choose to take oral comments during the meeting, provide a sign-in sheet for attendees who want the opportunity to speak.
  - Use a court reporter, if possible, to obtain an accurate transcript of public comments.
  - Make a court reporter available to take oral testimony one-on-one, for those who hesitate to speak in front of crowds or neighbors who may hold different positions.
  - At the start of the meeting, explain what scoping is and what you are asking the public to comment about today. Use lay terms rather than technical or regulatory language. Describe future opportunities for public comment in the project's NEPA process.
- After the meeting:
  - Send attendees a thank-you note or email for participating in the meeting and remind them that they may continue to participate in scoping until the end of the scoping period.
  - Acknowledge receipt of email scoping comments by return email.
  - Update the project webpage and the site bulletin or newsletter frequently to show where in the NEPA process you are.

Don't take anything personally, because when you represent the government, you are not an individual. Scoping can be challenging and rewarding as you forge positive relationships with stakeholders and build trust that will bring rewards as you get into hearings on the draft document.

– Linda Cohn, NEPA Compliance Officer, Nevada Field Office

Using these shared strategies can help make scoping "work" for you in the NEPA process. Additional suggestions are welcome; please contact Ralph Barr at ralph.barr@hq.doe.gov with updates to be included in future issues or to suggest topics for future articles in this series.

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

TRANSCRIPTION OF PUBLIC HEARING
TAKEN AT THE FORT SMITH CONVENTION CENTER
ON FEBRUARY 18, 2015, BEGINNING AT 5:00
IN FORT SMITH, ARKANSAS

REPORTED BY KERRI PIANALTO, CCR

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MR. FASANO: This portion of our meeting is officially designated as a Public Hearing for the Plains & Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on February 18, 2015 at the Fort Smith Convention Center in Fort Smith, Arkansas. It is being held to receive comments on the Draft EIS.

We are commencing the public comment portion of this meeting at 6:30 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have three minutes. If time permits, we will try to provide flexibility in the amount of time allotted based on the number of speakers that are registered; however, please be concise.

This meeting was preceded by a presentation by DOE EIS document manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

My name is Greg Fasano. I have been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground rules reviewed earlier in the evening are followed.

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The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

Okay. The first two speakers are County Judge John Hall followed by Mayor Gary Baxter of the City of Mulberry. No applause, please.

JUDGE HALL: I'm not usually nervous about speaking to crowds, but this is a big crowd so I may be a little bit nervous. Where's the mayor? You're supposed to come up here. Come this way, Mayor. By the way, I'm John Hall and I'm a county judge for Crawford County. I represent 62,000 people. Of those 62,000 people, there is probably 90 percent of those people that oppose this project and I'm here tonight to tell the DOE that we are 100 percent against this project. 1|34

In the last ten year census, we grew -- we were the fourth fastest growing county in the State of Arkansas, the fourth. If you take this line across Crawford County, you're going to rip the heart out of it. You're going to take a mile of land across this county that is going to be abandoned, will be of no use, will be ugly, you're 1|34 cont.

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1 going to hurt this county for eternity. You're
2 going to put the medical part of this thing will be
3 devastating to our communities. This is the worst
4 thing that we could ever have come across this
5 county and I hope that every one of you here will
6 express your thoughts tonight and we'll let these
7 people here with DOE and Clean Line understand this
8 is not the place for this project. If they want to
9 put this plan through somewhere, why don't they put
10 it on their own property? The DOE has the National
11 Forest.
12 I asked these gentlemen in the back a
13 while ago, three of them, I said, you've got
14 National Forest all the way across the northern part
15 of this county -- country -- state of Arkansas and
16 across this county, why don't you put it up there?
17 He said, well, first of all, we can't put it up
18 there because we've got to go through private
19 landowners. I said you're going through 1,000
20 private landowners in Crawford County, you're going
21 through ten in the National Forest. He said, well,
22 but there's a bug or some kind of beetle up there
23 that we cannot do because it's going to be extinct.
24 And then he says, also, the Forest Service will not
25 allow the looks of this thing being in the National

1|34 cont.

2|8

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1 Forest, it is not green. I said, is that more
2 important than my two-year-old and my four-year-old
3 that's living right next to the thing?
4 I hope everybody will express yourself and
5 if you all need anything from the county judge's
6 office for Crawford County, holler at me. Thank
7 you, all.
8 MR. FASANO: Mayor Gary Baxter followed by
9 Mayor Glenanna O'Mara of the City of Cedarville.
10 MAYOR BAXTER: Yes, I am Mayor Gary
11 Baxter, the mayor of Mulberry. Mulberry is located
12 in Crawford County. We're located in one of the
13 greatest places in the central part of the United
14 States. Interstate 40 that connects the East Coast
15 to the West Coast, it comes right through Mulberry,
16 exits 20 and 24. We've got I-49 that's going to
17 connect Canada with the Gulf Coast comes right down
18 through our area. We've got Union Pacific Railroad
19 and we've got the Arkansas River all here. Folks,
20 this is a great place for growth that we have in the
21 central part of the United States.
22 Now, we want to encourage people to come
23 and move here and we want people to know that
24 environmentally friendly places, Arkansas is known
25 as the Natural State. We want to keep it as the

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Natural State and we want to make sure that people know that coming through a small community like the city of Mulberry, Mulberry has a background of about seven square miles. If this project goes as planned, it would dissect our city going right through where we put in a new city park that we've already spent $420,000 on. The western side of our park would be obstructed by this Clean Line Energy towers right on the western side where we have beautiful sunsets. Our park is a great place. That would destroy the aesthetic value of our new city park. 1|8 2|29

Then it turns north and goes up across Interstate 40 and exit 24 completely destroying the economic value of us developing exit 24. For a small community, when you take away the economic development on the interstate, then that hurts the growth of that community. When you take away the aesthetic value of when people go to the parks, that hurts this community. So I am here to appeal to the Department of Energy that you do not participate in this project as it is planned because of the impact it would have on a small community like the city Mulberry. Thank you. 3|24 2|29 cont. 4|34

MR. FASANO: Okay. Mayor Glenanna O'Mara

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and Julie Morton.

MAYOR O'MARA: We appreciate the opportunity to speak to the DOE and to Clean Line Energy. I'm Glenanna O'Mara, the mayor of Cedarville, Arkansas in Crawford County. We are fortunate in that we were -- we convinced Clean Line Energy during their scoping period to locate to a different area. We would like to see them out of Arkansas. We don't feel like this is a project that's good for our state. It's definitely not good for our county. 1|34

The people now who are affected, I am also representing them tonight, I have been asked to speak on their behalf, come through the areas of Uniontown, back over toward Figure Five and out that direction. These folks were not included in the scoping period, DOE. We feel like that was a wrong on their part. If they had been being considered as an alternative line, we feel like that should have been noted at that time and those folks should have an opportunity to speak directly to Clean Line which they missed that opportunity. So we would like to ask that you consider their comments at this time as well and we are definitely opposing Clean Line Energy. 2|2 1|34 cont.

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Our city last night passed an ordinance -- or a resolution that opposes this project due to those factors as well as the certainty of the Arkansas state government's ability to handle the transmission projects and electric for the state of Arkansas for their own people. Thank you very much. 1|34 cont.

MR. FASANO: Julie Morton. Julie Morton and Sherry Marshall.

MS. MORTON: My name is Julie Morton and I'm from Figure Five, Arkansas. My comment tonight is about the federal government partnering with a private, for-profit corporation to take your land. I also question their judgment that these people would be a good partner. How many stories have we heard about them trespassing on people's land, changing their story every time they talk to a landowner, intimidating elderly people and showing up at people's houses drunk? And they think this is a good partner? Really? 1|4

This is a slippery slope down which our government is taking us. Where will it end? Will the corporations end up owning all the property and there will be no private property rights left? Our forefathers fought and died for us to own this land. Thousands of people have spilled their blood on

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foreign shores to protect those rights and now these Washington bureaucrats are giving them away. A word to the wise, if you keep trampling on the rights of we the people, you may have another American Revolution on your hands. Thank you.

MR. FASANO: Sherry Marshall and then Emily Brown.

MS. MARSHALL: Yes, I'm Sherry Marshall. I'm from Uniontown and like Mayor O'Mara said, we were both in when this first started coming in to Arkansas and I'm thankful that it is no longer coming through the town of Uniontown. I would like to thank you for that, but I am here to stand with the rest of you and I'm here to speak for my ancestors that left this land to me to now speak for them and I would like to ask the DOE to please take the no action alternative. 1|7

The alternative route that is now proposed that goes across a scenic highway, Scenic Highway 220, and that was enacted back in the '90s and that would destroy the scenic value. Can you imagine the 200 foot towers as you come and you go across this beautiful land of ours? And also, the blasting that would take place. You're going to have to blast 60 to 80 feet deep. What will this do 2|8A 2|8A cont.

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to the foundation of our homes? What will this do to the foundations of your chicken houses, to the foundations of your cattle barns? And you'll have animals in those buildings. What's going to happen when that structure comes down on them? You will have no more cattle, no more chickens. 2|8 cont.

The endangered species here, I think it is us, the private property owner. And speaking one more time for my ancestors, what about the blasting that will take place by our cemeteries? Do you want the vault that your grandparents and great-grandparents are in to be cracked and destroyed? No. We're here to take a stand and say, no, you're not coming across Arkansas. 3|34

MR. FASANO: Emily Brown and then Travis Brown.

MS. BROWN: My name is Emily Brown. I live at 3303 Pine Hollow Road, and that's going to be hard to follow. I'm a member of the Sierra Club and I oppose this. I oppose cutting down -- I oppose cutting down 8,000 acres of trees. 1|28 An engineer from Clean Line that I spoke to stated that in the event of a tornado, which this is tornado alley, will -- in the event of a tornado, these towers will fall inward, yet there are ton of 2|19

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pictures on the Internet showing smaller towers laying on their side, not inward. These transmission lines are only made to withstand an F3 tornado. How do you predict nothing bigger will come along? 2|19 cont.

Also, if the majority of Arkansas counties in the state of Arkansas has passed a resolution opposing this project, why are we here? No one wants them to come through. What is the purpose of this meeting? Why is the DOE putting landowners through this? The EIS uses property value research from the 1990s. That's over 20 years old, so it's useless. 3|6

So I would like to end then with I don't want anybody trespassing on my land and they will not come on my property. God bless. 4|34

MR. FASANO: Travis Brown and Tim Brown.

MR. TRAVIS BROWN: My name is Travis Brown. I just want to talk briefly about the real estate values that it's going to affect. I own a real estate company in Van Buren. We just had a Board of Realtors meeting last week. There was three realtors that said they had properties under contract and once the buyers found out about these power lines that the buyers backed out. So they sit 1|24

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here and tell us it's not going to affect real estate values. That's three examples right there that I've seen firsthand. So not only is it going to depreciate your property values, several properties are going to be unsellable in my opinion from the -- what other realtors and buyers have spoken about. 2|6

We live 400 feet from these power lines and we're personally going to sell our property if it goes -- if these things go through just due to the health risk with our children.

AUDIENCE MEMBER: Maybe.

MR. TRAVIS BROWN: Maybe. That's if we can sell it. That's all I have to say and just thank you all for coming out here.

MR. FASANO: Tim Brown and Eric Simpson.

MR. TIM BROWN: My name is Tim Brown and my talk is more on a personal note and it has to do with health. I have a defibrillator that is not supposed to be around DC current. From what I understand, this is DC current to the best of my knowledge. I used to be a pipefitter. I was told not to do that anymore because of the DC current, the welding, and here I am within 1,000 feet of this project.

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Then you can get a little more personal. I'm originally from California. I drove back here when I was 18 by choice. I love Arkansas. I've done well in Van Buren. It's treated me well. I will go down fighting this, that's a fact. I know great men already has gone down that are gone that was fighting this and I won't stop. That's the bottom line. 1|34

MR. FASANO: Eric Simpson and Debra Simpson.

MR. SIMPSON: I'm actually going to speak for my mother who is the next one on that list. She asked me to say a few comments for her tonight. My name is Eric Simpson my wife, Debra, and I live in Crawford County. Our property and our house is about 200 yards from where this proposed line is going to go through. And, Dr. Summerson, we are against this line for a number of reasons, but I'll point out two of them tonight. 1|34

The first I think Julie spoke very good on is the fact that I am totally and everybody I've talked to is against the use of eminent domain by a private company. I look at this as nothing more than stealing property or stealing money from myself and my family. 2|4

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When we retired from the military, we bought this land with the intent of living here for the rest of our life and passing this land on to our children and grandchildren. That's their inheritance. I am very upset even at the idea. Now, if this was an interstate, that's a little different. This is a private company making rich people richer by stealing our money.

I want to talk -- the other thing I'm against is the financial, personal financial hit that myself and my family are taking on this and everybody else is within view of this and I guess I should back up and reintroduce myself because I really should have introduced myself as a sensitive viewer. I'm going to read from the EIS draft. This is page 66 and it says, it's talking about the visual impacts of this line and it says, "High impacts to sensitive viewers are expected to occur in the foreground up to half a mile." I would ask Dr. Summerson that word sensitive be changed to sensible. I think any sensible person living along this line is going to have a high impact and be very upset.

Now, when it talks about property values on page 59 of the draft report, and I'm going to

3|6

4|29

3|6 cont.

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read this. I know I've got one minute, but I've got two other people I'm taking their time. This says -- this I'm going to read says, "Some short-term adverse impacts on residential property values (and marketability)," thank you, I can't read that, "Might occur on an individual basis as a result of the project; however, these impacts will be highly variable and individualized and difficult to predict." That's BS and I think Travis spoke to that. I have talked to other real estate agents, I've talked to an owner of a title company who also told me there was lost sales in this area and I've been told I can expect somewhere between a 30 and 50 percent and maybe more loss in my property values. Once again, Clean Line is trying to steal from me, my children and my grandchildren and that is wrong.

The other thing that's going to affect our property values here that has just been touched on a little bit is the health risk. I don't have a medical background, but I've tried to do some research and, quite frankly, it's very confusing. There are a lot of studies that say it's not, there are a lot of studies say there are -- it is. I'm going to read again from the report.

3|6 cont.

5|15

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MR. FASANO: Will you please wrap up, sir?
MR. SIMPSON: Yes, I will, but I'm speaking for my mother.
MR. FASANO: Thank you. Please respect the three minutes per person. Thank you.
MR. SIMPSON: Okay. I'm done here.
MR. FASANO: Thank you.
MR. SIMPSON: My wife wants to speak.
MR. FASANO: You bet. Debra Simpson followed by Patrick Horan.
MS. SIMPSON: My name is Debra Simpson following my husband. I didn't know I was going to speak tonight, but I'm going to follow through with what he was saying. He made the very valid point when he was talking about the health effects. We don't know how it's going to affect us, our neighbor, anyone that has a heart pacemaker, but I'll continue on by reading what he has written -- or what was written in a manual that was sent to us. "The research available on the health impact of the magnetic field exposure is not a definitive and no conclusion regarding the health impact can be drawn based on what is presently known about the health impacts in magnetic fields." They don't know. They don't know how it's going to affect us. 1|15

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AUDIENCE MEMBER: They don't care.
MS. SIMPSON: I, myself, also am saying please say no, no, when you go to the EPA.
MR. FASANO: Thank you. Patrick Horan followed by Andrea Goff.
MR. HORAN: My name is Patrick Horan. I'm from Fort Smith, Arkansas. My address is on the paper here that I will give to the reporter here. I own 80 acres in Crawford County, Arkansas which appears on sheet 40 and this is located just east of 88 Road north of Rudy, Arkansas. I am concerned about my land which is near where two power line transmissions or proposed lines come together and as a conservationist I am worried about the negative impacts to the environment regarding the visual resources and the wildlife on the south side of Green Mountain and also the dangers to area groundwater and surface water and to the fish and aquatic invertebrates in this Ozark Mountain region. 1|6 2|29 3|31 4|18 5|26 3|31 cont.
These can all be adversely impacted by the large and continuing defoliation program on the large 150 to 200 foot right-of-way easement of this proposed Plains & Eastern Clean Line project through the states of Texas, Oklahoma and Arkansas to its 720 mile connection with the Tennessee Valley

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Authority in Memphis, Tennessee.

Recently the Cherokee Nation in Oklahoma voted against this power line project in mid January of 2015 and last year the proposed Southwest Electric Power Company, SWEPCO, power line transmission in Northwest Arkansas was also rejected by the citizens because of its adverse environmental impacts. Let's join these active citizens trying to keep Arkansas a natural state. 6|34

MR. FASANO: Thank you. Andrea Goff, then Haley Hall.

MS. GOFF: Hello, my name is Andrea Goff. First, the people sitting in the back, there's probably 20 or 25 chairs up here if you want to sit down.

I would like the DOE to take a closer look at region seven, specifically Poinsett, Mississippi, Cross and Tipton counties. All of these run across the New Madrid fault line. Drilling and blasting in this area is very dangerous. Drilling and blasting even 25 feet deep is very, very dangerous. This is the New Madrid fault line. 30 to 40 feet deep will trigger large earthquakes, but the 50 to 60 foot deep would cause catastrophic earthquakes for us. 1|17

Keep in mind February 7th of 1812 one of

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the world's biggest earthquakes -- or the world's biggest earthquake happened. It was 9.0. It flattened many, many, many towns and they're still feeling earthquakes there today. Drilling and blasting in that area would be detrimental to the State of Arkansas. May the Lord be with Clean Line. 1|17

MR. FASANO: Haley Hall and Carol Westcamp.

MS. HALEY HALL: Hi, my name is Haley Hall and I'm from Rudy, Arkansas. I'm also a member of the Sierra Club and I oppose Clean Line because of the 8,000 acres that will be taken away from Arkansas, the herbicides they will use on our right-of-ways, the blasting they will use in our rocky areas and the possible well water contamination along with the interference of bird migration. 1|34 2|8 3|18 4|31

This will be the highest DC voltage power line to be built in the United States. Clean Line claims there are no health concerns. They handed me this little EMF pamphlet at the scoping meeting and in this pamphlet cited by the World Health Organization it says, "The panel," the World Health Organization, "Classified power frequency EMFs as possibly carcinogenic to humans," meaning cancer, 5|15

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"Based on a fairly consistent statistical association between a doubling of risk of childhood leukemia and magnetic field exposure." Along with that, they also claim this will not affect the pacemakers if you talk to Clean Line themselves. However, in their own EIS statement it says that even brief periods of interference could be life threatening. And other than that, in the EMF pamphlet it talks about this could affect joint replacements, any kind of metal, you know, rods or plates that you might have in your body. 5|15 cont.

What I want to know is why are the people in our community not receiving their EIS studies that they have requested well over a month ago? They have not received them and we're in the comment period. How are they supposed to comment informed whenever they cannot get their hands on the material? 6|2F

I also want to know why the EIS study, the references are so outdated, property values in the 1990s? Cattle fertility studies in the 1970s? And I won't even get started on the health stuff because that gets me all flustered. 7|2

Why was the EIS done so carelessly? They didn't even locate our schools that are on the 8|24

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proposed route. They located schools that were off the route, but they did not locate our schools on the routes. They located churches, they located cemeteries, they located houses, they failed to locate three Alma schools which are approximately 2,600 feet from this line. They failed to locate two Mulberry schools which are approximately 1,300 feet from this line. 8|24 cont.

I went over to look at European studies since the U.S. doesn't do a lot of this cancer research and over there it says even at 2,000 feet there is still an increased risk of cancer and this was on a 500-kilovolt line and this will be a 600-kilovolt line, so one can only assume that you could increase the distance. And also -- 5|15 cont.

MR. FASANO: Wrap up, please. Thank you.

MS. HALEY HALL: I am. Why did our school administrators not know about this project until last week whenever our locals went to talk to them? They didn't have any say in the scoping process because they weren't aware that the line even existed. 7|2 cont.

I want to know why the DOE sent out a letter asking for applicants to use section 1222, which has never been used before, and why Glotfelty, 9|4

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one of the guys who helped write section 1222, is the one that responded to this letter to use section 1222 to start his own business called Clean Line? 9|4 cont.

This project is about one thing and that's greed. They don't see our green trees, our land, our lives that are so important to us. They see a different kind of green and that's money. We don't want this route changed, we don't want it stopped, we don't want it anywhere in Arkansas and I'm not going to stand here and beg the DOE to oppose Clean Line, I'm simply going to say the DOE should be ashamed that they have even entertained the idea of this project this long. 1|34 cont.

MR. FASANO: Okay. I will just let you know that when you applaud while the person is speaking, while she's saying words, it's very difficult for the court reporter to hear it and record it so you might want to time it -- you might want to time it a little differently I guess is all I'm saying.

Okay. Carol Westcamp followed by Nicholas Stockton. Thank you.

MS. WESTCAMP: As he said, my name is Carol Westcamp and I'm not an expert on any aspect of this. In fact, I have not even received a copy 1|2F

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of the study even though I have requested one. 1|2F cont.

However, I am an affected landowner so I did want to speak. I implore the Department of Energy not to support and participate in this project. I am not an Arkansan, I'm an Okie, but I do teach at the University of Arkansas at Fort Smith. I've taught there for 15 years. 2|34

I was born and raised in Muldrow, Oklahoma. My family lives on a 100 acre plot of land north of town that is less than a mile from this impacted or this proposed route. Because my land is not a part of the route, my thoughts are deemed unimportant. However, I'm less than a mile away and my view will be affected and my community members are going to be affected. 3|29

I chose to stay here and live in the community that I grew up in. I live in the very house that I grew up in. My great-grandmother bought that land, my grandparents lived there, my parents lived there and I live there. I have chosen to stay in this community and to educate and work at the University of Arkansas Fort Smith because of my love for this community and I'm here to support my community members.

I'm not against clean energy, but I am

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against Clean Line Energy. I'm against them destroying our land and our landscape. I'm against them lowering our property values. I'm against them ruining our views, the noise and the radio and the TV interference that she just told us about and I'm not even -- what gets me is we're not even getting the benefits of this electricity. It's just -- it's just going through our land. So we were told to suggest an alternate route or give some positive suggestions. The only alternate route I have would be for the members of the Department of Energy to allow this to run through their land.

4|6
3|29 cont.
5|22
6|11

MR. FASANO: Nicholas Stockton and then Steve MacDonald.

MR. STOCKTON: Good evening, folks. I'm a fifth generation landowner. I'm trying to raise the sixth generation on our property. I live on Pheasant Road in Crawford County. I was strongly advised not to build my house this year, which was supposed to start last week, because of the impact that this power line will have. I was told that I would be upside down before I even got it built. My wife and I have been working for seven years to build that house, so my life is again on hold. For how long, it is up to the DOE.

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Am I for a private company paying us pennies on the dollar to make billions on the dollar on property that we will not be able to use for anything else? If you look at the route of this line, my property, my family's property and most of the landowners of Crawford County, this property doesn't even go on an adjacent boundary line. It zigzags across it. On our property, and I'm using ours because I'm more familiar with it, it starts at the southwest corner and it goes to the northeast corner. It cuts me in half.

1|8

My grandmother's house is on the highest point of the community called Bond Special. Her house has four foot by eight foot tall windows in it. They built it that way because of the million-dollar view so it's been told. Well, their view will be this power line from here on out. My grandmother has stressed herself unbelievably to the point where she couldn't even come tonight because of this. Is it right for her to be under this amount of stress in the retirement stage of her life? She should be enjoying her great-grandchildren right now instead of worrying about what they're going to get from her.

2|29

Pennies on the dollar for someone to make

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billions on the dollar; is that right? Eminent domain to a private company; is that right? You know, I was raised with morals and values. We're not rich. We're blue collar. Our wealth is in our land. I harvested my first deer off our property, I caught my first fish on our property. I would like to see my son be able to do that as well.

If the power line goes through, I will take it as a threat to my family because it will be threatening their health. 3|34

MR. FASANO: Steve MacDonald and then Jim Rogers.

MR. MACDONALD: My name is Steve MacDonald. I live in Sequoyah County near Akins, Oklahoma. We have a group in Sequoyah County who fought Plains & Eastern Clean Line Oklahoma. Last November, we had 38 members. Today we have over 840. We all oppose this. Everybody has given good reasons, property values, scenic values, the scenic destroyed. 1|34

I just want to say when I went to school, we had something called the Constitution. We had a Tenth -- we have a Tenth Amendment right with separation of states and federals. They have no right doing this. We also have the Fifth Amendment

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against eminent domain. They can't take private property except for public use. This is not for public use. This is for putting money in the pockets of billionaires in Houston, Texas and partners in Great Britain, National Grid, so I urge all of you if you haven't got your EIS studies and they are -- they are slow, you haven't even got documentation to look at, go out and request it, go to the comment forms, make all the comments you can, notify your friends and neighbors. I just want everybody in Arkansas, everybody in Sequoyah County supports you guys. Arkansas has such a great crew here getting everybody organized, but you need to get yourself involved, you need to get yourself educated on these people. Clean Line -- Clean Line is not clean. Thank you. 2|4

MR. FASANO: Jim Rogers and then Patsy Thomason.

MR. ROGERS: My name is Jim Rogers. I'm a county commissioner from Sequoyah County. We submitted a letter opposing Clean Line and for some apparent reason, it just didn't seem to make the news, so if I could, I would really like to read this to you and then comment from there.

"We are writing to formally express our 1|34

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opposition of Plains & Eastern Clean Line's proposal to run power lines through Sequoyah County. We feel that there are uncertainties regarding this particular project. We feel we would be simply a stepping stone given that this line does not benefit the Southwest Power Pool which includes our county, as well as the state of Oklahoma. 1|34 cont.

At a time when constituents are facing severe, real and unreasonable negative impacts concerning this project, we contend as the Sequoyah County Board of Commissioners and as representatives of our county to support their concerns and oppose this proposal.

In conclusion, there will always be projects on the horizon and we're always willing to look at those that will improve the infrastructure for the constituents we represent. However, we do have concerns that this project will cost Oklahoma taxpayers millions in tax credits for electric services that would benefit other states." 2|24

Neighbors, don't take me wrong here, we're all willing to help our fellow man, but it has to be for need, not for greed. We do not embrace such projects that contribute to the decline of rural Oklahoma, but rather those projects that will

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enhance, improve and have a positive impact on the quality of life for the people of Sequoyah County and the State of Oklahoma.

You know, I've had an opportunity to sit in on several meetings. We even had an opportunity to conduct such a meeting where we invited Clean Line representatives in to answer questions. I remember one of the questions, I believe it was Mr. Brown that brought up the decrease in the value of your property. That was a question that was directly asked, what percentage they thought the decrease would be in your property, would it affect the marketability of your property. Their comments was that their studies show that it would have no effect whatsoever. I think we know the real true answer to that, but we want you to know us Okies are here and we're supporting you. Anything that we can do to help you, just let us know. 2|6

MR. FASANO: Patsy Thomason and Natalie Fullbright. Thank you.

MS. THOMASON: My name is Patsy Thomason and I live at 104224 South 4650 Road in Sallisaw, Oklahoma. My father-in-law bought our land in 1963. He, his wife, his seven-year-old son, who is my husband now, his 14-year-old son actually built the

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farmhouse with their own hands. Now, he left the 90 acres to his two sons. Four of the five grandchildren have lived in this farmhouse, the fourth being my son. Now, according to Clean Line's handy-dandy little map, our farmhouse falls within the 1,000 foot corridor along with our neighbor, Daron Harrison's mother, on the other side of that corridor. We'll not see a dime of compensation over this because the line doesn't come on our property at all, it's on his property, but it will hang over my son. 1|6

Now, in 2012, this has already been touched on by a couple others, the scientists did a five-year independent study involving the HVDC lines. These reports refute Clean Line's claim of no negative health effects associated with their transmission lines. The power lines and other sources of extremely low-frequency radiation are consistently associated with higher rates of childhood leukemia. There is little doubt that exposure to the EMF causes childhood leukemia and other childhood cancers cannot be ruled out and also contributes to adult leukemia. 2|15

Now, I brought this picture of my daughter and my grandchild so that you would have a visual of

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my story. It's not just a story, you know, these are my loved ones. So on the other side of the farmhouse is my daughter and her four-year-old daughter that they live on the land that their -- that her grandfather gave to her, the land where she is eking out a living as a single mother. Five years ago she was diagnosed -- or she flatlined three times. She has a pacemaker now. She's doing well; that is, unless these HD lines come through within 2,000 feet of her home. The DOE's own study says that the magnetic field exposure could affect her pacemaker. Now, I want to know, this mama bear has her claws out. All three of my precious gifts from God are in jeopardy from Clean Line. Do you, Clean Line, do you all have children? Ms. Jane, do you have a child? 2|15 cont.

DR. SUMMERSON: I do.

MS. THOMASON: Okay.

DR. SUMMERSON: And grandchildren.

MS. THOMASON: You put yourself in our shoes. If my daughter's pacemaker quits, will you pay to bury her? In five years if my precious grandchild contracts cancer from this high line wire, will you pay for her chemo? We are here to fight for our rights and our lives and we appreciate

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Arkansas.

MR. FASANO: Natalie Fullbright and Daron Harrison.

MS. FULLBRIGHT: My name is Natalie Fullbright. My address is 4616 East 1070 Road, Sallisaw, Oklahoma, but I'm from a community called Akins. I'm a resident of Sequoyah County, Oklahoma. I'm also a citizen of the Cherokee Nation and I've been raised my entire life on my great-grandfather's Cherokee allotment. Akins, Oklahoma is primarily made up of my family. I have 68 family members within a mile radius and we're all within this 1,000 foot corridor. We're all in the location we are because we live on Cherokee allotted land.

My mother is the deputy speaker of the Cherokee Nation Tribal Council and she's very sorry that she could not be here to address you tonight, but she has a broken toe. She is the primary reason the Cherokee Nation passed a resolution in opposition to Clean Line. Sequoyah County is named after a Cherokee Indian named Sequoyah and this line is going to go within a thousand feet of his home place. It's also going to be very close to a Cherokee ceremonial site called Stokes Smith Stomp Ground. Now, I want you all to imagine with me for 1|8

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a minute that you have a bunch of Native Americans at a ceremonial site singing and dancing to songs that are long beyond our understanding and are in a language that is not spoken anymore and it's a calm, serene setting with people dancing around a fire worshiping in the way they choose. And now I want you to imagine that same scene with a power line in view of it and environmental noise and crackling from the electricity generation. That can't be tolerated.

This line also runs on top of the Trail of Tears. When my family came to Oklahoma, they had been forcibly removed from White, Georgia. My ancestors died on that trail and they're going to build a power line on top of it. I strongly encourage the Department of Energy to review with your partner, the Bureau of Indian Affairs, on the Historic Preservation Act simply because if you do, you will find the Cherokee Nation, the Trail of Tears Association, the Choctaw Nation, the Chickasaw Nation, they are all opposed to this line and for the simple reason that you're building it on top of our historic sites. Thank you. 1|8 cont. 2|5

MR. FASANO: Daron Harrison and John D. Small.

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MR. HARRISON: My name is Daron Harrison. My address is 104668 South 4650 Road and I would like to ask you all how many knew about the scoping period in 2012 and 2013 because I sure didn't. Me and Steve MacDonald have that Facebook page and we have contacted probably more landowners that are impacted about this that have skin in the game that have not been notified about this, so then that kind of makes me feel like the gentleman said tonight out there, kind of makes me feel like we're a bunch of hens in a henhouse being guarded by a bunch of foxes.

But to my comment, now, that was free. First off, I would like to apologize to my son who is at home feeding our cattle and taking care of our chores because I had to be here for this. I would like to apologize to my wife and my daughter and my mother that had to be here and sit through this because of this nonsense. They have been the ones that have suffered through the past ten months that I have worked diligently, Steve MacDonald and I, to stop this, to educate people in this project.

I was approached in April of 2014 by Jim with Clean Line with my eight-year-old daughter by my side. He did not hesitate to use the terms of

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eminent domain and I don't blame him. He was just passing the buck from the people that was above him, that's who I blame. This project, if approved, will send electricity to Tennessee, which also passed resolutions against this project as well, through Oklahoma and Arkansas without any benefits to us property owners. We have worked hard, a lot of blood sweat and tears we have invested in our land. That is about all we've got, but it is ours. 1|6

My father and my mother purchased the property that we live on in 2004. They spent their life savings, blood, sweat, tears and that was short-lived for my father that passed in 2011 in the farmhouse that this line is going over that will be dozed down if this is -- goes through. In 2012, my mother deeded the property to me and my brother. I still feed the cattle that are descendents of the cattle that my mom and dad started out with over 30 years ago. That may not mean a lot to a lot of people, but I take a lot of pride in that. That doesn't mean anything to the Department of Energy or to Clean Line because their biggest deal is get a buck.

MR. FASANO: Please wrap up, Mr. Harrison.

MR. HARRISON: It's not about -- it's not

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about any type of -- anything but capital gain. I will -- one good thing has came out of this because I have met some amazing people through this, amazing Arkansas people and amazing Oklahoma people, some that will be friends well after this does not come through our property.

And I'll end with this, in writing this my eight-year-old daughter wrote comments as well and I quote her and this is not coerced, "Clean Line is taking from our lives and they need to stop right now." 2|34

MR. FASANO: John D. Small and then Jerrell Harry.

MR. SMALL: My name is J.D. Small. I live at 2014 Zion Road which is just north of Van Buren and within spitting distance of this clean line, if it goes through. The 1,000 foot corridor is a joke. There's not one person in here that won't have to travel under this thing or see this thing. Everybody that I know that lives north of this line works in Fort Smith or in the surrounding area that will have to travel underneath this thing every day or go see their relatives that live on the other side of it. 1|8

You know, I spent -- I was born and raised

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in Crawford County. Natural Dam, Arkansas, I was born here and I -- I mean, this breaks my heart to see something like this happen, but what is encouraging is to see all the people that have stood up here tonight and spoke against this, all of the well-informed people that has informed the rest of us of what's going on and I just applaud them.

MR. FASANO: Jerrell Harry and Larry Stumbaugh.

MR. HARRY: Two things I want to address is notification of affected landowners and the lack of proper scoping procedures. They have said they mailed 28,000 or 40,000, depending on who you talk to, notifications out and I will guarantee not one half of one percent ever got to the people that were involved. I don't know where they got their information, but if the DOE and Clean Line, whoever mailed them, if they're not any better than that, we've got a problem. Some of the people are being notified two or three weeks ago that have been there for the last 35 or 40 years. Amazing how that happens with the route confirmed. I have asked questions of Clean Line and DOE people and there has been no answer as to where those people's notices went. I don't know whether they're being held and I 1|2

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1 know good and well the U.S. Postal Service is not
2 holding them.
3 The other part of this thing is the lack
4 of appropriate -- proper scoping of this thing. If
5 you're going to do an environmental impact study, 1|2 cont.
6 you've got to put boots on the ground. You cannot
7 do any environmental impact study 350, 400, 5,000
8 feet up in the air. You're going to have to get out
9 and get dirty, you're going to have to have a
10 citizen's approval to go on the property. Either
11 that or you're in violation of the law. I can tell
12 you in Arkansas in one instance there's about a six
13 or seven mile stretch that they weren't allowed on
14 the property. In Oklahoma there was a ten mile
15 stretch they haven't been allowed on the property.
16 Now, they can't tell you what's there. We've got a
17 prime example of this in San Antonio, Texas where
18 they've got a multimillion dollar interchange tied
19 up by a cavern with some blind spiders in it.
20 You've got a lack of information available
21 to the stakeholders which they call the landholders. 2|2F
22 They've had failure to properly locate the schools 3|24
23 and stuff as Emily has alluded to. We've got a lack
24 of advising the affected citizens of this county and
25 of the state of the amount of power being handled.

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1 We don't need the spots on our scenic state. We
2 don't need the energy. We don't need to enhance 4|34
3 their pocketbooks. We are against this little
4 project.
5 MR. FASANO: Larry Stumbaugh and Daimien
6 Rice.
7 MR. STUMBAUGH: My name is Larry
8 Stumbaugh. I live in Sequoyah County. The Fifth
9 Amendment prohibits the government from taking
10 property for public use without just compensation,
11 the basis of eminent domain of the United States.
12 Executive Order 13406 which states in section one
13 that the federal government must limit its use to 1|3
14 taking property for public use for just compensation
15 for the purpose of benefiting the public -- general
16 public. It is not to be used for the purpose of
17 advancing the economic interest of the private
18 parties to be given ownership or the use of the
19 property taken. This project does not qualify for 2|4
20 eminent domain. There could possibly be a conflict
21 of interest between Plains & Eastern and the
22 Department of Energy. We have a group of people
23 gaining the system for the purpose of advancing
24 their own economical interests.
25 The health hazards of killing the trees

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from the fence rows should not be taken lightly. Killing the trees does not keep others from growing back. Drifting spray and runoff is a hazard to humans and livestock as well as the aquatic life. The higher the brush and tree killers are sprayed or the harder the wind is blowing, the greater the drift in spray from these target areas. As close as some homes are to the lines of the drifting spray, it would have no difficulty reaching those homes or the people outside. The ground contamination of this spray does not become uncontaminated just because the trees are dead. 3|8

A lot of veterans have talked about this project, against this project. Some have served their country fighting for freedom and the Constitution only to return home and finding what their fathers and grandfathers fought for and died for does not apply to them. This is not right in the United States of America. 4|34

MR. FASANO: Daimien Rice and Thomas White.

MR. RICE: Hello, everybody. I am from Mulberry, a small little town. I want to say thank you for the mayor coming out to give his speech. Last night we also passed a resolution for power 1|34

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lines not go through Mulberry. Every little town needs to do this. Talk to your mayors, talk to your city council, tell them you want it passed. Mulberry right now is trying to grow. At one time it was a pretty little boom town and it's trying to get back on its feet as doing that with its parks, it's getting industry back and it's got Walmart there, but if these power lines come through, like the mayor said, our park, it's really -- it's going to ruin the city's value of it. Who's going to want to bring their kids out to play beside the buzzing power lines? It's not going to be fun, it's not going to be cool, it's not going to be healthy. 1|34 cont. 2|22

The field behind the park is also one of our main cattle areas. There's I don't know how many thousand cattle out there, but who's going to want to eat beef that lives under power lines? It's not going to be safe, healthy for anyone. It's also threatening to get into our soybean patches. We've got a soybean plant. Yet again, are you going to want to eat soybeans that live and grow under power lines? It's not going to be healthy. 3|15

So basically, stop it any way you can, call anybody you can, write letters, tell your council, city, talk to your neighbors. This little 1|34 cont.

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green piece of paper, you're probably going to take it out, throw it in the back seat of your car. Stick it in your window. Go home, stick it on your front door, that way if they come and knock on your front door they know we're here, we don't want it. Don't let it be trash in the trashcan, don't let it be in the floorboard of your car, put it up. If your office let's you put it up, put it on your desk. Make copies, hand them out, go on the street corner if you have time, wave it around. Thank you.

MR. FASANO: Thomas White and then Kirk Stites.

MR. WHITE: First of all, what a showing. Good job, guys. I'm not like a lot of you folks, I don't have a lot of money or big business that's going to go under because of this or I'm not going to lose sales on real estate or anything like that, but what I do have is I have a pond that I take fish out of and I feed my family. I have chickens that I eat, I raise eggs off of. You know, we kill deer, that's how we eat.

MR. FASANO: I'm sorry to interrupt, can you get a little closer? She's having a hard time hearing.

MR. WHITE: We're doing our best to take

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care of the land that we have been provided for us right here in the greatest state in the United States and it's being taken from us one little piece at a time, 100 foot at a time, 200 feet at a time, not for me. That's all I've got to say. 1|34

MR. FASANO: Kirk Stites. Folks, thank you for being patient. We're halfway through the list.

MR. STITES: Good evening. Dr. Summerson, hi. I grew up in Sequoyah County, Oklahoma, just northeast of Sallisaw. This project will run south of Highway 101 about a mile east of Highway 59 that goes to Stilwell. This will affect the land I grew up on, where my father is at this point. This line comes into Crawford County, Arkansas. I live in the Bond Special Community which is close to Desert Road. I grew up with Commissioner Rogers and I appreciated seeing Jimmy down here. I don't know if he's still here or not.

The last 16 years we have sunk basically our retirement, I don't know how much money, but it's a bunch into developing, building this property. My children grew up on this property and we moved there when they were one year old and two year old. I had hoped my grandchildren would be

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able to return to this. As best I can tell, this line will probably run within 200 feet of my back door, so I figure I'm in rice crispy territory. I can step outside or sit at my pool and feel the snap, crackle and pop.

Okay. It is extremely disappointing that the Department of Energy is coming in, if they do, and play the role of Godfather, which means make me an offer I can't refuse, and that's how it feels. They are always holding the card of eminent domain over your head. We're there to negotiate, we want to negotiate as long as you take our deal. That's not a negotiation. The trump card in their back pocket is the participation with DOE and they hold all the cards. It really doesn't matter at that point. And if this program is economically viable, let them come buy the right-of-ways, let them come buy the land and let them pay for it. Don't take my money and your money and everybody in this room's money to force us into something that we don't want to do. And if they can take your land, you know, I don't know what they can't take. 1|4

You've heard about the health risk. Let me just mention one thing. You've heard about the loss of property value. Best I can tell 50 percent

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is probably a reasonable number, 60 percent. I know I could not turn around and sell my property for anything close to what I've got invested in it. I could probably make somebody a fire sale deal, ten cents on the dollar I could probably sell it and take a huge loss. But you know what? I can't even deduct that loss at the end of the year and that's a shame. 2|6

Our telephone is a wireless cell phone. I don't believe it will work. We don't have cable in the Bond Special Community. We get our Internet from a wireless device. I don't think that will work. This community is built on one big piece of rock and when they start pounding the rock, my foundation, the sheetrock, the chimney in my living room, it's all going to shatter. 3|8

MR. FASANO: Please wrap up.

MR. STITES: Trying to get something done about it at that point, you know, I think will be, good luck, you know, we'll put you on the list. The better part of the power line if it has to be built, use land it already has. The government owns a majority -- the single, biggest landowner in this country is the government, let them use their own land and leave our land that is land that's already 4|11

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been deeded and turned over. Please don't come take my land.

I'm a physician, Dr. Summerson, and reading the data, I'm a cardiologist, I know about the defibrillators and I know about pacemakers. Bottom line is they don't know what the effect of this is. The 600-kilovolt line, we're the guinea pigs for that. 5|15

MR. FASANO: Please wrap up, Mr. Stites.

MR. STITES: At that level of energy, you don't know the impact, you really don't. Please do not participate. If they want to build this line, let them pay for it. 6|34

MR. FASANO: Thank you. Laura Hall followed by Addy Hall.

MS. LAURA HALL: Hi, my name is Laura Hall and I'm from Uniontown. I was born and raised in Texas. I know that's a bad word right now, but all my life, ever since I was little, I've always wanted to live in the country, have animals, have a place to -- have a place to roam besides the concrete of Dallas, Texas. Well, with God's will and hard work, I worked all my life, my dream came true. I have about 210 acres, a small cattle farm and I have a job. And, you know, that was 12 years ago and this

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is my dream. I don't want them to take my dream away from me. I worked very hard for this. Our land is real unique. It has ponds. We live on Lee Creek, meadows, fields. It's beautiful, and we also have eagles and every year eagles come to Lee Creek and they come to the same nest every year and that's something we all look forward to. I want to know, does the EPA have anything to say about our national bird? I don't know.

We also have two cemeteries on our land and we have a real dear friend that's from Texas. He used to come every year with his children and his grandchildren and he said -- he said to me that he wanted to die there and he wanted his ashes spread there because he thought that was a piece of heaven, and he did. He died last year. He is spread underneath an oak tree by that pond right where the easement will come up to. So what are they going to do, spray and kill that tree? No, they're not. It has too much meaning for us, for his family and the state of Arkansas.

There's a, you know, motto, Arkansas is a natural state. What part of natural is this? Are we going to rename our state? No, not for it. 1|34 Thank you.

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MR. FASANO: Addy Hall and then Shane Griffin. Try to get just a little bit closer to the microphone. Thank you.

MS. ADDY HALL: Hi, I'm Addy Hall and I'm 17 years old. I go to Van Buren High School. Although the power lines will not be within 1,000 feet of my high school, it still affects me indirectly, although I know that it affects a lot of you directly and I still support your opposition against the power lines. I'm not here to waste your time in my attendance tonight to offend you, but if you are willing if you will bow your head with me, I would like to spend part of my three minutes with a prayer. Today is Ash Wednesday and they decided to have a meeting on Wednesday so I'm missing church to be here to support all of you that are against it and if you are willing if you will just bow your head for a few seconds.

Dear Lord, I thank you for everyone that's here tonight. Lord, I thank you for letting everyone get here safely with all the weather that's been going on. I just ask you to put your hand over DOE as they make their decision, Lord, that you would just guide them in the right direction, Lord, that you would put your hand over any generation

1|34

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that might have to deal with heart defects or childhood leukemia, Lord, and that you would let the people that are in charge of this realize the effects that it will have not just on the generation right now, Lord, but on my generation and the generations below me, Lord, that are coming up and I just ask you that whatever is in your will that you will just show your plans, Lord, and whatever comes out of this, Lord, and, hopefully, it won't happen, but whatever comes out of this, Lord, that there will be safety with the health problems, Lord, and that being the niece of a fourth generational farmer and a granddaughter of a third generational farmer, Lord, I ask you that you put the thought and the consideration of home value, Lord, and land value and just morals into the heads of the Department of Energy, Lord, and I just thank you for your time and ask you to bless everyone here. Amen.

MR. FASANO: Shane Griffin and then Tom Hopper.

MR. GRIFFIN: Good evening and thank you for this opportunity to speak. My name is Shane Griffin and I'm a JP for District 2 of Crawford County, Arkansas. My district is directly affected by this line going through. It's going right

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through the center of it. All the constituents of mine that I've talked to oppose this line, you know, there's no benefit to it. It's all a health risk and the property values are lowered. 1|34

Our country was founded on something called fundamental fairness which is essentially the government cannot take away your life, your liberty or your property without just cause. That's all this is is taking away some of your liberty and your property without just cause. The purpose of eminent domain when it was conceived was very limited, the idea being as so here have stated that when land is taken it's for the good of the community, like the benefit will be recognized locally. What they're proposing to do here is far reaching. It's eminent domain that, A, will not benefit the community at all. In fact, it will deter. It's terrible, the effects are terrible on the community and the benefits are not for the community, the benefits are for on the eastern seaboard, not here in our Crawford County. 2|4C

Secondly, it's supposed to be the government and the government alone that issues eminent domain power. What we have here are people that are trying to use eminent domain for the 3|4

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benefit of a company, for billionaires who want to make more money. That's not the purpose of eminent domain at all. 3|4 cont.

Again, and also I would like to add that I can honestly tell you that I -- well, I don't remember what day it was last week that I heard the news, but I've never been more proud to be an American when I heard the news last week that a grassroots movement in Crawford County, Arkansas sent enough letters to our senators, Bozeman and Cotton, that they proposed legislation based on this. You guys did that. You did that. The DOE had nothing to do with that, you guys did that and I'm so proud to be an American. Thank you all very much for listening to me tonight.

MR. FASANO: Tom Hopper and Dana Adams.

MR. HOPPER: Good evening. With all due respect for all the comments and concerns that have been voiced before, I bring a little bit different perspective to this project. My name is Tom Hopper and I'm with a consulting engineering architectural survey firm in Arkansas and Oklahoma.

There will be people employed to build this project in this area. This project will hire as many contractors, surveyors and manufacturers to

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help manufacture and build the structures and the wire that will be used to build this project. This project, from my perspective, is about economic development of Arkansas. Arkansas needs to grow our manufacturing, needs to grow our industry and our industry comes at the cost of our electric costs and the ability to keep our electric costs low will bring energy, economic development to this part of Arkansas and all of Arkansas; therefore, I'm in support of this project and would hope that you would consider that there are two sides to the issue. Thank you.

MR. FASANO: I ask for respect on every viewpoint, please. Thank you.

Okay. Dana Adams and then Corey Schildt.

MR. ADAMS: If you see red coming out of my mouth, it's because I'm biting my tongue right at this moment. My name is Dana Adams and I live in Van Buren, but we have property up north of Mulberry. The proposed alternate route goes directly across our property which we bought as a vacation getaway. We didn't buy it to make money on it. We didn't buy it to develop it. We didn't buy it to raise animals and I'm incensed that I'm even here having to defend my right to own property that

1|35

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I worked for 30 something years to afford to buy.

I refuse to call this by the name stated up there. This is Michael Skelly's Energy Company. He lives in Houston. He has an MBA and he came up with a smart way with the help of a former DOE staffer who wrote this new interpretation of eminent domain and all of a sudden he's working for this corporation and to me it's at the least, it's unconscionable and, secondarily, it should be illegal.

The other thing that really upsets me is I spent a lot of time in high school and college and graduate school. I did a lot of term papers. If this were one of my term papers, I wouldn't have gotten my degree. It's based on faulty assumptions. It uses undefinable terms. What is a major impact? There's not a number for that. There should be. They use numbers and then they come up with some thin air definition that makes no sense. I read as much -- for those of you that don't get the EIS, it's about that tall stacked up. I defy you to understand, read and retain all of it. And it's -- it's -- it shouldn't have even been published in the form that it's in. It should be published with accurate deals, like we said, boots on the ground

1|2

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and people that don't have a cow in this or a dog in this hunt. Thank you.

MR. SCHILDT: Good evening, folks. My name is Corey Schildt. I was just informed of this probably about two hours ago and I'm new to the area. I'm a Yankee. I come from Pennsylvania. I married a Southern belle. We had four children here in Van Buren and constantly all I hear is bureaucratic bull crap and nobody wants to step up and do anything about something that as many gentlemen and others have said here tonight, eminent domain is government for the people by the people. It has nothing to do with private industry. So I hope everybody just opposes this and sticks together. Thank you. 1|4 2|34

MR. FASANO: Melissa Koller and Paula Broadfoot. Melissa?

MS. KOLLER: Good evening. My name is Melissa Koller. I've joined to you as the official representative for my family, our land and the eight families that live on the ranch development. Our 135 acres is located on the northern side of the juncture of I-40 and I-49 on the west side of the Frog Bayou. My family purchased our acreage in 2001 for $270,000, $270,000 that my parents have worked

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their whole life for. We owned a business here in Fort Smith. For 31 years we've run Koller Moving and Storage bringing people into the River Valley. Right now, not two years in the future, not ten years from now, Clean Line, you are ruining our area. The Department of Energy, please take note they are already having a negative impact on where we live. I have 27 lots to sell in phase one. I have another 27 lots to sell in phase two. My father is 61 years old. This is his retirement. This is how he's going to live and this is the land he wants to pass on to his seven-year-old granddaughter, his one-year-old grandson and a grandchild to be born.

This line goes directly through our 135 acres and they did not come on my property, no one was allowed to come onto my property, so how can an EIS study actually be done on my property? 1|2

I am also the volunteer leader of an Alma 4-H Club. I have 22 children learning how to do agriculture, learning to sow, raise pigs, raise cattle, raise backyard chickens and eat their own eggs. Clean Line wants to come in and put this line right through my property where I raise my chicken flock, the children that I took to see those

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chickens just this weekend. They want to spray herbicide. It covers my entire hay pasture, the hay pasture where I subsequently raised those chickens on grassland only. It says region one, grassland; region two, grassland; region three, pasture and grassland. Our grassland is our livelihood. It is not something you just build over, spray and destroy and that is what Clean Line wants to do. 2|8

I urge the Department of Energy to respect your citizens, respect your landowners and respect the future generations to come in Arkansas, Oklahoma, Texas and Tennessee. We have a right to raise our children with health. We have a right to own our property and not have it stolen from us. This is our land. This my land, this your land and you will not take it from us, Clean Line. Thank you. 3|34

MR. FASANO: Paula Broadfoot and Keith Ljunghammar.

MS. BROADFOOT: Hello, I'm P.J. Broadfoot and I'm an integrative veterinary medicine practitioner with a long-standing interest in the benefits or risks of electricity. Fortunately, some of the people covered some of the things so I'm going to try and do a speed of light synopsis. This

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actually is the basis for an over one-hour lecture.

What needs to be noted is that there are significant health risks from a DC line. Cell to cell communication in the body is actually DC communication, that's one of the methods that the body uses to communicate within itself. It has already been talked about, leukemia, lymphoma. There's a 13 times greater risk of brain cancer in linemen, so, you know, you cannot discount electrical effects and cancers even in adults. There's been a study that was done that actually showed that you have health risks as far out as over a mile on either side of a high-voltage line. 1|15

There are -- there have been studies on reproductive failures. There's some pictures if you go look online, you can look -- you can look up reproductive failures. There was a Sheltie kennel that had been successful previously, lost 120 litters of puppies after a power line went through.

Emotional distress, birth defects. There was a study done in Kwangchow, China talking about going through -- near the schools that showed neurobiological effects in children, in school children, so we cannot discount the effects on kids from high-voltage lines.

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Someone has talked about the noise and hum. We talked only briefly about the corona discharge. The corona discharge actually will pick up particulate matter. It creates its own corona wind and it will carry particulates downstream of it, downwind of it. That has some significant problems for people with lung issues. It can increase lung cancer. 2|22

They also talked about -- okay. One minute. My speed of light lecture is not going fast enough. Okay. So I'm going to talk about, quickly about wildlife. Somebody talked about clearcut, habitat loss, herbicides. The birds here and other wildlife actually do their sensing, direction sensing is electro -- electric in nature, electromagnetic. There are also 175 million bird deaths in the United States already annually from collisions with power lines, so we have nothing like what we're going across now. The bees are major pollinators. Those are going to be -- they can be disrupted with a cell phone, so you can imagine what a power line would do to them. Bats are also disrupted and there have been millions of bats killed, so we're the same -- we're the subject of a grand experiment. 3|31

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Since I don't have time, the rest of you look up Robert Becker's work, Cross Currents and The Body Electric, it will tell you about electrical stuff, and consider that some of the prototypes, look up Germany and look up Altamont Pass in California, those have been grand experiments that have gone seriously haywire. They are dead in the water. Thank you for your time.

MR. FASANO: Keith Ljunghammar and Ronald Lee.

MR. LJUNGHAMMAR: We were first talking about bugs in the National Forest. I have not been able to work on one of the experiments I was supposed to be working on and it will probably take about another two years to get it completely experimented on, but we can move the bugs out of the National Forest in about a one mile area strip so that you can put the power lines through the National Forest without any environmental problems. 1|11

The other thing is that we can go back to the Virginia Charter of 1606 and the Virginia Charter of 1609 which goes from Virginia to the Pacific Ocean, take a look at that and it's concerning -- one part is concerning eminent domain. What it does, it gives the right of the descendants

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of King -- King James I, class sixth to the class fifth to if there isn't the rightful compensation to somebody that's been adversely affected by somebody who owns property who is doing something with the property, it gives them the right to take that property. In other words, if somebody doesn't get compensated for their disease that they get or the devaluation of their property, then they can come in, seize the entire line and what would they do with that, probably take the income from that and convert it to compensating those people, but then the -- they wouldn't have the power system at all. I mean, that's if it goes through.

And another thing I was thinking about is I have a friend in Seattle who likes to deal with physics and this sounds like a perfectly probable physics solution. There's always power coming off the grid that is just dissipating from the line. If that power somehow through physics can be gathered outside the scope of the area that they think that they have for eminent domain, in other words, up to a mile, then perhaps some money could be made on that, but the residual effect might be that instead of 100 percent going to the other side in Tennessee, maybe it might be 50 percent or ten percent. So I'm

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going to get ahold of my friend from Seattle who does some physics. He also did an invention with Dr. Hawkins at one time and, you know, he doesn't -- and my friend doesn't consider Dr. Hawkins to be all that smart in some areas, so we're going to if that goes through, we're going to work on that so we can grab some of the energy out of the air and create something useful with it via physics and so something's got to be done. So in other words, their investment might go to zero.

MR. FASANO: Ronald Lee and then Garland Farris.

MR. LEE: Good evening ladies and gentlemen and Clean Line, and Ms. Summerson?

DR. SUMMERSON: Yes, sir.

MR. LEE: I'm not as well prepared as most of the people that have talked tonight, sorry for that. I have a small ranch. I live in Vian, Oklahoma, Section 23, Township 12, Range 22 is where they're wanting to go. And so I should be at home like Mr. Harrison feeding cattle. I would like to say to you, Mrs. Summerson, that most of all of what you said is Greek probably to most of these people and to myself. All these rules and the different numbers and abbreviations means nothing to me unless

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I have some kind of paper and an explanation in front of me, but I know you were trying and it's the government. These meetings should have been held -- something is wrong with the mic. These meetings should have been held in the small towns up and down the area and to my way of thinking with, you know, more localized instead of -- I can't travel these distances. You know, that's your job, Mrs. Summerson, and Clean Line. It's your job to get here. It's not my job to be here, but I'm having to to defend myself.

1|2B

I first want to thank the senators from Arkansas, Bozeman and Cotton, for what they did. I would like to thank all the people from Arkansas and all the people from Sequoyah County for showing up here. I would like to thank Senator Mark Allen from Sequoyah County and Representative John Jennings and all three of the county commissioners from Sequoyah County for what they did and I would like to talk to you a little bit about my personal experience with Clean Line so far.

I was contacted February 14, 2014 by a man named Mike Burke. There is his card, Mrs. Summerson. I invited him into my home. I told him I couldn't meet with him, he would have to come

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after hours, after -- at night. I invited him into my home and after listening to him and him showing me all of these papers, eventually I rose because I couldn't take it anymore, I said, Mike, you've been drinking. You know what he said to me? Yes, I did, and you had cabbage for supper. And I said, yeah, that's right, I did.

I would not sign these papers. I told him I would give the EPA or whoever was going to do this for looking for the bugs and digging the holes and all these things, I would give them permission to go on my property, but it would have to be when I was there, and I not knowing when they were going to do this, my hay might be ready to cut and they're out tromping that down, so I said, come knock on my door.

He called me again February the 20th. I told him, no, Mike, I'm not signing this. He said, I went and talked to your neighbor. I guess Mr. Burke was just mistaken, I don't think he was lying. Surely, he wasn't lying.

MR. FASANO: Please wrap it up, sir.

MR. LEE: He called again on March the 4th and I called another two neighbors. Neither one of them had heard from him and he said they had, he had

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talked to them and they had already signed papers. He called me again on March the 5th still trying to convince me to sign these papers. I told him, Mike, knock on my door or whoever's going to do this and then they can on my property. I still haven't seen anyone. December the 17th I received this package from Plains & Eastern Clean Line showing a map where they're going across my property. He didn't know where it was going is what he kept telling me.

MR. FASANO: I'm sorry, sir, we need to wrap up. Thank you.

MR. LEE: I pressed him when he told me he didn't know and he did produce a map and it's virtually the same map that I got in the mail. Thank you.

MR. FASANO: Thank you. Garland Farris and Dr. Elliott Hays.

MR. FARRIS: Good evening, I'm Garland Farris. I'm a property owner in Sequoyah County, a member of the Cherokee Nation and a veteran and I oppose Clean Line. Over 100 years ago my great-grandmother and my grandmother were allotted land by the Cherokee Nation that lies on the proposed Clean Line route. Over 50 years the land was consolidated and sold to others. 54 years ago

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my father was able to purchase the ancestral land and spend the rest of his life improving the land and then raised cattle to support his family.

After serving my country, I returned home to help my father maintain the land and keep up the high standards. With luck and hard work, my wife and I were able to improve the land and increase the land holdings. As the current transmission route shows, there will be three to four of these 150 foot plus towers crossing the length of my ancestral land. The construction of the power line goes through my ancestral land, but will desecrate land that was sacred to the Cherokee.

2|6

Our property has two historic routes that border it and cross it. On the south side is Old Military Road. This was a 19th century supply route from Fort Smith to Fort Gibson for the Cherokee and Indian Territory. 100 -- a few hundred yards north of Military Road is the Trail of Tears. This marks the last section that goes from east to west from Fort Smith to Gore which is now where the route falls and then it would turn north and go to Fort Gibson. The proposed Clean Line route puts the towers right on top of this sacred trail that would go from Vian, or basically Gore, straight across to

3|20

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about just north of Muldrow and then go up toward Alma.

The Cherokee Nation was removed from our ancestral land in Georgia and North Carolina by the United States government and forced on the Trail of Tears to the Indian territory. In this case, nearly -- this was early use of eminent domain by the federal government to take Cherokee land and give to private individuals. There was no gain in the Cherokee nation, just sorrow.

Clean Line Energy wants to get the Department of Energy involved in this project so eminent domain can be used to take our land. If this is the case, it repeats history when the federal government partners with in this case a private corporation to take the land that is important to the Cherokees and their history. Thank you. 4|4

MR. FASANO: Elliott Hays and Dick Ater.

DR. HAYS: I'm Elliott Hays from Van Buren. My father had the trading post near the mouth of the Arkansas River in the late 1800s and my grandfather and my wife's family lived in this area since the 1800s. I just -- when I got out of college, I didn't want to go anywhere else but this

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state of Arkansas, the beautiful, natural state of Arkansas and --

MR. FASANO: Step a little closer to the mic, please. Thank you.

DR. HAYS: There is evidence in numerous medical papers that have indicated that living in an electromagnetic field generated from high-voltage transmission lines causes a numerous type of disorders and that would be cancer, blood disorders, neurological disorders. And, you know, our body is made up of literally trillions of cells that are held together with electromagnetic energy and I think it's just common sense that if you expose it to a man-made, high-voltage generated electromagnetic field it's going to disrupt the physiology. And if that's not enough, these towers are proposed to be 20 stories high and when an aircraft is going to spray these defoliants or the poisons to kill the trees and the underbrush, those aircraft are going to be above 20 stories high and it's not going to fall just straight down where they want it. It's going to go wherever the wind blows and if it gets on your skin or if you inhale it, it is poison. 1|15

But I just -- I can't imagine destroying

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8,000 acres of the beautiful natural state of Arkansas, our home state, and trading it for some technology of transmission lines that's probably going to be obsolete in a short period of time and it's just unhealthy, it's ugly and I hope and pray that the Department of Energy listens to the public opinion which I believe I'm part of the majority that opposes this. Thank you. 2|34

MR. FASANO: Dick Ater and then Rick Holtsclaw.

MR. ATER: My name is Dick Ater and I'm another one of them Akins boys over here from Sequoyah County and for me this is a personal note. I live less than a quarter of a mile from the proposed route and as of when I left home a while ago, I've not heard one word from Clean Line about my property or the theft or anything about it and I would certainly think I would be eligible for that. I would have thought I would have been notified by phone, personal. I never even received a postcard or a Christmas card or anything from them. And it just looks like it's not the kind of people you want to go to bed with when they can't be anymore honest than they are. So next month my wife and I celebrate 50 years and I'm pretty sure if we had

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started our relationship like this we wouldn't be at that point. Thank you.

MR. FASANO: Rick Holtsclaw and Dan HorseChief.

MR. HOLTSCLAW: Hi, my name is Rick Holtsclaw. I'm almost afraid to tell you that I'm from Houston. I'm a retired Houston police officer, worked there 31 and a half years and a former marine. I moved up here, my wife and I did, seeking some peace and some solace and by God's great gift we found it. We found it in Uniontown. We've got some great neighbors, very proud to be their neighbors and I want to thank you for allowing me to stand up here tonight as a displaced Texan and I want to tell you that I'm very proud of each and every one of you.

As a Houston police officer, I have watched my governor, I watched my commander, I watched my police administrators tap and bow to the big money, to political pressure and all that goes along with political correctness. I thank each and every one of you for having the guts to stand up and say, no, we're not going to stand for it. What you're dealing with here is the same thing I dealt with in Houston with every criminal that I put in

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jail, everyone that I ever arrested, everyone that I warned whether I got in a shooting or whether I was just putting handcuffs on him, I was dealing with a bully and what you're dealing with here is a very wealthy bully. This bully went up north here around Rogers, Bentonville and he ran into big money and he says, well, I'm sorry, we'll go south. So he came down here and found some farmers and some ranchers and he said, this is not a problem, we'll just push our way right through here. Well, I think -- I think he ran into a rock hard spot here and I'm proud of you guys.

Uniontown is supposedly out of the loop. My property is most likely, not a guarantee, because of the problems is not going to be affected, but I want to let you know this Houston boy is standing with you and if there's anything I can do to stop this, I'll help you do it.

I'm asking -- I'm asking the DOE not to get weak-kneed, not to bow to big money and political pressure, but do what's right. I would just like to see some government official do what's right. I am tired of cowards, I am tired of liars, I'm tired of deceivers who look me in the face and stab me in the back. I'm so proud to stand with you

1|34

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guys.

As far as Clean Line is concerned, stay out of Arkansas because you're dealing with something that you have no idea who you're dealing with. And I'll end so I don't go over my minutes, not to bring up some 1860s blue and gray animosity, but if the Yanks want power, let them develop their own power and leave beautiful Arkansas alone.

1|34 cont.

MR. FASANO: Dan HorseChief and Rick Haglund.

MR. HORSECHIEF: I thank you for letting me come and talk with you guys. I'm a little under the weather, so I'll try to speak up.

MR. FASANO: A little closer to the mic, thanks.

MR. HORSECHIEF: Okay. You know, looking at me you probably wouldn't guess that I tested growing up the highest in my school's history in intelligence and aptitude and they said I could be anything I wanted so I became an artist. That's a joke, but that's what I am and I say that because I think everybody in here has been underestimated and maybe that's good because it seems like, you know, there's a big beehive stirring up and Clean Line has

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been taken by surprise. I think they moved too soon.

And what I want to tell about is my mother's property. She approached me one day and said that there is this wind-powered electrical line coming through and I thought, big deal. You know, we all have to give our part. You know, being a native, we need to give to the greater good of the community and we just need to buck up. And I knew nothing until I did my research and I started listening to other people and it was pretty disturbing what I found. And I wrote something, a comment immediately and sent it in and I just want to read it to you.

"There is a private business movement happening all across the country that is hard to explain as it is to understand. To put it simply, there are private businesses set up to take advantage of the momentum gained to make green energy a reality. The problem is they are not truly clean or green in their actual delivery and technology. They do, however, have misleading and self-serving names like Clean Line. Instead of meeting public needs safely and efficiently, these companies have rushed massive projects to the front

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of the line in an effort to cash in before other green energy companies with a more effective and safer approach can come forward.

It is also a rush to beat nonexisting regulations in this brand-new field and a means to cash in on the language written in the Department of Energy that would enable the department of our government to partnership with a private business of these types. Under that unheard of partnership with the DOE, a private merchant transmission line project for private profit like CL could override state blockages of eminent domain. It is a privately owned transmission line you're talking about and not a public utility line.

That section 1222 introduced in 2005 and materialized immediately after Jimmy Glotfelty stepped down as the Assistant Secretary in the Department of Energy in 2004 conveniently, therefore, cannot be officially traced to such a self-serving provision, but we all know such ideas do not appear overnight and take time to come into being. He became one of the founding members of Clean Line and wrote in its application for the ability to use Section 1222 primarily as a tool to condemn private lands for this project. 1|4C

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The problem is, it doesn't benefit the nation or the true concept of green energy and is basically a counterfeit conservational endeavor that has gained the backing of groups like the Sierra Club who have been misinformed by their PR representatives. It doesn't hurt also that anyone can pay a fee and join groups like the Sierra Club. At every level they are misinforming people as to their true intentions and disguising the limitations of their approach. They tell everyone" -- 1|4C

MR. FASANO: You need to wrap up, please. Thank you.

MR. HORSECHIEF: -- "This is the latest technology and the only way it can be done." Well, it's not. I mean, technology is coming forward each day and I have plenty more to say, but I just wanted to touch on one thing that the nice, old lady in the red jacket mentioned the revolution and other people as well. I'm sorry. And most people don't realize, it's unfortunate and most adults don't realize it, the revolution was flawed because we wanted to kick corporations out of government and that was one of the first moves this country made and here it is 200 years later, we've become what we fought against and this is a direct result of that. So look at the big

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picture and the small picture and I stress the DOE to consider that, too, because there's going to be trouble on down the line if this goes through. There's going to be lawsuits and all sorts of trouble and just think about that. Thank you. 2|34

MR. FASANO: Did you want -- did you submit that already? Did you want to submit that?

Okay. Rick Haglund and Jennifer Keller. Rick didn't hang in there, Rick Haglund? Okay. Jennifer Keller.

MS. KELLER: Hi, my name is Jennifer Keller and I ask the Department of Energy to not participate in this project. My husband and I own land in both Crawford and Franklin counties in Arkansas. My husband and I chose Arkansas to raise our family even after living in the luxurious Dallas, Texas and just miles off the beach in Camarillo, California, so we have spent the last 16 and a half years investing in land in this state. We pay taxes in this state without the possibility of any tax credits based on going green. We actually pay taxes on 558 acres in the state and we started from nothing. We're also small business owners. We are in the path of the proposed line and since we try to be environmentally responsible, we 1|34

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were not automatically opposed to this project. However, after reviewing the propaganda from Clean Line and comparing that to the documents filed with the federal government, independent environmental studies and documentation from other states involved, it became apparent that this company had no interest in providing energy long term for the greater good. The company is solely interested in a quick return on investment at the expense of anyone in their path.

And if I could give a little quick shout out for Sequoyah County Times, they were the ones that actually drew up the graphic that's to scale, so while I make this reference to this quote that they put in their news article made by the president of Clean Line, Michael Skelly, he was stating, "There's going to be a lot of money for the landowners." Well, past history, I did take history classes and I actually do have a degree, too, past history in regards to the execution of eminent domain has proven that landowners are not compensated with a lot of money. They are compensated at present value with no, absolutely no compensation for the future value. 2|4

And at the beginning of my discussion I

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talked about the investment that we have made in the state. As small business owners, we don't have 401Ks, we don't have built-in retirement plans, that was our retirement plan. It may take an act of Congress to stop this, but we're working on it. 1|34 cont.

MR. FASANO: You need to wrap up.

MS. KELLER: I think it's time that every person here just contacts five people that you know that are friends that may not know about this project, tell them and tell yourself to make it a point, contact every senator because there is a proposed bill. Do not allow Clean Line to have their rubber stamp approval for this project. 1|34 cont.

MR. FASANO: Thank you. Okay. We have ten speakers left. I'm just checking with the poor court reporter. She's been going at it full bore over there. I want to make sure she's okay. She says she'll hang in there.

Brad Hall and Thelma Augustine.

MR. BRAD HALL: I will make this pretty quick. My wife and everybody else has said just about everything I think that is possible to say about this project and I would like to thank all of you all for coming tonight and voicing your opinions. I know we had a lot of friends that came

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that are not affected. You know, they just wanted to show support for the people that was and that means a lot to us.

My name is Brad Hall and I'm from Crawford County and last night -- I go with my wife to these things, you know, and I go out and I talk to the Clean Line folks and I was talking to this lady and she was sitting there while everybody was telling their story, you know, up here and she had her head down and I said, what are you doing, what are you all writing all this stuff down, what is all this? And she said, well, we're listening. I said, you're listening? Yeah. To make a long story short, I had asked her another question and she said, well, I'm just listening. I said, okay. Well, I asked her again. She said, well, I'm just listening. I said, well, ma'am, what is the most moving story you've heard here tonight? And she goes, well, I'll have to read the transcripts. So she didn't listen at all.

But my friend, Daron, over there, we grew up in the same area and we have seen the ivory-billed woodpecker. That was great. We have seen it and this would destroy its habitat. It runs right across Lee Creek and it would be detrimental 1|25

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to that bird. 1|25 cont.

Also, I told it last night, my wife said she liked this, anyway, I was talking about it and I said, you know, if you took the wallet out of one of these guys' pocket out here that's wearing white shirts, they would call the police department and have you arrested and thrown in jail, but they want to steal our money and our heritage and that's just not right. 2|34

And one last thing, I know you're ready to get out of here, but everybody has seen Chevy Chase's Christmas Vacation. And is there a -- out here anywhere because one last Christmas present, late Christmas present I'd like to have would be Michael Skelly brought here tonight with nothing, out of his house, his warm living room wearing a big, red bow so we could tell him what a sorry, low-life piece of mud monkey you-know-what he is.

MR. FASANO: Thelma Augustine and Gail Cullens.

MS. CULLENS: Hi, my name is Gail Cullens and I'm also going to make a comment for my mom, Thelma Augustine. She currently has 110 acres that she's leasing out for cattle and that is part of her income. This line is going to go straight across 70

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of it, right down the center of it. She has got ponds on there and she has a well on her property for drinking and she's really concerned about the blasting, what it's going to do to her well water, her drinking water and the ponds and who's going to lease land from her with no ponds and with these large electric lines coming across. It's going to directly affect her pocketbook. 1|8 2|6

I was able to go to the Stillwater meeting and I did make some of my comments up there about -- for Oklahoma, the tax credits that we are going to spend on this and the actual jobs as compared to what Clean Line is stating. But something that is has caught my attention, I was reading through the Oklahoma Corporation Commission and when they gave them the public utility status transmission line, they had certain things that they needed to do with this order. Every six months they had to give them an update and in the update were like eight points including the number of jobs, different things that they wanted to know what was going on. 60 days after they were given the utility status, they were supposed to come up with an abandonment and decommissioning program plan. I could not find anywhere where this was, so I called the Public 3|37

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Utility Department two weeks ago asking for this. I haven't gotten a return call, I don't have anything. I don't know if there is such a thing as an abandonment and decommissioning. And the reason I'm concerned about that is if they do start this project and it doesn't go through or technology goes way above it and stops, who's going to pay for these things to come down? 3|37

There is a project up in the northeast and those wind farms didn't even start producing. National Grid pulled the finance and they pulled it because they said it took too long. Is not National Grid one of these that's involved in investing in this? So where does that leave us? 4|36

I have ten acres that overlooks that 70 acres. It is a beautiful view. I'll stand on the deck eyeball to eyeball with these towers. I don't appreciate that either. I do appreciate everybody coming here and I want to applaud everybody for standing up for our rights. And like the gentleman said earlier, if it's that important to the Department of Energy, then place it across federal lands. Thank you. 5|29 6|11

MR. FASANO: Ma'am, that was a combined Thelma and Gail, right? Thank you.

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Karen Long and Don Oft.

MS. LONG: My name is Karen Long and I'm from Sallisaw. I'm one of the owners that's in the yellow, bold line that has Clean Line going directly across their land. I am concerned about the water. We -- as everybody knows, Oklahoma has droughts and the only big pond that we have that can survive our droughts is across the line. If they're doing maintenance, if they're doing anything with that, we can't put our cattle over there. I am concerned about the water.

The blasting that was talked about earlier, if you go across -- these lines are going 1|18 to go all the way across Oklahoma, all the way across Arkansas. They're going to be blasting every quarter of a mile. The drinking aquifers of Oklahoma, some of them are less than 100 feet down from the surface. We don't know what kind of effects this kind of blasting across two different states is going to cause to the drinking water that we have for almost all of the residents.

There is just one last thing I wanted to say and that is to a comment that was made by a Clean Line representative in a newspaper. They said that the landowners were confused and uninformed and

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I've got news for them, we are not confused, we are not uninformed and if you go on any of the Bloglines, any of the Facebook Bloglines, you'll see a wealth of information of exactly how informed we really are.

MR. FASANO: Thank you. Don Oft and Travis Warren.

MR. OFT: Hi, my name is Don Oft. I'm from Sallisaw, just north of Sallisaw. I'm glad to see everyone fighting Clean Line here today from Arkansas. Oklahoma is with you.

I enlisted in the Army in 1966, served for three years. I cannot believe what's happening. I cannot believe what's happened in this country. People are talking out of both sides of their mouth. Clean Line will say one thing, then if you read the fine print they say another thing. Health, it's not going to hurt you, and then there's a lady up here that started reading the fine print. It wasn't substantiated what would really happen. And another lady talks about, has a medical background, about the electrical and magnetic input that's going to affect you.

Who does this line benefit? Does it 1|1 benefit Arkansas? No. Does it benefit Oklahoma?

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No. It benefits who? The money people, the people that want to do it for profit. This is coming through our land, our property, our state. We should have a say. Why would the Department of Energy want to partner with a private company to give them the right of eminent domain to take away your land, my land, for their profit? Why would the Department of Energy want to use that section 1222? If you want to stop this, you tell the Department of Energy not to partner with Clean Line, then it's stopped. Without 1222, they do not have the right of eminent domain, so efforts should be put forth on stopping the Department of Energy from partnering with eminent domain. 1|1 cont. 2|4

They don't care about me and my story and what happens on my land. I can tell them how it's going to affect me, how it's going to affect my property, how it's going to affect my wife, my daughter. They don't care. Focus your energy on the Department of Energy, all right?

Property values, it's a bunch of hooey that it's not going to affect your property values. We all know that. Who's it going to benefit? It's going to benefit the money people. Is it going to Arkansas, Oklahoma? No. 3|6

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I get a kick out when they say tell me about history. Look up here, it says they want to know about adverse impacts to historic properties for the proposed property. What about the Cherokee Nation? My property is on the Old Military Road north of Sallisaw. Daron's property, he's a neighbor of mine, his is just next to mine. Steve's property is in that area.

MR. FASANO: Please wrap up, sir. Thank you.

MR. OFT: Clean Line runs right straight down the Cherokee Nation Trail of Tears. Why do we have to tell them that? Who does it benefit? The money people. I'm getting tired of this. Stand up, fight, go to the Department of Energy, tell them not to partner with Clean Line. I don't want it rerouted, I want it stopped. Do everything you can to stop this. Don't give up. Talk, contact the politicians, contact the Department of Energy. 4|34

I see you over there, I'll be there in a minute. Okay.

MR. FASANO: Thank you.

MR. OFT: We're ready to stop this, do you understand? Stop Clean Line. 4|34 cont.

MR. FASANO: Thank you. Travis Warren and

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Linda Halmes.

MR. WARREN: My name is Travis Warren. I operate a service company for oil and gas projects as well as wind and solar projects. The key element for what I do is moving those resources. With oil and gas, of course, you're dealing with pipelines, you're dealing with the trucking industries and interstate highways.

MR. FASANO: A little closer, please.

MR. WARREN: As well, you're dealing with the railroad. With wind and solar, the only option you have is electrical power. The only option to get that resource out is through transmission lines. Are they pretty? No. I don't think anybody here would argue that they are. The problem we have is that we're at a crossroads. You have on one end yourself and this is a heritage for you, this is your heart, this is your life, your children, your generations past and generations to come. On the other hand, it's a project and there's nothing anybody can say to change that. This is just like you said, for Clean Line it's a project, for you it's your heritage.

The problem with all of this is, of course, is that as Americans we are interdependent.

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We move resources from every state all over the country because no state is self-sufficient. We bring products from the northeast to the south from the south to the northwest. What we're trying to do in this situation is move a product from the midwest to the East Coast. Unfortunately, that goes through your heritage, and I understand that.

I deal with it on every project that I have and there's nothing that can change that. There's no dollar figure you can put on that. But we are interdependent. Arkansas Electric Co-op has four coal power plants, all of which bring coal from Wyoming and cross two states to get here. They have six natural gas plants. Natural gas pipelines are crisscrossed and spiderweb throughout the country and nobody knows where the gas comes from. They had two power purchase agreements, one for a wind project in Kansas and one from south-central Oklahoma. The lines to bring in that power do not benefit the counties in Oklahoma or Kansas that they cross.

I don't stand here to say give up your rights, but working these projects and understanding the interdependence that we have, I just ask that you give them a shot, let them talk and do their

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best --

MR. FASANO: Respect, the time is not up yet. Respect, please.

MR. WARREN: Let them -- hear them out and see what they can offer. 1|35

MR. FASANO: Now it's up. Thank you. Have some respect, please. Everyone has listened closely to everybody tonight. Thank you.

Linda Halmes and Tim Culver, please.

MS. HALMES: My name is Linda Halmes. I live at 7809 Highway 352, Ozark in Franklin County. I have a nice, tidy little summary made up, but I want to say something before I read this. It really upset me when I heard that Clean Line had said that landowners are confused and uninformed. I would like to tell you a true story to let you know about how informed we are. Several weeks ago it came out in the Ozark Spectator that our land had been sold. This doesn't have anything to do with Clean Line, but my husband read it and said they sold our land. He said it has our section, township and range on it. So -- you know, so we go to the courthouse, they give us our deeds. We take them to the office that prepared the deeds and my husband said this is our land description. It's our land that has been

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sold. Okay. So they looked it up. They all had this funny look on their face. How could this have happened? They said this land was surveyed and my husband said that is my land description, I know that's my land. They looked it up and it was a typographical error. If we had not known that, 20 years from now our families would not have known what to think, so I don't think we can be classified as uninformed.

And another thing I didn't intend to bring up tonight until I heard some of these other comments, the maps are old and we brought that to their attention and their excuse was that they got them from the state and that was the latest that they could get, so I would think that with a project of this nature that you should be able to have up to date maps and you should be a little bit more familiar with the area that you're working with before you take the land away. So now I'm going to read. 1|8

Our farm is located eight miles northeast of Ozark in a beautiful valley with what we call White Oak Mountain to the north. Both sides of our families have lived in this valley for years. My husband and I are fourth-generation farmers and our

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grandson is a sixth-generation farmer. The sentimental value of our land is huge. There's no way we could put a price on it, but we have been told by our lawyer to approach the proposed taking of our land for a transmission line as a business matter. Now, that business is farming. Now, I'm not a farmer, but I am married to the farmer. So we have a cow-calf operation as well as a feeder cattle operation.

MR. FASANO: Please summarize, ma'am. Thank you.

MS. HALMES: Okay. The proposed line would go through three owned or leased properties by us. At the present time, we have 430 head of cattle on these plots. It would be a major inconvenience to relocate all these cattle during the construction of this line that would go through the farms. It would cost Clean Line a fortune, not us, because we have to recover those costs to have to rearrange our operation to make concessions for this line to go through right down the middle of these farms, our business. We want to continue the farming practices in our own way and not be controlled by a for-profit corporation owned by billionaires.

And in the study it said no widespread

2|6

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major impacts, it will be. It might not be for Clean Line, but it will be for us, the landowners. And also it said it would only be a temporary disturbance of active agricultural lands and operations. And again, we have to disagree with that because the impact it will have on our farm will be a lifelong effect.

3|13

MR. FASANO: Thank you. Tim Culver and Philip Merry.

MR. CULVER: Good evening. I'll be very brief, I hope. I will tip my hat to Clean Line on one thing, that I've never seen so many folks with OU Sooner gear and Razorback gear come together for one cause. I appreciate that.

I've been to several of these. This is the fifth meeting I've been to. I tip my hat to Mr. Harry, Dr. Broadfoot, Ms. Millsaps; they've done a lot of the things, a lot of the heavy lifting in this affair. I'm kind of a bystander, kind of sit on the sidelines. I don't intend to do so. I intend to be more informed. I had a list of clever things maybe to say, maybe call these folks back here some white-shirted lackeys out of Houston, but I'm not going to do that. I didn't say that. I didn't say that.

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But seriously, this is a great thing coming together like this. I can tell you my viewpoint that I have a wonderful view, that it won't go directly over my land. Ms. Halmes' son-in-law, it does go across their land in three places. I have a wonderful view out my back door that will be affected from now on. 1|29

But to echo Mr. Holtsclaw, I work at a school now. I'm retired from my previous job and what I deal with a lot is bullies and we try to teach kids to practice conflict resolution. Our conflict resolver in this matter should be the Department of Energy and so far they have failed us, I believe. Hopefully, the Department of Energy will step up and do the right thing ultimately. If not, we need to stay after our senators and representatives in Washington. Senator Cotton and Senator Bozeman got on board. Senator Cotton got on board after the election I might note. He wasn't very inspired before the election, but anyway, hopefully they'll do the right thing. Thank you very much for letting me speak and keep up the good work everyone. Thank you.

MR. FASANO: Philip Merry and Roy McCann.

MR. MERRY: My name is Philip Merry. I'm

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a business owner in the City of Fort Smith, Arkansas and I'm a member of the Arkansas Advanced Energy Association referred to as AAEA. I thank you for this opportunity to comment on behalf of the AAEA's support of the proposed Plains & Eastern Clean Line project. 1|35

AAEA is a business trade association of diverse and innovative companies that are dedicated to helping our state create more jobs in this emerging business sector. Today AAEA represents an industry that includes nearly 800 companies and employs more than 25,000 Arkansans as of 2014 according to a recent study.

We support the Plains & Eastern Clean Line because it represents a half-billion dollar investment in the state of Arkansas, will generate hundreds of jobs in our state and provide at least 500 megawatts of low-cost, clean energy to Arkansas electric customers. 1|35 cont.

The Plains & Eastern Clean Line is a classic example of how America can modernize an aging electrical system to accommodate a growing diversity of energy resources. While the U.S. has some of the best renewable resources in the world, the transmission infrastructure does not yet exist 2|1

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to connect the bulk of these resources which are located predominantly in remote areas to distant load centers. 2|1 cont.

The Plains & Eastern Clean Line delivers wind power produced in the Oklahoma Panhandle region to the utilities and customers in Arkansas, Tennessee and other markets in the mid-south and southeast areas that lack access to low-cost, renewable power. The increased power density of Clean Line's high-voltage DC transmission lines allows them to carry the same amount of energy as AC lines while using narrower rights-of-way and fewer towers which reduces land requirements and should simplify siting considerations.

Importantly for AAEA's consideration, the Plains & Eastern Clean Line will provide a host of economic benefits to Arkansas. The developer will invest a half-billion in Arkansas during and after the construction. Clean Line has proposed an investment of $100 million in Russellville to establish an intermediate converter station in central Arkansas that would allow for interconnection of up to 500 megawatts of new wind capacity to the Entergy Arkansas network, nearly doubling the amount of wind energy currently 3|24

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purchased in the state. Increased market competition benefits electrical consumers. As the prospect of further coal retirements loom, it is critical that utilities have access to the lowest cost resources in order to keep their rates down. Wind power offers utilities in our region --

MR. FASANO: Please wrap up.

MR. MERRY: I'm almost done. Okay. Reliable low-cost energy. 400 manufacturing jobs, 150 million in Russellville. I would like to share with you that the -- 1|35 cont.

MR. FASANO: Respect please.

MR. MERRY: I just want to say I'm proud to be an American because we get to have differences of opinion and you have been nice while I shared this point of view.

MR. FASANO: Sir, continue with your comments.

MR. MERRY: Do what?

MR. FASANO: Continue with your comments or finish up.

MR. MERRY: Okay. I appreciate speaking for Arkansas.

MR. FASANO: I ask for respect and courtesy. Every one listened to you folks. I ask

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for courtesy, please extend it.

Roy McCann, please.

MR. MCCANN: Good afternoon -- good evening everyone. My name is Roy McCann and I am a professor at the University of Arkansas and I'm a resident in Fayetteville and I do not own property adjacent to the proposed transmission line site. I would just like to make a few comments for public awareness.

I would like to mention that renewable energy from wind and solar will increase in generation capacity in the future. There will be an additional need for transmission capacity to be installed in the Oklahoma and Arkansas region. My area of expertise is researching the power flows grid modernization in the United States. The increase of renewable energy and the transmission lines that will be needed to transport that will benefit not just the load centers and the wind generation because the way that electricity flows, it benefits all of the regions that are connected and that impacts industry, jobs and economic development. 1|1

From a technology point of view, the proposed high-voltage DC technology is the best 2|35

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solution for transporting electric power with minimized environmental impact in the right-of-way areas. And I understand the personal impact. I recognize the impact of landowners and that it's a very personal aspect to where you live. If the HVDC technology is not used at this time, it is uncertain what transmission configuration will be used in the future when there's the inevitable need for transmission expansion. 2|35 cont. 1|1 cont.

I would like to add that landowners have valid concerns for property values and eminent domain is important, that property rights be respected and that fair and equitable compensation be provided for those affected in the Clean Line project. 3|6

MR. FASANO: Thank you. The last speaker is a gentleman who would like to read a brief resolution into the record. Please state your name.

MAYOR BAXTER: I asked to speak last and I was actually up front, but I'm Mayor Gary Baxter from the City of Mulberry and last night our city did write a resolution and I did express the sentiment of the majority of people here tonight so I want to read this resolution. If you would like to stand, since I'm last that would be great. This

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is resolution number 2015-04. "A resolution addressing the eastern Clean Line" --

MR. FASANO: A little slower, please.

MAYOR BAXTER: -- "Transmission project request to operate as a public utility in Arkansas. Whereas, Clean Line Energy Partners, LLC has submitted to the United States Department of Energy an application for its Plains & Eastern Clean Line transmission project to construct and operate a transmission line throughout various states, including Arkansas; and

Whereas, the project will not provide energy to the citizens of this state or benefit consumers of energy within this state; and

Whereas, the proposed transmission line would pass through numerous Arkansas cities, including the City of Mulberry and will potentially have detrimental impacts on the economic development, aesthetic value, and on the property of landowners in these areas; and

Whereas, the United States Department of Energy should not approve the application of Clean Line Energy Partners, LLC or its Plains & Eastern Clean Line transmission project unless it identifies clear and substantial benefits to the State of

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Arkansas that exceed any detrimental impacts caused by the project;

Now therefore, be it resolved by the city council of the City of Mulberry, Arkansas:

Section 1: That the City of Mulberry encourages the United States Department of Energy to carefully consider the application of Clean Line Energy Partners, LLC or its Plains & Eastern Clean Line transmission project and urges the United States Department of Energy to not approve the application unless it identifies clear and substantial benefits to the State of Arkansas and the City of Mulberry that exceed any detrimental impacts caused by the project."

Passed and approved this 17th day of February, 2015. Approved, signed by Gary D. Baxter, Mayor and attested by Jerry Dickerson, Recorder-Treasurer. And this is from 1,655 residents of the city of Mulberry. Thank you very much.

MR. FASANO: I bet you're happy he let me end with that, let him come up here and do that. Thank you once again for your participation and your comments. I understand the passionate viewpoints here on this issue and I thank you for helping me

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with my role this evening, especially with the time limits. So please remember that you can continue to submit comments on this EIS through April 20th. This public hearing is adjourned at 8:57 p.m. Thank you again.

UNKNOWN CONCERNED CITIZEN: First of all, thank you. I know this is beyond the service that you provide and I appreciate it, okay?

DR. SUMMERSON: That's okay.

UNKNOWN CONCERNED CITIZEN: But if there's any way that the DOE can stop this, I think it would be a good idea because I don't see any benefit for Arkansas, I really don't. I know it won't benefit me personally. The property that I bought to retire on to be next to my daughter won't be usable anymore because it wasn't used for anything but to build a house. It was just a big ravine. I paid more for it than it was worth. It wasn't for sale, but I wanted it, so I talked to the man and paid more than it was worth. I will never get that back and I don't want to make any money on it. I just don't want to sell the property. It would affect my daughter, I believe. I know it would affect the value of her property and she won't be reimbursed anything. My neighbor has got three little boys.

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Everybody I talk to, and I've been to all the meetings I could go to, nobody wants it, nobody sees the need for it.

Now, do I believe in clean energy, I really do. Do I think it's causing global warming, I don't know, but if it is, it should be changed. If everybody who thinks that would drop their thermostat five degrees in the winter and raise it five degrees in the summer, we wouldn't have it. This line is a drop in the bucket compared to that. That would affect everybody.

What they're doing now, the people that want it is the people it doesn't affect. Like I said, I don't think it's good for me, my family, my county. Everybody I talk to in the county, all they see is a big ugly line. Will it increase tax money, maybe, I don't know. But is it worth cutting across the county, cutting down all the trees?

You know, one of the Clean Line people I talked to, he said, well, you people are the hardest headed I ever saw. We're going to offer you a fair amount of money for your property. It's not about the money, that's what I told him. I appreciate you wanting to be fair, even though it's not fair, because they can make a profit on it and we can't.

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But like I said, it's not about the money.
How many jobs is it going to create? Clean Line told me at first it would create thousands and then later they said hundreds. Permanent job was hundreds and then they told me it would be 27. I think that came out in your report. But how many jobs does eliminate? I mean, right now somebody is producing that electricity and people is 2|24 working to make it, so if they get it somewhere else, they're going to lose those jobs. And I don't know, is it wash? Is it one job, is it two? I don't know. And the environment, I don't see how cutting down that many thousands of acres of trees is really going to improve anything.
Now, you people are smarter than I am. I went to the library. I thought, well, 3,700 pages, I'll try to thumb through it and understand it. I couldn't even understand the summary. You know, I've had two years of college. I'm not a genius, I'm not a doctor and I don't mean that negative, my son is, so I believe in education, but I could have ten months -- I think it took them two years to write it with the lawyers. I wish I could say I trust the federal government enough to do the right thing and there was a part of my life I could, but

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I'm beginning to wonder.
I know you can't answer that, nobody can. If somebody could just tell me the benefits. I let Cedarville city water run a property line through my property. They said, well, we'll pay you for it. No, they needed the water. It ain't going to hurt me to put a little piece on my property. My neighbor next door needed a water line. I already had it run under the road. Tie on to it, you need the water. Another neighbor needed a gas line. Well, I've got room in the front of the property, run a gas line. I'm not trying to be hard headed. I don't want people to go without.
This ain't going to give anybody electricity that doesn't already have it. Or if it is, Clean Line can't tell me that. What they told me was that it was clean. I said, well, what do you mean by clean? They said it doesn't cost -- it doesn't take as much to produce it, as much carbon emissions. And I believe they might be right. I don't know. But is there anything we can do now with what we've already got? Can we update our 3|11 natural gas plants and clean them up, can we cut down on the amount we use? Can we do something that's going to affect everybody?

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I talked to them about running across the federal land. You know what they told me, we can't do that, that belongs to everybody. And they're right, it does, but who is it going to benefit? I don't understand, I just don't. I know you can't answer the questions. I feel better getting it off my chest and that's all I can do. Thank you.

(HEARING CONCLUDED AT 8:57 P.M.)

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C E R T I F I C A T E

STATE OF ARKANSAS)
) SS:
COUNTY OF WASHINGTON)

I, Kerri Pianalto, Certified Court Reporter within and for the State of Arkansas, do hereby certify that the above PUBLIC HEARING was by me taken and transcribed pursuant to agreement; and that I am not an attorney for nor relative of any of said parties or otherwise interested in the event of said action.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 24th day of February, 2015.

KERRI PIANALTO, CCR
State of Arkansas, No. 651

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PLAINS & EASTERN CLEAN LINE TRANSMISSION PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

_____

TRANSCRIPTION OF PUBLIC HEARING
TAKEN AT THE U OF A COMMUNITY COLLEGE
ON FEBRUARY 19, 2015, BEGINNING AT 5:00
IN MORRILTON, ARKANSAS

REPORTED BY KERRI PIANALTO, CCR

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MR. FASANO: This portion of our meeting is officially designated as a Public Hearing for the Plains & Eastern Clean Line Transmission Project Draft Environmental Impact Statement. This meeting is being held on February 19, 2015 in the Fine Arts Building Auditorium at the University of Arkansas Community College in Morrilton, Arkansas. It is being held to receive comments on the Draft EIS.

We are commencing the public comment period of this meeting at 6:34 p.m. and are scheduled to adjourn once all participants have had a chance to make their comments. Each speaker will have three minutes. If time permits, we will try to provide flexibility in the amount of time allotted based on the number of speakers that have registered; however, please be concise.

This meeting was preceded by a presentation by DOE EIS document manager, Dr. Jane Summerson. Dr. Summerson will represent the DOE in listening to and accepting your comments. There will be no interactive dialogue so that an uninterrupted record of comments may be obtained.

My name is Greg Fasano. I have been asked by the DOE to conduct this comment period as a neutral moderator. I will ensure that the ground

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rules reviewed earlier in the evening are followed.

The court reporter's task is to create a complete and accurate transcription of this meeting. The verbatim transcript of oral comments received tonight will be included in the DOE's record of these proceedings.

Okay. The first two speakers are Dowell Evans and Cynthea Callahan. Please get fairly close to the mic so it's clear.

MR. EVANS: Thank you very much. My name is Dowell Evans. We are from Little Rock, Arkansas, a small place in Little Rock. We have a small business in Little Rock, Arkansas and we come tonight to say a few comments about the project, that we are small and we're trying to get business with industry and we think that it would be a nice thing for this project to be done here and to create jobs and for us to -- a very small business, we're very, very small and for us to even be here right now is having an impact on us as a small company. But on that note, as I was thinking about coming here and all the landowners and other people that were going to be here and I just thought about how important this is to you and to everyone that's here. And I thought about how great of a nation

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that we are in that we can have this kind of forum so people can come in and trust people of this nature to make decisions for us with good, sound information that will benefit us all. I just can't help but think about that and all of us in here are beneficiaries of this great nation and people making decisions.

Now, I thought about this and I think I'm just going to say this and be done maybe about the Declaration of Independence. How someone had to make decisions that sometimes it's not going to be all happy on both ends of the street, it's not going to come out good for everybody, not going to be happy about it, but it would be for the betterment of us all that decisions are made and can be made and I just thought about that and it's so wonderful to see all these landowners here and all the DOE and all these different functions and Clean Line and all of these things are going on in this great nation and for us to have this kind of opportunity. This is so great and I really thank you so much for being able to come and talk to this great assembly of Americans and hopefully that the DOE will take this information that you received from all of the people that are involved and make a decision that would

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benefit every last person in this auditorium tonight. Thank you very much.

MR. FASANO: Thank you. The next speaker is Cynthea Callahan followed by David Stephens.

MS. CALLAHAN: Thank you. I have a bunch of issues here just with the EIS in particular in no particular order. One concern is the sound out in the country of 30 decibels. It's a quiet country sound they say and people come to my house and remark how quiet it is. These lines are going to create noise in the 35, 40, 55 decibel range according to the EIS. That is two to four times louder than the background noise. Sound travels in a lot of different ways. I teach physics and chemistry. I'm not going to explain how that works, but it does, it can be amplified. 1|22

Health concerns have been dismissed in the EIS, in my opinion, using old data. Even the World Health Organization considers high-voltage lines a Class 2 carcinogenic. EIS does say people with pacemakers could experience fatal events, yet again, they go, no significant impact. You cannot say there's no risk, you cannot say it's perfectly safe. There is reason for caution. We also said asbestos was wonderful. We said a lot of things were safe in 2|15

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the past that we learned otherwise.

Residential property values are cited to be devalued at about one percent according to the EIS. Again, this is old data and it's urban data, not rural. We're talking about rural Arkansas here where the value of property is largely in the view for most of the properties on this route. The devaluation will be more like 30 percent. Stay away from residences and a lot of these problems would go away. 3|6

What about the bees? The bees are not being dealt with. There's beekeepers near or around the route and we're already having studies coming in indicating that there's problems with those kinds of things and the bees. We need bees. 4|31

The EIS says that the poor are not disproportionately affected. Using numbers from the EIS to calculate the amount of property value loss by those people on and near the route, because you don't have to be on the route to have your property devalued by it, in the country if you can see it or hear it, your property values are going to decrease. Up to $800 million in property loss will be borne by the people of Arkansas and Oklahoma and in Arkansas the average median income in rural Arkansas is 5|24

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$33,000 a year. Don't tell me the poor are not going to be disproportionately impacted.

720 miles of clearcutting and poisoning, that's green, right? Yeah, that's green.

MR. FASANO: Please wrap up.

MS. CALLAHAN: We can do better. We can do better, there are better ways. Burying the line was dismissed in the EIS. It needs independent research, not the testimony of a Clean Line executive which is cited in the EIS as to why they cannot bury it. IEEE says you can, you could use existing power line right-of-ways. It's been said well over 500 kilovolts, that's the max, so what? Take the line down to 500 kilovolts if you need to and bury part of it, if not all of it. 6|10

Connected actions in the EIS 40 mile radius is inadequate. Michael Skelly said 3,000 turbines would be needed in Kansas, which isn't in the EIS, Oklahoma and Tennessee to the tune of about 1,500 square miles. 7|12

MR. FASANO: You need to wrap up, please.

MS. CALLAHAN: Got tired of reading pages and pages of numbers about economic impact by people using hotels and restaurants and only a paragraph or two about the socioeconomic impact on people.

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Cultural impact to rural America is not addressed, lives and livelihoods are going to be affected and changed forever. Urbanites can just move across town, that's not how it works around here. We have generational landownership, land is our investment, it is our wealth, it's not in the bank. 8|24

Clean Line doesn't want to buy easements, they want --

MR. FASANO: Please wrap up.

MS. CALLAHAN: -- the authority to take them with federal eminent domain. 9|6

MR. FASANO: Please respect the time limits.

MS. CALLAHAN: I have one more line and then I'm done.

MR. FASANO: Okay. Thank you.

MS. CALLAHAN: Jobs, jobs, jobs, thousands of jobs. Not according to the EIS. Read it. 50 permanent jobs maybe in Arkansas. 50, not 1,000. 10|24

MR. FASANO: Thank you. David Stephens followed by Ron Hairston.

MR. STEPHENS: Thank you for coming out this evening. My name is David Stephens. I'm with the International Brotherhood of Electrical Workers and I'm in favor of this project moving forward. I 1|24

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represent construction workers that would be doing this type of work whether it be the linemen, ground installing the transmission lines or whether it be the inside electricians down in Malvern and General Cable that are retooling the lines, installing machinery to do this type of project. Some say these are temporary jobs, but this construction -- in construction work, all jobs are temporary and a two-year temporary job is a pretty good job in what we do for a living. 1|24 cont.

I live in Guy in North Faulkner County. I also own property in Conway County. I received several notices about the project at my home because I'm very close to one of the alternate routes. I attended the first public meeting on this project that I went to was over two years ago in Greenbrier, so they done a pretty good job of, Department of Energy and Clean Line, notifying about public meetings so we can get together and talk about the project and see what the issues are in my area. 2|2C

There's definitely some concerns about the property. It's my hopes that through this process that we're going through right now affected landowners will be compensated to their satisfaction and if they're not able to be, that there will be 3|6

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offered an alternate route taken. I know if it crosses my land up there where I live, I farm and there's a structure on my property, I'm going to take the check and put it in the bank and I'm going to buy me a John Deere tractor and I'm going to keep on farming. So I hope we can go through this process, find a way to make it work out for everyone involved and I appreciate your time.

MR. FASANO: Thank you. Ron Hairston followed by Gordon Millsaps.

MR. HAIRSTON: Hello, my name is Ron Hairston and I live in Clarksville, Arkansas. I'm a retired electrical engineer with 35 years of experience in the energy industry. I rely on as many facts and numbers as I can assemble to lead me to conclusions.

I deeply care, like all of us here I think, about the environment and support clean energy initiatives. I believe it's in our national interest and that mankind has been given a sacred trust to care for this planet. My proposal this evening, however, may create some controversy, but my hope is that any angst stirred up will also stir our thoughts leading to a broader understanding of the issues we face and appreciation of what may be a

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greater truth.

Let's first establish the fact, you've already heard some of this, Clean Line will upturn many lives in its wake. There may be $100 million or more of uncompensated financial loss, that's uncompensated, borne by the property owners. For example, corona noise which you heard about has the ability to completely destroy the value of a home because no buyer will make an offer once he hears the constant hissing and crackling of noise emanating from the overhead wires. 1|6

Now, let's make an argument that Clean Line should cross federal lands wherever possible to minimize financial upheaval in the lives of private citizens. The land taken by the right-of-way could be leased by the government. The rate establishment could be based on a fixed dollar amount or on the quantity or value of kilowatt hours transported or a combination of these. 2|11

So what would the benefits be? The lease income generated would be returned to the affected government agency to be used for maintaining and creating new recreational areas. The small amount of timber removed in the narrow right-of-way could be sold and used in a like manner. The right-of-way

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and access roads created during construction would have value as fire breaks and could provide additional access, access for campers and others. Agencies such as the U.S. Forest Service could better -- would be better able to provide oversight of environmental issues such as the spraying of chemical herbicides than private landowners would be. And the cost to establish and transport the energy would be lower because leasing the land from the government reduces upfront capital investment requirements by Clean Line improving its financial model.

We should expect the government to welcome construction on public lands because, after all, the EIS does describe and Clean Line does advertise just how clean the project is. Furthermore, this proposal creates three winners, the public, private industry and the federal government.

Let me ask you this question. What is the difference between private and public forested areas as it pertains to the preservation of wildlife and other natural resources? After all, much of the private land currently in the path of Clean Line is a virtual extension of forested government land. My land has owls and bats that are likely -- are likely

2|11 cont.

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one or more of four endangered species may be among them. Drainage from my land affects streams in a nearby lake.

In conclusion, we must understand we can't have it both ways. Either Clean Line is as clean as claimed and suitable for crossing forested land both private and government owned or it's too dirty to place on federal land and, therefore, too dirty for similar private lands.

If this creates a conundrum for anybody, then maybe our eyes are not fully open. Arguably, private property should have more protection than public land simply due to the added human toll. Thank you.

MR. FASANO: Thank you. Gordon Millsaps and then David Knoernschild. It took me several meetings to get Knoernschild.

MR. MILLSAPS: I'm Gordon Millsaps from Dover, Arkansas. I made some angry comments at the Russellville meeting and I was rude to the moderator, who has a very hard job, and I didn't make it any easier. A man apologizes when he's wrong, so, Greg, I'm sorry for being dismissive and I will try to keep my comments brief tonight.

MR. FASANO: It's all right.

2|11 cont.

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MR. MILLSAPS: Something went terribly wrong in the NEPA notice of intent and initial scoping process. The reason that you are seeing such angry, negative, passionate and outraged responses is that the landowners feel that they were ignored, uninformed, disrespected, misled and purposely excluded from the process. Restart the process. 1|2C

Now, that that's said, here's one reason I was angry the other night. On my family's land there is a little three room tarpaper shack. It ain't much to look at, but my grandpa lived on the land he got from his father. My momma was born in that shack, as were my aunts and uncle. They worked that farm with horses and mules and as a kid I remember fetching cool water from a hand dug well and going to the outhouse on a chilly night with a Sears and Roebuck catalog. And I remember digging taters and collecting eggs just like my kids do today. I remember ditching our chores to go skinny-dipping in Big Piney Creek and the whippings we got for it and how it was totally worth it. What dollar value do you place on that? 2|6

I remember building forts in the shade of the oaks and the hickories and sucking the sweet

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nectar out of honeysuckle blossoms, getting covered in poison ivy and playing on the bluff even though momma told us not to. I remember standing at my Grandpa Mason's bed as he lay dying in that three room shack. Dying the way that he wanted to after living the way that he wanted to. That rundown shack is still there and we have no plans of ever tearing it down. That's our history. What's the monetary worth of that? 2|6

I recall digging and clearing rocks from the fields by hand in the summer heat and I would use those same rocks to help my uncle build a house for his family with the entire extended family helping out. That same family helped us build our house with wood that we cut while clearing some land for pasture. I asked my daddy, why didn't we cut all the woods and raise more cattle to make more money? Daddy said, son, it's not just about the money.

I remember a man showing a boy how to shoot a gun and treat it with the respect that it demands. I remember him teaching me how to be a conscientious and responsible hunter and steward of the land. I recall hand pulling invasive species and replanting with natives to create food plots for

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the wildlife that dad said was such a vital part of the circle of life and how on that same property that boy shot his first deer. I remember how sad he was at killing such a beautiful creature and how he had thanked it for giving its life like he was taught to do. I also remember how proud that boy was to help put food on the family table.

I remember my daddy dying in his bed in the house that he built the way that he wanted to after living the life that he wanted to. He wanted to be put in a simple pine box and returned to the earth under the circle of life that he told us about.

But the memory that brings me here tonight is, excuse me, is one of a man with skin like leather from working outside his whole life, taking his two sons out to the bluff to watch the sun setting over Big Piney and then turning them around to face the property. With a hand on each of their shoulders, he said, Boys, some day this will be yours and you have a responsibility to your kids and grandkids and those that come after to leave this place better than you found it. And damn it, that's what I intend to do.

We now have multiple energy easements on

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the family land. My momma's land alone has four energy easements already. We have already had to move our potential homesite once in the past year due to eminent domain for an energy easement. Enough is enough.

Clean Line sees our property in terms of dollars as obstacles in the way of them making money, but they are wrong. Our properties are our futures, our children's and our grandchildren's futures. They are the futures of our way of life. As for Clean Line, no matter how many billionaire investors you have, you will never have enough money to purchase those easements because like my daddy said, it's not just about the money.

MR. FASANO: Please summarize and finish up, sir.

MR. MILLSAPS: Thank you, sir. We will never sell, we will never sign anything, and you will not take our property. Thank you very much.

MR. FASANO: Thank you. David Knoernschild and Chris Callahan.

MR. DAVID KNOERSCHILD: I am David Knoernschild from Hot Springs Village, Arkansas. I would like to express my opposition to Region 4E alternate route from a personal, practical,

2|6 cont.

1|8B

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economical and constitutional perspective. My personal opposition is because your alternate route, 4E route, would go right across my family homestead homesteaded by my grandfather where my youngest brother still lives. This route would go within ten feet of my brother's home and make it uninhabitable if he wants to remain healthy. 1|8B

Let me paraphrase from an article published in the American Journal of Epidemiology. Living close to power lines with an electromagnetic field, or EMF, has been shown to increase the risk of leukemia and other cancers since 1979 when convincing evidence was first published by the American Journal of Epidemiology. Since then, dozens of published papers have found links between living near power lines and the range of health issues such as cancers, Lou Gehrig's disease, Alzheimer's disease, birth defects, reproductive problems, depression, suicide, heart disease, neurodegenerative diseases and many others. 2|15

To appreciate the sheer weight of this evidence, there is an excellent list of published research papers compiled by Powerwatch group which identifies over 300 papers relating to EMF from power lines. Over 200 of these papers show a link

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between this type of radiation and harmful biological effects. It is extremely unlikely that all these studies were mistaken in their conclusion. 2|15 cont.

Power line radiation, how close is too close? It is common for high-voltage power transmission lines to generate a magnetic field whose strength is well above normal household ambient levels at distances up to 600 feet. Your power lines, sir, would be less than ten feet from my brother's house.

My practical and economic opposition is why would you want to transmit additional power all the way to Memphis, Tennessee? I lived in Tennessee for 30 years until recently and the whole time we were provided with sufficient, dependable and economical power through TVA and they also provided power to much of the southeastern U.S. 3|1

My constitutional opposition is I understand that you may be asking for eminent domain powers to get the routing that you desire. That kind of authority for nonessential service is unconstitutional. Thank you. 4|6

MR. FASANO: Thank you. Chris Callahan and Dale Beckmann. Raise the mic up just a little. Thank you.

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MR. CALLAHAN: Hi, my name is Chris Callahan. I live at 701 Hickey Town Road, London, Arkansas 72847. I heard the spiel here about alternatives, but the problem I have is that NEPA and the Council of Environmental Quality require alternatives to the action, not alternatives within the action. Alternatives within the action is nothing more than engineering and I'm an engineer. That's what you do, you find the best route to go from Guymon, Oklahoma to Memphis, Tennessee. An alternative to that action would be to do something else. The other alternative that was mentioned was the no action alternative. That is a requirement also. Unfortunately, the law requires that those alternatives be studied at the same level as the proposed action so that the decision-maker can determine which action is the most environmentally sound. 1|11

Other alternatives, since there were none mentioned, I would like to mention a couple. First, instead of going from Guymon, Oklahoma to Memphis, Tennessee, and I don't know why Clean Line hasn't thought of this themselves since they're from Houston, why not go from Guymon, Oklahoma to Houston, Texas? Did you know it's only 692 miles

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instead of 720 miles, so I guess they would have, you know, instead of 5,000 jobs it might only be 4,998 jobs or they could go -- well, another thing about Houston, there's 6.18 million people that live in the Houston Metroplex. Did you know in the state of Tennessee there's not that many people? Memphis has 790,000 population. Where is all this clean energy going to? It seems like Houston could suck a whole bunch of it. I think the president of Clean Line could burn a few megawatts in his 20,000 square foot home. They could go to DFW instead of Houston. It's closer, it's only 453 miles. They have six million people there, too. They must need more energy. Or they could go to the heart of Texas, the geographic center of Texas is Brady, Texas, that would be 465 miles and then they could just branch out to Houston and San Antonio and DFW and they could probably build three of our power lines there to sell so much wind energy. If it's such a great idea, why isn't it going to Houston? Cheap, clean energy, doesn't Houston need that? Why does it have to be here? 1|11 cont.

Another alternative I would like to mention is use AC power instead of DC power. This thing is useless as part of the grid with DC power

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unless there's a hidden motivation by DOE or Clean Line or National Grid of the UK. Why do we need to have this be DC and be a one way street from Guymon, Oklahoma to Memphis, Tennessee? 1|11 cont.

MR. FASANO: Please summarize and wrap up.

MR. CALLAHAN: It serves no purpose for the grid the other direction; therefore, it cannot be part of the grid. Thank you.

MR. FASANO: Thank you. Dale Beckmann and Dr. Todd.

MR. BECKMANN: Good evening. My name is Dale Beckmann. My address is 7699 Anagram Drive, Minneapolis, Minnesota. I am here in support of renewable energy and, therefore, the Plains & Eastern project. 1|35

I follow energy projects and especially renewable energy projects all over the United States. What I see is that the source of energy, whether it's fossil, nuclear or renewable, requires a power line to go from the source to the user and no one likes a power line near them. Wherever these lines are placed, the landowner deserves to receive fair compensation for what they have to give up. 2|6

I have read online parts of the EIS and I don't know how the average person can grasp all the

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technical data that has been written. I don't have the time or the expertise to understand all of it. I wish there was a way it could be condensed so the average person could assess and understand it. I, like you, have to rely on outside experts from the DOE to evaluate the project.

I have recently read that the United States is the third fastest growing country in the world. Forty years ago our total population was 216 million people. Today, the Census Bureau estimates our population at 319 million people and they forecast that in the next 40 years we will increase by another 100 million people. That will require a significant amount of energy and I do not want to rely on fossil fuels to continue as our primary source of energy for the 319 million people today or the 419 million people in 40 years. Coal and fossil fuels do pollute the air. How can we not do everything we can to improve the air all our children and grandchildren will breathe? 3|14

I cannot determine if what is being offered as compensation for those of you impacted by the line is adequate. What I can do is provide some information regarding how a project like Plains & Eastern puts money back into the local communities

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during construction.

I was recently involved as part of my job in a major energy project which was 600 miles long covering three states. The company I work for provided land survey services for that project. We made a commitment to our client that we would source as much of the labor and supplies as we could from the local communities.

I want to point out that I do not work for Clean Line or have been hired by Clean Line for this or any other project and they did not ask me to appear for them. I am here because I wanted to hear firsthand the residents and the business owners their concerns so that if the project were to proceed and I'm given an opportunity to be involved with this project that I can better understand and craft a plan which would will maximize our support to local businesses along the corridor.

Major projects like Plains & Eastern put significant dollars back in local communities. It's not only about creating jobs, but also providing revenue to local businesses in the area of the project that would not happen if not for the project. This boost in revenue to small businesses can often provide them with additional capital to

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improve their business or expand.

The nature of long corridor projects like Plains & Eastern or pipelines or other power lines is that they are often built in rural areas away from major cities.

MR. FASANO: Please summarize and wrap up, sir.

MR. BECKMANN: Okay. To support the construction of the project requires hundreds of construction-related personnel to support the new construction. Our client requested we develop a relationship with the communities along the route to put the money back in.

On the project I mentioned, our company spent an average of $1.2 million per month in services and supplies to communities along the route. We documented the values as we proceeded and proceeded to summarize as follows: Trucks and equipment, $2.5 million; fuel and equipment, $1 million; lodging and food and beverages, $5.4 million. And finally, we hired 267 people total for the project. Twenty-three percent were along the project with a total salary and benefits of 5.9 million.

In summary, the total economic impact to

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communities along the project for that one year was $14.8 million. Thank you.

MR. FASANO: Thank you. Dr. Todd and then Victoria Pacheco and Mark Pacheco together.

DR. TODD: Dr. Summerson, I'm Lisa Todd. I'm the deputy superintendent with the Greenbrier School District and I live in Conway County in Bird Town up on Dutton Mountain and I'm speaking on behalf of my mother's farm and the residents that live on Dutton Mountain. We have three high-powered pressure gas lines that go through our 300-acre farm, as do the neighbors that are in here. As I would suggest, probably most of the people that are in here have gas lines because when you look at the line on the plat, you see that it follows that clearing. We have easement overload. 1|6

Everybody is for clean energy when it's done responsibly, nobody argues that, but this is not a responsible way to do that. With three pipelines going through our place, the whole length and breadth of the property, I have two in the front of our house and one in the back, the only area that's left for any kind of development will be taken by Clean Line. I think that the people that have gas lines on their property have done their

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part for public interest. This is not a public interest. This is only the financial backers' interests. This does not benefit Arkansans in the long run. It may supply a couple of temporary jobs, but certainly not in the long haul. It does more destruction than it would ever in the environment of the landscape of Arkansas. 2|4C

If we really want to talk about developing clean energy, then we need to be looking at the resource that we have in Conway County which is our natural gas. Develop it. Develop ways to improve our grid line. I do not even understand why the DOE would even consider partnering with this company for private enterprise that would employ eminent domain, so on behalf of the family and neighbors on Dutton Mountain in Conway County, we are asking that the DOE not participate in the Clean Line project and that you take a no action alternative or take it back to Missouri. Thank you. 3|11

MR. FASANO: Victoria Pacheco and Mark Pacheco are two individuals signed up separately. Victoria is going to speak for both of them.

MS. PACHECO: I'm Victoria Pacheco from Russellville, Arkansas. The fact is, like the lady just said, Plains & Eastern Clean Line is a

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privately owned for-profit company that the DOE is considering partnering up with. The fact is, too, that Plains & Eastern wants to force early 1900s technology of overhead transmission lines on us to line their pockets. The fact is the wind power is not constant since wind doesn't blow all the time and although Clean Line has touted that their project is greatly diminishing or eliminating fossil fuel, it stands to reason that fossil fuels still will be necessary for backup, not to mention the extra petroleum products needed for maintenance of the 700-mile project. Please name one coal company in Arkansas that Plains & Eastern will eliminate by constructing this project. The fact is, Plains & Eastern Clean Line overhead HVDC lines require 200 feet of right-of-way that is equivalent to two Interstate 40s, that's from shoulder of one way to the shoulder of the other way, and 150 to 200 feet high transmission towers.

I believe that our country should be independent from foreign energy and produce renewable resources by solar, geothermal and wind power, but we can accomplish this without the destruction and devaluation of our property that we have worked so hard for. The alternative is a six

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foot wide, four foot deep, buried trench for the HVDC cables within the existing transportation corridors without the use of private property. ABB is just one of the companies that produced 2,600 megawatts, 525 kilovolts with a capacity of 600 kilovolt high-voltage direct current underground and subsea extruded cable systems to make renewable energy installations more efficient and cost-effective. The transmission system lays the foundation for stronger, smarter and greener electricity networks if used in the proper way and installed in the existing corridors where Plains & Eastern does not take private land. The two pairs of 2,600 megawatt cable underground or subsea can generate power produced by several large nuclear power plants or more than 1,000 large wind power plants. The cables can also be used underground along existing corridors, that's railroad right-of-ways, highway right-of-ways such as the interstate I-40 or state routes, the existing overhead transmission lines that come out of Nuclear One or the cables could be submerged along the Arkansas River from Van Buren to Conway and then buried along I-40 to Memphis. The cables reach distances of 1,500 kilometers or 935 miles and

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that's while keeping transmission line losses at five percent. Clean Line says that their line across Oklahoma and Arkansas is approximately 700 miles, so that's well within the underground cable range. 1|10 cont.

The new technology was presented in August 2014 at the CIGRE Technology Symposium in Paris, France. Underground cable experts from around the world, from ABB, Eurocable and Siemens say how the HVDC underground technology has advanced in recent years and how the costs have dramatically come down for the products and installation. There are numerous examples for underground HVDC systems all over the world. Even in this country there are buried HVDC lines, for example, the Champlain Hudson Power Express and the Northeast Energy Link Project and neither of them used private property.

Now I'm going to speak for my husband. Significant environmental benefits with underground HVDC lines without the use of private property reduce -- have many benefits. Okay. They reduce the tree clearing, scarring of the existing land and visual impacts. They are safer because buried lines don't fall over in hurricanes, tornadoes, high winds or ice storms. They eliminate costly power outages 2|10 cont.

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to hundreds of thousands of customers every day resulting from damage to aboveground electricity infrastructure. They're safer because helicopters, planes, hot air balloons can't crash into them and can't electrocute people or animals. They do not lower impacted and adjacent property values. Buried cable right-of-ways can be used for hiking trails and bike pathways. They have lower maintenance cost. They do not kill millions of birds annually through collisions. They do not start wildfires, nor are they affected by fire. They are not affected by solar storms. They eliminate the negative health impacts of corona effects and electromagnetic fields to zero. 2|10 cont.

Now, we bury sewer lines, water lines, telephone lines, electricity distribution lines, TV cable, natural gas lines, oil pipelines, gas pipelines and other petroleum pipelines. It's time we started burying more high-voltage direct current transmission lines because overhead lines and towers are unsightly and have so many other negative effects.

Ms. Summerson talked a lot about the analysis of environmental impact and she showed you a big, long list of potential impacts to resources.

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Well, the fact is that after initial placement of underground lines to the existing right-of-ways, there are no added negative impacts to people or to the environment. Thank you.

MR. FASANO: Thank you. Leslie Davis and then Hanna Davis.

MS. LESLIE DAVIS: My name is Leslie Davis. I am from Little Rock. I'm an environmental consultant and small business owner and I'm experienced in the NEPA process. I'm here because I believe energy diversity is key to several parts of our future economy. Our coal plants here in Arkansas are under a heavy regulatory burden. Wind power is different. It provides a cleaner alternative and will help stabilize our electric rates as those coal plants that currently provide our energy are not taken out of service, but are under increasing regulatory burdens and have to spend money on capital projects in order to improve their emissions and environmental impacts. 1|1

I'm also here because I'm in favor of the jobs that both the construction phase jobs that will be produced. We all experienced some of that job growth during the Fayetteville Shale Play exploration and production. We've talked about the 2|24

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pipelines and things like that and some of the negative perceptions that we had from those. I think this project can be different from that. Our regulatory environment here in Arkansas has learned a lot from that process and from the exploration and production that happened there. Our regulatory agencies know how to handle those linear transportation projects and pipeline projects, right-of-way projects, things like that now much better than they did in the past.

The Draft EIS for this project appears to be thorough and consistent with the requirements of NEPA. It outlines impacts, some of which are unavoidable. Knowing the regulatory environment here in Arkansas, I believe that the line can be constructed with minimal permanent environmental impact, and with appropriate oversight from those regulatory agencies we can do a good job in leaving them in -- in a good position. I would encourage DOE to approve this project and I appreciate your time. 3|2E 4|35

MR. FASANO: Thank you. Hanna Davis and Kyndal Saverse.

MS. HANNA DAVIS: Hi, my name is Hanna Davis. I'm a sophomore at Hendrix College and as an

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environmental studies major there, I learn about all the different ways that humans have wreaked havoc on the environment. However, in addition to the, frankly, depressing aspects of my field of study, I also study ways that people could help ameliorate these situations, ways in which we could potentially clean up some of the messes we've made. An important part of improving the condition of the Earth is decreasing our use of energy directly from fossil fuels.

Annually, Arkansas' 19 power plants spew out 40 million tons of carbon dioxide which is a heinously generous contribution to climate change. Most of these emissions come from Arkansas' five coal plants, two of which were opened in the past five years. Whereas, Arkansas is continuing to develop the coal industry, many states have begun transitioning away from utilizing coal as an energy source and for good reason. Coal plants emit immense amounts of a number of pollutants harming not only the environment, but also human health. Unless we establish viable enviromental-friendly alternatives to fossil fuels, these harms to the environment will continue to be inflicted. 1|1

Plains & Eastern Clean Line is a viable,

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environmentally friendly alternative. Wind energy is a renewable, zero pollution and infinitely better option than many other energy sources, especially coal. To transmit it from a sparsely populated region that has an abundance of wind to states where consumers need the energy is completely sensible. 1|1 cont.

It's not as simple as that, though. I'm completely aware of that. The transmission line must travel hundreds of miles and cross many landowners' properties. It's extremely important then for Clean Line to work together with landowners to reach a fair agreement and to treat them with the respect they deserve. All things considered, I believe that the Plains & Eastern Clean Line is a significant step in the right direction for Arkansas, a step toward a more stable climate, cleaner air and improved health and a more sustainable future. Thank you. 2|35

MR. FASANO: Thank you. Kyndal Saverse and Marion Rossi.

MS. SAVERSE: Hi, my name is Kyndal Saverse. I'm an environmental science student at the University of Central Arkansas. I support the Clean Line Energy project because of its efforts to provide low-cost renewable energy, conserve energy 1|35

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resources, utilize local supplies and local labor, economically benefit the overlapping communities and its commitment to acknowledging landowner concerns along with adequate compensation for their own use. Most importantly, I support Plains & Eastern Clean Line Energy project because of its ability to solve our global climate change issue. The need to reduce CO2 emissions is an issue that my young generation will begin to see the catastrophic effects of as ecosystems soon reach their tipping points. 1|35 cont.

MR. FASANO: Slow just a bit. Slow down just a bit.

MS. SAVERSE: Oh, sorry, I'm kind of nervous. This project will help Obama reach his target of a 28 percent reduction in greenhouse gas emissions by the year 2025. This project will help the U.S. be a leader in the climate change movement. The benefits of this project overwhelmingly exceed any cost. I encourage the DOE to approve the Plains & Eastern Clean Line project. Thank you. 2|14

MR. FASANO: Thank you. Marion Rossi and Sheila Beck.

MR. ROSSI: On the way down here -- I'm Marion Rossi from Center Ridge, Arkansas. When I looked up at the screen, I seen what I think was --

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MR. FASANO: A little closer to the mic, please.

MR. ROSSI: After I looked at that, after they got in Arkansas they dipped down toward the Arkansas River where they know there's a lot of open land for us farmers, that we've got open land. Why don't they go through the mountains like they did up over in Italy last fall? In all their power lines over there, it's up in the mountains where it's out of everybody's way. Up there it's probably got a lot of people on that land. Up there it's wasteland. They could pay those people and they could get the oil people to go in with them and put the lines together, but they say the oil people do not want to do it. 1|8

I've also been told that this is not a done deal. I've been told that by the oil company, the Fayetteville Shale and the natural gas. I've been told that, that it's not, you know, but then they go right through if they want to.

If you've got any sense, you better watch when you sign that paper because when you sign that paper and they can get those other guys that have nothing to do but this, the ones who want to put it up, and they're going to do what they want to,

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folks, because they did it to this point. That's all I've got to say.

MR. FASANO: Sheila Beck and Rick Beck.

MS. BECK: My name is Sheila Beck. I live at 1091 Dutton Mountain Road in Center Ridge, Arkansas. We have 120 acres that was handed down from my grandparents and parents to me. We have a house a quarter of a mile off the road and probably from here to the outside wall is where the line will go from our house. It's caused lots of nights of sleepless nights with mental anguish already. We -- you know, we'd love to hand it down to our kids, but the value of the land will go down.

Arkansas already has some the cheapest energy. It's not going to help our state. They're wanting to run this line 700 miles across our state, 200 foot corridor. You know, the temporary jobs that it would possibly create, they can say, you know, there may be a converter station, there may not be one. There may be temporary jobs, there's not going to be very many permanent jobs at all.

You know, it's basically what it boils down to is the rape of our state to put money into a private company. We need to stand up. I think they've gone to a path of what they would consider

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the path of least resistance and we need to stand up for our rights because the day that a private company can come in and take our land that we have paid taxes on for generations is the end of the American dream.

3|6 cont.

MR. FASANO: Rick Beck and then Larry Love.

MR. BECK: Thank you. Thank the DOE for coming down and hearing us all talk. A couple of points I want to make and a lot of people have made great points that I was going to make, but I gotcha.

You'll notice something geographically, the people who are speaking for this line are speaking from Little Rock or speaking from places where this line is not at. I wonder if they would speak so highly of this project if it was running by their house?

MR. FASANO: Continue with your comments, please.

MR. BECK: Secondly, I would tell the DOE to watch very carefully what you're about to do. Make no mistake about this, without your eminent domain grant this project goes nowhere and Plains & Eastern knows that. You would force them to deal with us and they know that they won't deal with us

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fairly, so without eminent domain this won't happen. So let's talk about when you give them eminent domain or if you give them eminent domain. What you will be creating is a monopoly because Plains & Eastern will have the sole line to deliver DC power from Oklahoma all the way over to Tennessee. Now, that's interesting that it's DC, but that's what they need for the monopoly. Right now, if a power line goes down, the company simply diverts the AC power to other lines around the problem. They won't be able to do that with DC. Plains & Eastern admits they don't generate DC power. They're not generating this power, they're just delivering it. They will have the monopoly. And, oh, yeah, by the way, this code that we're using, this 1222 will be -- that they -- that they're going to get eminent domain underneath will be the exact code they use to protect the monopoly because within that code it says that if there's not a need, you can't get this eminent domain, all right? Plains & Eastern will come and if someone tries to compete against them, Plains & Eastern will come forward and say that, hey, there's not a need, we're already providing that. So the very code that you're using to trample on the landowners in Arkansas will be used to

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protect this monopoly.

Now, things that I think we should talk about is this, all right, if the value of the property in this county drops way down, then what happens to as far as the millage that we pay on the property, what happens to the County Courthouse down here when they don't collect the money that they get off the value of our property because our property is valued way down?

I sat in a joint energy meeting in Little Rock and heard testimony from Plains & Eastern and others. Plains & Eastern has gone to the Public Service Commission and asked to get utility status in Arkansas and they were denied that. They asked for that so they could get eminent domain. The Joint Energy Commission of the State of Arkansas which is a group of elected officials, you guys voted on them, all right, those people that said -- wrote a letter of opposition to the DOE saying that we are in opposition to Plains & Eastern circumventing the duly elected officials in Arkansas and going to the federal government to get right-of-way across the state of Arkansas.

MR. FASANO: Please summarize and wrap up.

MR. BECK: If this is such a great

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project, why do you -- why are we doing it with DC? We're doing it with the DC to protect their monopoly and that's what they have to do. If they would do it in AC, they could increase the AC infrastructure, they would serve much better purpose in terms of providing standard power all over the grid, but they wouldn't have their monopoly. So you need to ask yourself, you heard the testimony, it says that they're collecting AC power and converting it to DC. Why are they doing that? It's called monopoly. The line would better be called the monopoly line.

MR. FASANO: Thank you. Larry Love and Glen Hooks.

MR. LOVE: Wow, I thought I was prepared, but these guys have all these numbers and such. I thought I did my homework, but I have -- I can tell I haven't. I live in Greenbrier, 25 Main Street, Greenbrier, but I have property outside of Quitman and they sent me a letter back two years ago concerning this, but since then I have heard nothing from them about that until somebody like you guys here called me and let me know, so, but anyway, I just thought maybe we could put some of this in perspective as to what they're doing here. If you look at this power line coming across Arkansas, it's

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roughly, give or take, 300 miles. They take a 1,000 feet right-of-way and so if you add all that up you end up with that they are taking roughly 56 square miles of the state of Arkansas and making that land useless. It's not going to be worth anything, nobody can build a house. Nobody can -- well, maybe you can run some cattle, but if you -- I talked to some of the engineers out there and for every meter of length underneath those power lines, that will generate 5,000 volts, so if you have an animal that's in there, an animal is conductive and so -- and he's hot and he's probably a meter long, well, he's going to be generating 5,000 volts inside his body and it decreases as the load decreases on the power lines, but anyway.

Now, about the power or the land on each side of the right-of-way. If you look another 1,000 feet from that, nobody wants to build there. Who would want to build there? Nobody. So what happens to the property values there? They go down. These people that are from Little Rock, instead of beating your chest about it, who have an axe to grind, by the way, because they come from probably some of the companies that were hired from the EIS and so -- but they don't live out here. They don't live out here

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with us.

MR. FASANO: Please summarize and wrap up. Thank you.

MR. LOVE: I just want to say one last thing is you have no rights unless you exert those rights. Thank you.

MR. FASANO: Thank you. Glen Hooks and then Barry Todd.

MR. HOOKS: Good evening. My name is Glen Hooks and I am the state director of the Sierra Club state chapter here in Arkansas and I thank you for the opportunity to speak tonight about the Clean Line Energy project.

The Sierra Club both nationally and right here in Arkansas has long been a proponent of transitioning away from dirty coal plants and gas-fired electricity and replacing that with clean wind and solar. We've long believed and advocated our position that shutting down these dirty plants would help open up the market for clean energy and that has certainly been the case over the last few years.

For those reasons, National Sierra Club has endorsed the various Clean Line Energy projects across the country and locally the Sierra Club

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chapters in Arkansas, Texas, Oklahoma and Tennessee have endorsed the Plains & Eastern project that's being discussed here tonight. We believe that moving thousands of megawatts of clean wind energy is a tremendous step forward for our region and can mean some great things for Arkansas, including not only the many direct and indirect jobs we've talked about here tonight, but also a lot of wind power for our state.

So Sierra Club has been an early and constant proponent of this project. In our official comments that we'll be filing with DOE before the deadline, we'll share some of our specific concerns and suggestions in detail and those concerns range from interconnection impacts for the proposed converter station to discussion of using existing rights-of-way as much as possible, to impact on the habitat of the lesser prairie-chicken and other items. But in my time tonight, there isn't enough time to do all those topics justice so I'll save that for our official comments.

Tonight, though, I want to make one specific point. A project of this magnitude will undoubtedly have some impact both upon our environment and upon people. We have been working

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with Clean Line for some time to suggest routes with the least environmental impact, but I specifically want to talk about the Arkansans affected by this project.

I've heard and we've all heard tonight from many people who have concerns about a lack of communication, about their fears of being steamrolled and about their fear of eminent domain. I hear those concerns. We all hear those concerns and I understand them. Sierra Club doesn't often find itself on the side of those pushing a construction project of this size, but we are supporting this one as a way of getting clean energy to scale in our region.

That being said, I want to urge Clean Line to really redouble its efforts at landowner communication. I want Clean Line to commit to treating landowners fairly, respectfully and equitably, and I further want Clean Line to use eminent domain only as an absolute last resort. I believe in clean power and I believe in this project, but as a lifelong Arkansan, I believe in treating Arkansans fair.

I know that my time is short here so I'll wrap it up by saying this. Sierra Club has long

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believed in the promise of clean energy. That can mean projects like Clean Line, that can mean distributed solar, which I've heard a lot about from folks talking to me about this project. We don't believe that one necessarily cancels out the other. Sierra Club has supported and is currently supporting legislation to make distributed generation more affordable and attractive and we will continue to do so. I've heard a lot of people talking about distributive solar and I'm excited by that kind of passion. I invite any of those folks to come down and join us at the legislature currently in session and we can work together on making that a reality. Thank you for your time.

MR. FASANO: Barry Todd and then Robin Rumph.

MR. TODD: I'm Barry Todd. You already heard from my wife, Dr. Lisa Todd.

MR. FASANO: Can you move the microphone up just a little?

MR. TODD: Sure.

MR. FASANO: Thank you.

MR. TODD: I live at 278 Kelley Drive. We're out in the county where one of the proposed routes for the clean lines. And I think we've heard

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from some landowners here who if this was a question of vote today would unanimously turn it down. This is not arguing the merits of the program, this is just based on land rights. I think there's a dual concern, one has to do with the environment and one has to do with the fact that we're concerned that we'd be coerced to giving up our land through eminent domain which would be granted to a private company because of their partnership with Department of Energy. 1|6

I'd like to approach this in the limited time we have to put it in perspective. I'm an artist. I paint portraits, I paint landscapes. One of the great aspects of the environment here in Arkansas is its natural beauty. I have a copy here of the DOE report from Melissa Ardis, the project leader on the environmental impacts, regarding those species that would be threatened and they're very specific, include a variety of three or four different bats and I think that concern is justified, but I don't hear a lot of talk about the aesthetic impact. How are 115, 200 foot towers every five or six intervals in a mile basis going to impact the look and the natural beauty of our state. That can't be replaced? Once those towers are up 2|29

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there, they're forever, so let's keep in mind that there's more than just dealing with animal species and questions of eminent domain and government overreach or partnering with private companies and let's keep in mind that we have a great reservoir of natural beauty here and I think we should protect it. Thank you. 2|29 cont.

MR. FASANO: Thank you. Robin Rumph and Monique Bassi.

MR. RUMPH: My name is Robin Rumph. I'm from Benton, Arkansas and I'm here to support the Plains & Eastern Clean Line because I believe it's necessary to transition from fossil fuels to clean energy and particularly because of peak oil and climate change we need to start now. Extreme extraction processes like oil and gas through fracking, tar sands mining, mountaintop removal, coal extraction and deep water drilling are too dangerous and too harmful to our land, freshwater here and oceans. Wind power is much less harmful to our environment and it will ultimately cost less than any of these extreme extraction energy sources. 1|35

All too often eminent domain issues in a way that does not benefit the broader community. In this particular case if done right, then I do not

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believe this is one of the cases. If this were a new oil pipeline, I would oppose the use of eminent domain because such projects are part of the infrastructure of our past and not our future. Having said that, we should always be mindful that any taking of land from property owners requires a sacrifice and it's one that should not be made lightly. And in that regard, hear the voices of those whose property will be taken if the particular line goes through their area. In that regard, I'm certainly in favor of any routes that avoid taking an individual's property. I'm certainly understanding that people need to be fairly compensated and that every consideration for the landowner needs to be taken. 2|6

That concludes my remarks. Thanks for the opportunity to speak.

MR. FASANO: Thank you. Monique Bassi and Rel Corbin.

MS. BASSI: Hello, my name is Monique Bassi. I live at 5906 Riviera Drive in Benton, Arkansas.

THE COURT REPORTER: I'm sorry --

MR. FASANO: Can you bring the mic --

THE COURT REPORTER: I didn't hear your

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address.

MR. FASANO: -- a little bit closer, bring it in a little bit closer?

MS. BASSI: 5906 Riviera Drive, Benton, Arkansas. And I am a member of the Sierra Club and I would like to thank you for the opportunity to speak in support of clean wind power. 1|35

Wind power is clean, sustainable and cheaper than fossil fuel, coal, oil or gas. It has no waste, no air emission, no water pollution, no fuel to mine, transport or to store. Wind power is abundant and it does not harm our health or environment. Wind power is not new. The ancient Greeks built sailing ships. Before the preindustrial era began, the Netherlands used wind power for grain mills. The U.S. farmer used wind to pump water.

About a hundred years ago, wind turbines were used in rural areas. European countries are capable of meeting their energy demand through wind power. Denmark meets 30 percent of their electricity demands from wind power.

Many utilities like XCEL Energy are demonstrating how wind is making significant contribution to their energy supply without

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reliability problems. It serves currently 3.5 million customers across eight western and midwestern states.

The cost of electricity from wind has dropped from 25 cents per kilowatt hours in 1981 to nearly 4 cents in 2008. Even so, the prices of the wind turbines has increased. The wind power is cost competitive in regards to coal and natural gas plants. Wind power will improve the air and water quality for future generations and will have less fluctuation than fossil fuel prices. 2|35

We need to make the electricity grid more efficient by using technology that is quickly adapting to changes in supply demands. We need the state and national standard to increase energy efficiency and renewable energy supplies to meet the demand every hour of the year in every region of the country. Thank you.

MR. FASANO: Rel Corbin and Dina Nash.

MR. CORBIN: I'm Rel Corbin from Little Rock. I come from pioneer families in rural Pulaski, Perry, Yell, Johnson and Logan counties and I know one thing, when the pioneers came here they organized government fast. Very few people wanted to stay out in the woods, and I love the woods.

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But, okay, I have a problem with people taking my property. I've got a transmission line across five acres we have out in the country, that takes a bit of that property. I don't like it when they took a bit of our yard to widen our street. They took down a huge oak tree. I don't like it when I'm trying to get a good photograph of a sunset or something and can't see for the darn power lines, but some things we just have to accept. I'm independent as can be, but some things you've just got to accept. If we're going to have a modern life, we've got to have power and we can't keep thinking Arkansas is independent. I grew up being told Arkansas could survive on its own without other states. That is baloney, that's why we're staying low in income. We've got to work with other people. I didn't make faces at you.

Coal is dirty as can be. My mother -- my father is from the Pioneer Arkansas family. My mother's from Appalachia, Virginia. Her daddy was a coal miner. He got black lung disease. I know quite a bit about coal. Coal is nasty as can be. I know a lot of people who have been hurt by fracking for gas across the Fayetteville Shale, a lot of people. It poisoned the water, the land and the

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air. That's not part of the solution. We've got to have clean energy.

We can get solar energy in every county in Arkansas, but you've got to start somewhere. You have to have diverse sources of energy. Wind and solar are readily available. Wind, not so much in Arkansas. The Great Plains, massive energy from wind and it is predictable. They know when the wind is going to blow. You cannot be -- you have to have multiple sources to have a steady source of energy. Clean Line is going to supply enough energy for TVA to shut down six or seven coal-fired plants and they have told us that they are going to give enough electricity to Arkansas for us to shut down one plant and it's setting a precedent. I expect in the future we can replace the existing AC lines. DC is about 15 more efficient than AC and it produces about half as much electromagnetic field as AC.

MR. FASANO: Please summarize and wrap up, sir.

MR. CORBIN: Sir?

MR. FASANO: Please summarize and wrap up.

MR. CORBIN: Okay. We need this partially to set a precedent and partially to shut down one coal-fired plant. Coal is nasty as can be. Nuclear

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is not a solution. We cannot -- there's no way to dispose of nuclear waste. I love Arkansas, too. Thank you.

MR. FASANO: Thank you. I have to say, that's a beautiful bow tie. Dina Nash and Penn Kelley.

MS. NASH: Good evening. I'm Dina Nash from the Little Rock area. I lived in the Fayetteville area and my interest is in the health of our children, the health of our population and the cognitive defects from coal. This should appeal to the parents in the room, it should appeal to anyone concerned about autism, anyone concerned about learning disabilities and also I would like to tell you that we have some killer coal plants in this state that need to go. We have at least two, the White Bluff and the Independence coal plant. Taken together, they are killing about 85 of our citizens a year. No one is talking about this. I feel like I'm screaming out in the wilderness. I don't hear anybody but me talking about this. Somebody needs to help me dig this stuff up. It's easy to find. You can go to ABT Associates and Google coal plants and health and find an eyeful.

Furthermore, about 2,000 people are made

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chronically ill with chronic obstructive lung disease, lung cancer, asthma and other respiratory diseases from coal plants. We've got to look at the whole picture.

I know my grandparent's place has been ruined by fracking. The creek we used to all play in as kids is gone. The roads cut off the creek and I'll never forget it, you know, but, hey, the family wanted the lease money. Whoopie. You know, you can never fix that. You can never find a swimming hole in rock, you know, platforms that's so clean as the one we had.

But anyway, so clean power from wind is paramount also to the survival of our planet, not just to the health of our kids. And right now the coal plants of the world are pouring so much carbon dioxide into our air that the oceans can no longer absorb it at the right rate. So what's happening is the oceans are acidifying, the fish are going away and they're not coming back if we continue business as usual. 1|35

Arkansas is rich in renewables to meet our needs for electricity. We must enact laws to stimulate the development of the solar, wind and other clean energy businesses. And I, again, want

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to tip my hat to the landowners. I really don't like -- no one likes their view being spoiled, so I really hope Clean Line will work closely with the landowners and compensate them and work around the most beautiful places in our wonderful state. Thank you. 2|6

MR. FASANO: Thank you. Penn Kelley and Rick Culpepper.

MR. KELLEY: My name is Penn Kelley. I live in Maumelle, Arkansas. I also have property in Conway County. The only reason we're here is because Plains & Eastern has applied to the Department of Energy in order to use their eminent domain authority under section 1222. Let me read you Executive Order 13406 of June 23, 2006, and I quote, "Section one: It is the policy of the United States to protect the rights of Americans to their private property, including by limiting the taking of private property by the federal government to situations in which the taking is for public use with just compensation and the purpose of benefiting the general public and not merely for the purpose of advancing the economic interest of private parties to be given ownership or use the property taken." 1|4

And that's why we're here, a merchant

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private transmission company, not a public utility, is attempting to steal your land with the assistance of the Department of Energy. We're not going to let it happen. 1|4 cont.

Let's take a look at the connective action in the National Environmental Protection Act. Is it reasonable a transmission company can sell electricity where they have no customers? Is it reasonable to expect wind farms to be built when subsidies are being eliminated? Let me read you a quote from Warren Buffett of Berkshire Hathaway who's heavily invested in wind farms. I quote, "On wind energy we get a tax credit if we build a lot of wind farms. That's the only reason we build them. They don't make sense without the tax credit." Is it reasonable to construct a 700 mile above ground transmission line through the most tornado prone region in the United States and expect it to add stability to the grid? The answer is no, nothing about this project is reasonable. 2|1

In the area I have property, I studied the assessment of the DOE. Let me tell you what they missed in their assessment. Ten residences, a church, a cemetery, active gas wells that will be directly under the transmission line, a designated 3|2E

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Civil War trail and the general lay of the land. Why? Their key observation point was 1.8 miles away. Virtually every observation they made was invalid. This isn't acceptable. I wonder how many other assessments were botched? 3|2E

We, the two stakeholders, have no avenue for questions regarding this project. Clean Line has history of misinformation and partial truths. They're not credible. The DOE only accepts comments. The have a right of virtually ignoring freedom of information requests and give our elected officials the runaround when questions are asked. The DOE needs to implement a system of reportable, and I stress reportable, questions and answers that go on the public record. Thank you. 4|2C

MR. FASANO: Thank you. Rick Culpepper and Connie Hill.

MR. CULPEPPER: Good evening. My name is Rick Culpepper. And if I can get my notes in the right order, I would like to take this opportunity to speak at tonight's hearing. I am the manufacturing manager for General Cable's Malvern, Arkansas facility. Arkansas is a lot of things, it's an agricultural state, it is also a manufacturing state and one of the things folks may

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or may not be aware of is here in Arkansas for almost 50 years now we've been helping build America's electrical grid. I represent a company that has almost 344 employees here in Arkansas and I look around the room tonight and I'll tell you myself and those who work with me are quite proud when we see the lights come on and we can sit here comfortably. We're in a modern building that took machinery to excavate, to lay concrete and put up structures, that all of that took energy, all of that energy took a conductor and we made a lot of that conductor. I'm quite confident for many of you in this room if you turn your lights on in your home or your office or you enjoy the benefits of your air conditioning or you hear the stereo in your car, some of us probably are responsible for making that happen or helping to make it happen.

We support the Plains & Eastern Clean Line transmission project and we do that because they are committed to working with Arkansas businesses such as ours. The transmission project would involve the production and shipment of roughly $100 million of overhead transmission line, create a steady stream of work here in the Malvern facility for over two years and it means jobs for us. We're a

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project-based business. If we don't see projects like this, our business does not exist. Okay. It's either new generation or replacement of existing, but don't mistake that this is employing a lot of people, a lot of Arkansans and we're just like everybody else here, some of us live in town, some of us live in the country, some of us have children, many of us hunt and fish and recreate outside.

As one of several companies in the Malvern area, this type work also drives investment. That investment sustains our future, it helps us attract and retain talent and supports the tax base. As our Arkansas facility, we take seriously the important role that manufacturing continues to play in job stabilization and potential creation in Arkansas generating shared values for communities that we serve.

1|24 cont.

We, too, have an extensive long-term commitment to the power transmission industry. Big energy infrastructure projects like this help our company decide where to invest, where to hire. As you know, the goal of the Plains & Eastern Clean Line project would be to deliver up to 500 megawatts of renewable power produced in western Oklahoma, southwest Kansas and the Texas Panhandle region to

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Arkansas. Businesses like mine, manufacturing businesses that exist in this state exist because they have access to energy.

MR. FASANO: Please wrap up, sir.

MR. CULPEPPER: The Malvern plant is committed to this project. We look forward to continuing to support this project. I would just like to close again and thank you for being here tonight and I hope that as you head home and enjoy the comforts of modern living to give some thought not only to where it came from, but the Arkansans who helped deliver it. Thank you.

MR. FASANO: Thank you. Connie Hill and Mitchell Crutchfield. Thanks for hanging in there, folks. There's ten speakers left.

MS. HILL: Thank you.

MR. FASANO: A little closer to the mic, please.

MS. HILL: Okay. Connie Hill, I'm here as a concerned citizen. I would like to voice my opposition to the Department of Energy partnering with Clean Line Energy Partners on the Plains & Eastern Clean Line transmission project. 1|34

I would like to take some time to talk about two of the comments in here and due to the

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time constraints I'll just focus on them, but I want to talk about real quickly, just mention the sorry job Clean Line did with the scoping process. If I had more time, I would talk about the myth of job creations, the myth about the effect on climate change, the myth that Clean Line is working with the landowners, the myth that this project is even clean.

And I'd also like to comment on the Sierra Club. For 120 years they've been protecting our fragile environment and our wonderful wildlife, but by supporting Clean Line they sold out to the environment, they sold out on the wildlife. It does make you wonder if there's a dollar value assigned to their support, like the amount of dollars they've received in donations.

And I would like to second the gentleman, the one, you know, that talked about the comments from private businesses, the ones in Little Rock, Malvern, all those, you notice this is not in their community. I have a feeling they would not be supporting this project if it was in their backyards, their front yards, affecting their employees, their homes, their children's house, the forest land. I understand the desire for the

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business, but what I do not understand is them publicly supporting a project that will hurt fellow Arkansans, cause irreversible damage to the environment, stomp on our state rights, our individual rights and liberties for their own personal financial gain. Short-term financial benefits is all that they're focusing on, but you know why? I guess they're following the lead set by Clean Line, you know, and that is some insight into their morals, their values, and their characters.

I would like to talk about the comment in section 113 of the draft environmental study EIS where they state there may be some short-term adverse impacts on residential values and marketability, they might occur. Clean Line keeps saying that the market values will go down about ten percent, but then EIS says short-term might occur. I would say neither are true. A more accurate statement would say your property will be worth about ten percent of its current value with the transmission line on it, plus the environment is so unhealthy you can no longer live there, noise pollution, air pollution 24 hours a day, seven days a week, soil pollution, chemical spray, water contamination, loss of trees, dead wildlife, birds,

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ducks, eagles --

MR. FASANO: Ma'am, please summarize and wrap up. Slow down, slow down. She can't track you --

MS. HILL: Okay. But anyway, the --

MR. FASANO: -- but you need to wrap up.

MS. HILL: -- list goes on and on and on. You know, guess what, folks? You get all that for free. And I forgot to mention that the draft environmental statement at some of your select libraries, it is in the fiction section.

MR. FASANO: Please wrap it up, ma'am.

MS. HILL: I would like to talk about -- thank the people who talked about the advances in technology in underground. I've been reading about new turbines that allow our wind to be generated in other areas that was previously not affordable. I would also like to point out the clean --

MR. FASANO: You need to wrap up, ma'am.

MS. HILL: I would like the same courtesy that Jane got for going over her time. I'll be done in just a minute, please.

MR. FASANO: Ma'am, please respect the time limit.

MS. HILL: Clean Line has used old wind

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data because it supports their cause. When you look at more recent wind data, there is plenty of wind in the south, southeast and stuff to generate wind locally.

MR. FASANO: You need to respect the time limits, ma'am, please.

MS. HILL: Okay. There's a diminishing need for this transmission line and very little desire to purchase what you may call non-affordable, non-clean energy. But they're in a rush to get this approved because their project is becoming obsolete. There is a more effective way to green energy. A reasonable person would say yes.

MR. FASANO: Ms. Hill, thank you.

MS. HILL: Okay. In closing, I would like you to join me, I'd like to ask the DOE to not partner with Clean Line, not to grant federal eminent domain powers under section 1222 to take private land from the landowners, to exercise what appears to be I have a fin -- I have a pen and phone mentality of our current administration. Remember the public benefits which is close to zero to the citizens of Arkansas and the benefits to the environment are zero. Please ask me in that -- please join me in asking the Department of Energy to

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protect the environment, to do their jobs without bias, without influence from their former colleagues and to reconsider what they call the minimum environmental impact and to recognize the tremendous environmental damage this transmission will cause. Please do not be silent on this issue, speak up and be heard for our environment's sakes.

I have more, but I will pass, I will yield to the next speaker.

MR. FASANO: Mitchell Crutchfield and Leo Knoernschild.

MR. CRUTCHFIELD: I'm Mitchell Crutchfield from Johnson County, Arkansas and I appear to oppose the --

MR. FASANO: A little closer to the mic, please.

MR. CRUTCHFIELD: I'm here to oppose the Clean Line Energy deal. You know, we've got -- here where we live, we've got one transmission line that we look at, here we've got a big transmission gas line. When it come through, they asked us, you know, do you want to sign up on this? They done a survey and all that stuff and when it got put in, they have amnesia.

MR. FASANO: I'm sorry, sir, please move

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in just a little closer.

MR. CRUTCHFIELD: We don't --

MR. FASANO: Thank you.

MR. CRUTCHFIELD: You know, we don't have natural gas like they said we would. Now, here this stuff is here and then they want this great, big deal on the other side of us, the clean energy they call it. You know if it's for our compensation, why is the landowners not setting the price for the compensation instead of the clean energy people?

One other thing, I'm just going to read a quote from 1800, a 19th century philosopher called Henry David Thoreau and he said, "Where there is one, there is a majority of one and when the rights of the majority take away from the rights of the one, then the many themselves will suffer." The eminent domain is just another way of legal theft, what they're asking for. You know, to say that this qualifies for eminent domain is ridiculous. 1|6

MR. FASANO: Leo Knoernschild and Clayton Rogers.

MR. LEO KNOERNSCHILD: I'm Leo Knoernschild of Lutherville, Arkansas 72846 and I am a retired state employee. I'm on? Thank you. Anyway, my wife, Sharon, and I have raised our

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family and live on our third-generation farm that my grandad homesteaded in western Boone County and I've lived there since my birth. Most of my opposition will be centered on the Clean Line transmission EIS project. Yes, I'm one of the 600 respondents to your first EIS scoping process that I returned on March the 18th of 2013. My concerns were not satisfactorily addressed in your EIS that I received and tonight I would like to address the bird issue.

For more than 50 years migrating birds have been documented to collide with communication towers. This is not transmission towers, these are communications, narrower. It is estimated approximately 7,000,000 birds collide each year in North America. Recently, the results of a study done by Erin T. Macchia from ASU was given at the 2012 Southeastern Partners in Flight meeting held in Raleigh, North Carolina. The title is Communication Towers and Migrating Songbirds in Arkansas, in this state. And the notes were made that the avian collisions at towers, one, it was the least -- collisions that they documented for more than 50 years on bird mortality. More birds found during migration times. Mass kill events greater than 100 birds were found per night in ideal weather and the

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increased number of towers in the landscape add to the bird mortality.

These communication towers and Clean Line towers parallel from eastern Oklahoma to Johnson County. It's amazing, there was a map of Arkansas, the communication towers in Arkansas, and right along I-40 all the way into Johnson County it just looked like a Christmas tree. That's where Clean Line is planning on coming. The study classified towers as short, less than 150 feet; long, taller than 150, and the results were they sampled 28 random, select towers in 2005 and 2008. They recovered 200 birds, carcasses. The number one bird species was the ovenbird. The red-eyed vireo was number two. Indigo Bunting, the little mountain bluebird that some of you may know was number three and the yellow-billed cuckoo. The bottom line is the short towers have .05 fatalities. The tall tower had .30, six times more birds were killed on the taller than 150 foot towers.

11

1|31

MR. FASANO: Please summarize and wrap up.

MR. LEO KNOERNSCHILD: I would like to also say about the American bird conservation led coalition of other environmental organizations including the National Audubon Society working for

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over ten years with communicating industry, they came up with the FFA in proving that the towers be changed and the most significant thing about that was they reduced the bird collisions by more than 70 percent by doing a few things to the communication towers and those of you that are birdwatchers, what does contiguous mean to you? Contiguous?

MR. FASANO: Please wrap up.

MR. LEO KNOERNSCHILD: Do you know I have not and I will not give our permission for Clean Line to cross over on our property. I want to turn it over to the fourth generation much like I have lived on it. Thank you very much.

2|6

MR. FASANO: Thank you. Is Clayton Rogers here? Okay. Steve Patterson and Karl Knoernschild.

MR. PATTERSON: My name is Steve Patterson. I'm executive director of the Arkansas Advanced Energy Association and I thank you for this opportunity to comment on behalf of the AAEA regarding the proposed Plains & Eastern Clean Line project. This is the sixth public hearing held across Arkansas in over the last two weeks and we've been impressed by the comments and the sincerity that all the landowners and the affected businesses

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bring and it is our hope and trust that the Department of Energy and the developer take these into account and that this project can be completed while respecting landowner rights.

We support the Plains & Eastern Clean Line because it is a classic example of how America can modernize an aging electrical system to accommodate a growing diversity of energy resources. While the U.S. has some of the best renewable resources in the world, the transmission infrastructure does not yet exist to connect the bulk of these resources which are located predominantly in remote areas such as the Oklahoma Panhandle where I grew up to distant load centers in the east.

1|35

The Plains and Clean Line delivers wind power produced in the Oklahoma Panhandle region to utilities and customers in Arkansas and Tennessee and other markets throughout the TVA in the mid-south and southeast, areas that lack access to low-cost renewable power. The increased power density of Clean Line's high-voltage DC transmission lines allows them to carry the same amount of energy as AC transmission lines while using narrower rights-of-way and fewer towers which reduces land requirements and should simplify siting

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considerations.

Importantly for AAEA's consideration, the Plains & Eastern Clean Line will provide a host of economic benefits to Arkansas. The developer will invest an estimated half-billion dollars in the state during and after the construction of the power line. Clean Line has proposed an investment of $100 million to establish an intermediate converter station in central Arkansas, somewhere near Russellville, that will allow for the interconnection of up to 500 megawatts of new wind capacity which would power up to 160,000 homes. Increased market competition benefits electricity consumers. As the prospect of further coal retirements loom, it is critical that utilities have adequate access to the lowest-cost resources in order to keep their rates low. Wind power offers utilities in our region a reliable, low-cost insurance plan against future price and regulatory volatility as they seek to diversify their existing portfolio of electric generation.

2|24

MR. FASANO: Please summarize and wrap up.

MR. PATTERSON: The Plains and Clean Line -- I'm talking too slow, I guess. The Plains and Clean Line and the new wind farm made possible

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by the transmission line will create demand for manufacturers. You've already heard from some of those tonight. In addition to the 400 manufacturing jobs that this will support, DOE's own estimate is more than a 1,000 jobs will be engaged in Arkansas directly or indirectly during construction. 2|24 cont.

AAEA believes that Plains and Clean Line will pay its fair share of property and other land-use taxes throughout the life of the project and we are proud to encourage the Department of Energy to approve this project. Thank you. 3|6 3|6

MR. FASANO: Thank you. Karl Knoernschild and then Brad Hill.

MR. KARL KNOERNSCHILD: My name is Karl Knoernschild. I live in Broken Arrow, Oklahoma. I am here because I have relatives here in Arkansas. In fact, I grew up here in Arkansas. When I was about ten years old, I remember my grandpa, we didn't have electricity. We sat in the house with a stove and a fire and we had a very, very good time, but as time went on, we -- when I got about ten years old, we finally got electricity and we -- everything went pretty good, but I just picked up a company here that does work with electricity. It's the EM Watch company and they show what electricity

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can do to you, to you and to your children. This electricity will -- is very dangerous to small children, to -- actually, to everyone because the exposure to electricity will cause brain damage, it will cause childhood and adult leukemia, it will give you Lou Gehrig's disease and it also gives Alzheimer's disease. It also will produce breast cancer in the women and men. It causes miscarriages with children, birth defects and very many other activities. 1|15

These are alternatives to -- what I meant to say is we need alternatives to what we're talking about here tonight and --

MR. FASANO: Are you okay, sir?

MR. KARL KNOERNSCHILD: -- to top it off, I am not for this program. I think that we need to find other ways to get cleaner and other ways to do what we need to do. Thank you.

MR. FASANO: Thank you very much for your time. Brad Hill and then Brandon Resecker.

MR. HILL: My name is Brad Hill and I'm from Little Rock.

MR. FASANO: A little closer in to the mic, please.

MR. HILL: Sure. I'm from Little Rock and

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I'm very opposed to the project. I have several thoughts here. Many of them have been touched on. The first is a question and I'm wondering what were the requisites for the path layout? Were the very best practices used then? Were there any failsafe measures utilized so that people who didn't know about this until last month could have been more active in the process? I think it's unconscionable, unconscionable that the proposed path would put even one homeowner at risk, even one, but as you probably know, there are a multitude of us whose homes are threatened.

MR. FASANO: Closer to the mic, please. Thank you.

MR. HILL: And I wonder what value, what socioeconomical value, or better yet, what dollar value the study places on a destroyed family? I bet they'd be afraid to even say. $5,000? What about a destroyed farm, what's that worth, 20,000, 200,000? I'll tell you one thing, my place is going to be worthless to me if this proposed line is built. I want to emphasize proposed line. 1|6

A recent court case I was reading about today -- and I would like to reiterate I believe there has been no need proven. I believe the

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company has failed to prove a need. I believe the routing is based on a flawed study. That should be easily evidenced by the extensive collateral damage. Many of these damages are permanent, irreversible. I hope the Department of Energy and its leader understands that when they make their decision.

Additionally, I believe the company has failed to prove that they are capable of financing the proposed construction. They don't have it, so with that being the case, who does the cost fall on? The state, ratepayers, taxpayers, Department of Energy? 2|4A

MR. FASANO: Please summarize and wrap up.

MR. HILL: This kind of says it all, the company, all the shell companies, the limited liability corporations are attempting to capitalize and profit from the potential of exploiting the government's power of eminent domain. That's what this is about, folks. 3|6

MR. FASANO: Wrap up, please. Please wrap up.

MR. HILL: I'm sure a lot of folks have been promised fair market value. Fair market value is an agreed-upon price between a willing buyer and a willing seller. I bet there's a lot of unwilling

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sellers out there that have been told they're going to be paid a fair market value. Don't believe it, it's not true, you won't be. You'll end up holding the bag.

And by the way, I resent the company referring to me as a stakeholder. That's some more intentional deceit. It's made to sound like a shareholder.

MR. FASANO: Please finish, Mr. Hill.

MR. HILL: They should call them bagholders.

MR. FASANO: Please finish, Mr. Hill. We're over the time limit, please. We're well over.

MR. HILL: When the true, complete costs of this proposed project are fully analyzed, it will be evident that this will not be cheap energy as claimed. It's not cheap and it's not clean. The lines will transmit coal energy, any other energy. The wind is a myth, it can't fill the lines. We're being deceived on many different levels here, folks. We're being denied process and we're losing our rights, freedom, our liberties.

MR. FASANO: Thank you for your comments, Mr. Hill.

MR. HILL: Thank you.

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MR. FASANO: Brandon Resecker and Michael Bajorek.

MR. RESECKER: My name is Brandon Resecker. I am the senior vice president of our energy division --

MR. FASANO: Closer to the mic.

MR. RESECKER: -- at Crafton Tull. We are based out of Conway, our energy division is, but with that being said, I am a Conway County resident. Crafton Tull, we have a 100 employees in our Conway energy division. Out of those 100 employees, 35 of them are UACCM alumni with two of them that are currently enrolled in the school. We have 16 employees that are residents of Conway County, 16 different families that we support in our energy division. With that being said, we are very vested in Conway County. I love Conway County. I have been raised here. I will raise my kids here.

But with that being said, Crafton Tull and I, we support this project. This project will bring so many opportunities to us it's unreal and Conway County is set up to really capitalize on them. It brings clean alternative and low-cost energy to homes, over 160,000 homes in Arkansas. The Plains & Eastern will pay millions of dollars annually to

1|35

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local communities that holds this transmission line. This is revenues that we can use to support our local schools and to me, that's important. I have a kid with another kid on the way.

Another thing that this will do as everybody's heard, it will boost jobs and I know there's a lot of doubt that it will boost Arkansas jobs, but I can say without hesitation it will. You all have seen and I just told you how many employees we employed from Conway County, from UACCM in various forms. We have done preliminary survey work on this project setting control and other miscellaneous surveys up. We feel like it will take at least 50 surveyors to accommodate this project. With that being said, that is a lot of jobs for Arkansas and I don't know how many people know this, but there's only two schools in the state of Arkansas that offer surveying degrees and UACCM is one of them. That's a lot of jobs for these students.

I want to wrap up by saying, Clean Line probably never knew this, we did a -- we worked with them on projects, several projects. We went to their office to talk to them about a project and we had -- some of my guys went to their office to talk

2|24

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to them about a project. When they come back, I asked them what's the story, how it went and everything like that. And we got to talking and I said, okay, well, what was important, where did they want to start the line, where do they want to finish? And they said the most important thing that was talked about in that meeting was making sure that we did not impact the landowners at all. That was not going out there --

MR. FASANO: Please, let him finish his comments.

MR. RESECKER: We make sure we stayed out of their way. I understand that you all are frustrated and I understand.

MR. FASANO: Please wrap up.

MR. RESECKER: I can assure you that they will do whatever they can to make sure everybody is happy.

MR. FASANO: Thank you. Please, folks, let's finish up. Michael Bajorek and Jimmy Hart.

MR. BAJOREK: Good evening. My name is Michael Bajorek. I come from a farming family. My grandfather had a farm in Cleveland County on an old gravel road that was 60 acres. My grandfather had a pond, that's where my brother and I learned to fish.

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We caught brim as long as my grandfather would bait that hook. We learned to swim in that pond. We later on when we got big enough to work, my mom and dad started a farm. When I was this big, I carried one piece of wood a quarter of a mile one way and when I got this big, I would carry two pieces of wood a quarter of a mile one way and walked past a tractor going and coming. And I asked my mother one day, I said, mother, when are we going to use that tractor? She said, when we really need it. Well, I thought we'd been needing it for years, but it wasn't until later on in my life my mother said, Michael, we couldn't afford gasoline to put in that old tractor to haul wood a quarter of a mile one way.

We used to drag brush, we cleared 20 acres of timber hardwood across the street from my mom and dad's farm. Every time we cut a tree, we'd drag the brush over in the trail, that way you didn't have to wade the muddy, frozen muck a quarter mile each way to carry that wood out. When I was 14, I bought my first vehicle, a '49 Ford flathead V-8 with a wood bed on it to haul wood out of the woods for a quarter mile each way.

As I got older, my grandfather, he passed.

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Twelve or so years later, my grandmother passed. The farm was divided up in six parcels. Over the years, my mother and dad has bought the farm back up, half of it. We cut wood, split wood, hauled, delivered it, $5 a rick. We did without. We worked hard. We paid taxes. We continue to pay taxes. The four acres across the street from my mother's, my godmother gave that to me. I got ready to build seven years ago and guess what? I couldn't get water utilities because my land would not pass a perc test. Oak trees that big around, canopy over the whole piece of property. So I went to Plan B, I would go to Cleveland County, ten miles south of Heber Springs, Arkansas at Greers Ferry Lake. That little gravel road is not a gravel road no more.

MR. FASANO: Please wrap up.

MR. BAJOREK: There's big houses everywhere. We planned to move there. Okay, they're wanting to come up in the middle of my ten acre strip and put a tower. That's my piece of hallow ground. My grandfather walked on it when I was like this. I've got a grandson I plan on walking with him when he's like this. I will bait his hook until he learns to.

MR. FASANO: You need to finish up, sir.

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MR. BAJOREK: I will.
MR. FASANO: Thank you.
MR. BAJOREK: I went to Searcy a week ago Tuesday. I listened to this in shock. My mother, my 75-year-old mother, got a card right at Christmas. She wouldn't tell Michael until after January 1 so Michael wouldn't be pissed off all during the holidays. When Michael's not happy, ain't nobody happy.
MR. FASANO: Please finish up, sir.
MR. BAJOREK: I'll get there.
MR. FASANO: Please.
MR. BAJOREK: I got to looking at it on this, they wrote this down like they sprinkled some fairy dust on it and explained it to everybody like you're a bunch of slow, uneducated, inbred, redneck hillbillies. Arkansas is one of the most generous people in the country so don't come up in here trying to take it from us. That's another story.
MR. FASANO: You need to finish up, sir.
MR. BAJOREK: I'll get there. I'll get there.
MR. FASANO: You're well over your time period.
MR. BAJOREK: I know this is your job, but

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I made this my job.
MR. FASANO: Finish up, please, sir, you're well over your time limit. We're respecting the time limit.
MR. BAJOREK: I don't have time. Time goes by. With the blink of an eye, you've lost 20 years has passed you by. I want to spend my last 20 years on my granddaddy's home place. You can't build on -- and this is on highway, state highway frontage. I can't build on the front of it because there's going to be a tower. I can't move on the back of it because there's going to be a tower. 1|6
MR. FASANO: Sir, you're over your time.
MR. BAJOREK: Not once have I heard any solid numbers of compensation. This is eminent domain for a private corporation. Do you think a small LLC -- you know what LLC stands for, don't you? Limited liability.
MR. FASANO: Please finish up, sir.
MR. BAJOREK: They aren't going to spend $2 million --
MR. FASANO: -- summarize, sir.
MR. BAJOREK: -- unless they plan on making $4 million and they'll sell it to somebody else, another shell company and then we'll all have

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to deal with them. Just food for thought.

MR. FASANO: Are you finished yet?

MR. BAJOREK: God may have mercy on them, but the people from the great state of Arkansas won't.

MR. FASANO: Thank you. Jimmy Hart and then the last speaker is Clayton Rogers if he came back.

MR. HART: Thank you very much. My name is Jimmy Hart and I'm a Conway County Judge. How many folks we got here from Conway County tonight? Thank being here.

MR. FASANO: Can you lean into the mic a little bit more, please?

MR. HART: Yes, sir, sure will. I can handle that.

MR. FASANO: Thank you.

MR. HART: You know, I think this project is about as much as it needs to be looked at as anything is need and necessity. You know, obviously, this is my 15th year as county judge and I don't mind to tell you, I've had a dose of eminent domain, didn't leave a real good taste in my mouth. Took six years and seven months to settle with the electric company. You know, people of Conway

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County, what I've got to deal with is the phone calls I get on this project because they know it will bring a lot of jobs. Sure, it's going to bring some jobs. It will create some tax base, although I question that sometimes, but the thing I think we've got to look at is the impact on people's livelihoods that are out there on those farms and those places being taken. 1|24

You know, I say this, you'd love to see -- and I mentioned that 15 years because of the Chief Executive Officer of Conway County. I have done -- for a landlock issue, I have done one taking in my career and that was only for individuals. I am not a big proponent of eminent domain. I like the bills that have been introduced by Senator Bozeman and Senator Cotton about being able to go across public lands and federal lands. I think it's a good idea. I think we really need to consider looking at this project on that basis and what we need to do with private property owners is probably take the -- that tool in the toolbox I've been told as far as eminent domain when it comes to private property owners, maybe we need to take a look about taking another way and using it on public lands and federal lands or corporate lands and let's leave our private 2|8

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property owners alone. Thank you.

MR. FASANO: Is Clayton Rogers here?

Okay. That does it then. Thank you once again for your participation and your comments. The experience has been challenging and rewarding for the team that has been out for four weeks for the public that had come to these meetings, but it certainly has been an important part of the process. I understand the passionate viewpoints on both sides. Thank you for helping me do my job this evening, especially with the time limits. Please remember that you may continue to submit comments on the Draft EIS until the comment period closes on April 20th. This public hearing is adjourned at 8:37 p.m. Thank you again.

(HEARING CONCLUDED AT 8:37 P.M.)

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C E R T I F I C A T E

STATE OF ARKANSAS)
) SS:
COUNTY OF WASHINGTON)

I, Kerri Pianalto, Certified Court Reporter within and for the State of Arkansas, do hereby certify that the above PUBLIC HEARING was by me taken and transcribed pursuant to agreement; and that I am not an attorney for nor relative of any of said parties or otherwise interested in the event of said action.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 25th day of February, 2015.

KERRI PIANALTO, CCR
State of Arkansas, No. 651

Comments Received after April 27, 2015

From: Dwight Bailey
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 4:37:55 AM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

Finally, the Department of Energy estimates Clean Line wind power will reduce carbon dioxide (CO2) emissions by up to 14,000,000 tons per year. That's about as much carbon dioxide released by 1.9 million homes' electricity use for one year, or about four coal-fired power plants. CO2 is a primary greenhouse gas, as well as contributor to ocean acidification.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Dwight Bailey
893 John Alden Rd
Stone Mountain, GA 30083

From: Chelsea Barnes
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 7:33:04 AM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

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Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Chelsea Barnes
2505 TRYON PINES DR
RALEIGH, NC 27603

From: Randy Bernard
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 1:07:09 PM

To Whom It May Concern:

The proposed Plains and Eastern Clean Line transmission project would greatly expand wind energy access to the Southeast. The project could positively impact land and natural resource use.

While the Plains and Eastern Clean Line project will use land, this project may actually help reduce natural resource usage overall. As noted in the EIS, the project would likely displace other forms of energy usage, like coal or natural gas powered generation.

Compared to other threats to land use, the Clean Line project uses a relatively small amount of land. According to the Farmland Information Center, nearly 2.5 million acres of rural land was lost to development nationwide from 2007-2010. That's a loss of about 0.2% out of the nearly 1.4 billion acres of rural land. According to the National Resources Inventory by the U.S. Department of Agriculture, the United States loses about an acre of agricultural land every minute. Additionally, every year, about 7-11 million acres of cropland fails or is abandoned. That's about 3-5% of all cropland. Specifically in Arkansas, Oklahoma, Tennessee and Texas, about 122,000 acres of agricultural land are lost annually across the four states due to development.

Given that Clean Line's one-time-use of 5,916 acres is a very small portion of rural land development, many of the acres used can ultimately be returned to production, the project footprint is smaller than other forms of existing power generation, and that the clean wind power produced can offset the negative effects that other energy resources have on natural resources and public health, it's clear the Plains and Eastern Clean Line project is a net benefit to land and natural resource conservation.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Randy Bernard
18 Plateau Rd.
Asheville, NC 28805

From: Lee Blackburn
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 9:40:17 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Lee Blackburn
Pincott St
Pataskala, OH 43062

From: Dan Bruer
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 9:25:22 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Dan Bruer
5933 Dunbarton Way
Raleigh, NC 27613

From: Pat Carter
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 9:05:43 AM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

The Department of Energy estimates Clean Line wind power will reduce carbon dioxide (CO2) emissions by up to 14,000,000 tons per year.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Pat Carter
155 Canterbury
Athens, GA 30606

CLEAN LINE ENERGY PARTNERS LLC
EIS-0486 - Plains & Eastern Clean Line Transmission Project
Information Provided to TetraTech / Department of Energy
Regarding: Recent Correspondence with the City of Fort Smith, Arkansas
Submitted: September 18, 2015

Summary of Recent Correspondence

This transmittal provides supplemental information regarding the Applicant Proposed Route (APR) Region 4 Link 3 and the Lee Creek Variation. Clean Line recently obtained new information from the City of Fort Smith's (Arkansas) Utility Department (Utility Department) about potential sensitive resources and future management plans related to the Lee Creek Reservoir (Reservoir).

Clean Line met with representatives from the Utility Department on August 24, 2015 to discuss Region 4 Link 3 Variation 3 and the Lee Creek Variation in Region 4 in Crawford County, Arkansas, and Sequoyah County, Oklahoma. During the meeting, representatives from the Utility Department provided new information regarding a potential historic or cultural resource and the City's long-range planning objectives for the Reservoir.

The Utility Department discussed the future possibility of raising the water level in the Reservoir to 462' above mean sea level (AMSL) to meet drinking water demands of the Utility Department's customers. This long-term objective is explained on pages 15-16 of the project's Federal Energy Regulatory Commission (FERC) March 24, 1988 Order Issuing License for project number P-5251. A copy of this 1988 FERC license and a recent map produced by the Utility Department and provided to Clean Line are attached to this transmittal for further reference.

During the meeting, Mr. Steve Parke (Director, Utility Department) and Mr. Lance McAvoy (Environmental Manager, Utility Department) stated that the Project and any potential route in proximity to the Reservoir should take into account the potential for future expansion of the Reservoir's flooded area.

Following the meeting, the Utility Department provided more information to Clean Line via email about the location of the potential historic or cultural resource and potential future water levels at Lee Creek Reservoir.

This correspondence included:

- An email from Mr. McAvoy to Mr. Hank Seltzer (Environmental Associate, Clean Line) on September 14, 2015, that included an attached topographic map depicting the following features:
    - Lee Creek, indicated by the royal blue linear feature running from west to east;
    - The current operating water level at Lee Creek Reservoir, indicated by the thicker royal blue polygon at the eastern end of the map;
    - The land potentially targeted for future acquisition by the City to accommodate a Reservoir level of 462' AMSL, indicated by the larger red polygon; and
    - Land currently owned in fee by the City of Fort Smith; indicated by the areas shaded in blue.

- An email from Mr. McAvoy to Mr. Seltzer on September 14, 2015, that included:
    - A map depicting an approximate location for the potential cultural or historic resource identified by the Utility Department.

This correspondence and attachments are attached hereto.

Attachments:

- *Attachment A: Correspondence from City of Fort Smith and attachments.*
- *Attachment B: March 24, 1988 FERC Order Issuing License (Minor)*

Attachment A

Correspondence from City of Fort Smith and Attachments

From:	Mcavoy, Lance
To:	Hank Seltzer
Subject:	RE: Draft 8/24 meeting minutes and additional information CRM:0060003
Date:	Monday, September 14, 2015 8:16:40 AM
Attachments:	Lee Creek Water Supply Ownership Map-Layout1.pdf

Hank,

Here is some of the data. Please feel free to pass on to those who need it. We are still working on getting other items ready for you. I have an ADEQ audit this week and have been busy with items for it. Thank you for your patience.

Lance A. McAvoy,
Environmental Manager
Fort Smith Utility Department
City of Fort Smith

Protecting Our Resources Through Sound Science
Reduce, Reuse, Recycle
Please consider the environment before printing any electronic document

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From: Hank Seltzer [mailto:HSeltzer@cleanlineenergy.com]
Sent: Tuesday, September 08, 2015 12:01
To: Mcavoy, Lance <LanceM@FortSmithAR.gov>
Cc: Jason Thomas <JThomas@cleanlineenergy.com>
Subject: RE: Draft 8/24 meeting minutes and additional information CRM:0060003

Good morning, Mr. McAvoy:

Hope you had a nice holiday weekend. Have you had an opportunity to review the notes from our meeting a few weeks ago? In the meantime, I'm working to complete our follow-up items referenced in the notes.

Thanks,

Hank

From: Hank Seltzer
Sent: Thursday, August 27, 2015 5:49 PM
To: 'Mcavoy, Lance' <LanceM@FortSmithAR.gov>
Cc: Jason Thomas <JThomas@cleanlineenergy.com>
Subject: Draft 8/24 meeting minutes and additional information CRM:0060003

Good afternoon, Mr. McAvoy:

On behalf of Clean Line, thank you and Mr. Parke, Mr. Clover, and Mr. Guthrie for taking the time to meet with us earlier this week at the Utility Department's offices. We value the information you shared with us during the meeting and look forward to following up on several items that we discussed on Monday.

Attached to this email are draft meeting minutes from Monday that I hope accurately reflect our discussion. Please review these draft minutes and make corrections or suggest revisions as you see fit. Once you are finished reviewing, please return your revised copy to me and I will assemble a pdf document that contains the final meeting minutes and a copy of the presentation we provided. I will distribute a final document to you for your records when completed.

In addition, there are two other attachments to this email:

1. Shapefiles of the Variation to the Applicant Proposed Route that we discussed (Region 4, Link 3, Variation 3). Recall that this Variation was developed in response to the City of Fort Smith's and other stakeholders' comments to the DOE on the DEIS. These shapefiles include a 200' representative right-of-way and a 1,000' corridor around the Variation's centerline.
2. A copy of the DEIS comment letter provided to DOE by Mr. Richard Hatcher, Director of the Oklahoma Department of Wildlife Conservation. We discussed this on Monday and I think you will find it useful when evaluating Region 4 Link 3 Variation 3.

Finally, here is contact information for Dr. Jane Summerson, DOE's NEPA Document Manager for the Plains and Eastern project. I understand that Dr. Summerson is currently on vacation and is expected to return sometime the week of September 8th.

Jane Summerson, Ph.D.
DOE NEPA Document Manager
U.S. Department of Energy
NNSA
PO Box 391 Building 401
Kirtland Air Force Base East, Albuquerque, NM 87185
Email: Jane.Summerson01@nnsa.doe.gov
Phone: (505) 845-4091

If you would like a response from DOE or its NEPA consultant (Tetra Tech) sooner than September 8th, I encourage you to try one (or both) of the following email addresses:

info@plainsandeasterneis.com OR CES.CommentsPlainSan@tetratech.com

I look forward to receiving your feedback on the meeting minutes and continuing our dialogue. Should you need anything between now and then, you are always welcome to contact me.

Regards,

Hank

Hank Seltzer

CLEAN LINE ENERGY PARTNERS LLC
Nashville, Tennessee

CELL 615.218.6124
FAX 832.319.6311
hseltzer@cleanlineenergy.com
WWW.CLEANLINEENERGY.COM

Lee Creek Water Supply

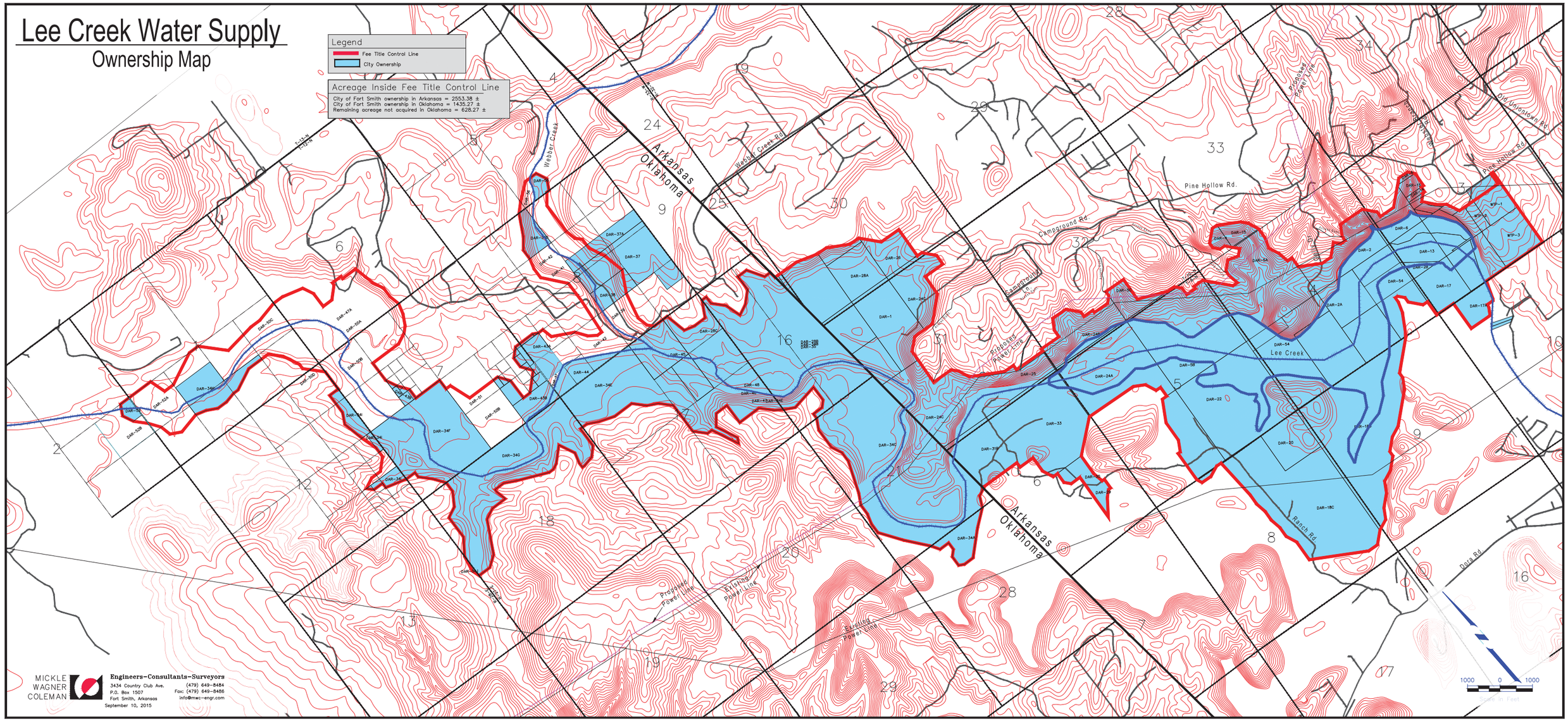
Ownership Map

Legend

- Fee Title Control Line
- City Ownership

Acreage Inside Fee Title Control Line

City of Fort Smith ownership in Arkansas = 2553.38 ±
City of Fort Smith ownership in Oklahoma = 1435.27 ±
Remaining acreage not acquired in Oklahoma = 628.27 ±



MICKLE WAGNER COLEMAN

Engineers-Consultants-Surveyors
3434 Country Club Ave.
P.O. Box 1507
Fort Smith, Arkansas
(479) 649-8484
Fax: (479) 649-8486
info@mwc-engr.com

September 10, 2015

September 22, 2015

Stephen E Clair
992 Walnut Valley Lane
Dover Arkansas, 72837
Mailing: PO Box 1330
Dover Arkansas, 72837
479-331-0090

Attn: **Jane Summerson, Ph.D.**
DOE NEPA Document Manager
U.S. Department of Energy
NNSA
PO Box 391 Building 401
Kirtland Air Force Base East, Albuquerque, NM 87185

Dr. Summerson;

We understand the need for clean energy. We are not opposed to clean energy solutions.

We are deeply concerned that the proposed route "Region 5 APR Link 1 (HVDC Applicants Proposed Route)" that is located north of Dover, Arkansas, routes through a legal binding covenant (Walnut Valley Estates Phase 1 of 2). Walnut Valley estates Phase 1 is ~ 120 Acres and currently resides 5-8 residents of homes that are of high quality. In addition "Region 5 APR Link 1 (HVDC Applicants Proposed Route)" also impacts the new addition of ~ 110 Acres purchased recently (Walnut Valley Estates Phase 2) to expand the covenant subdivision which will include another additional 20 lots.

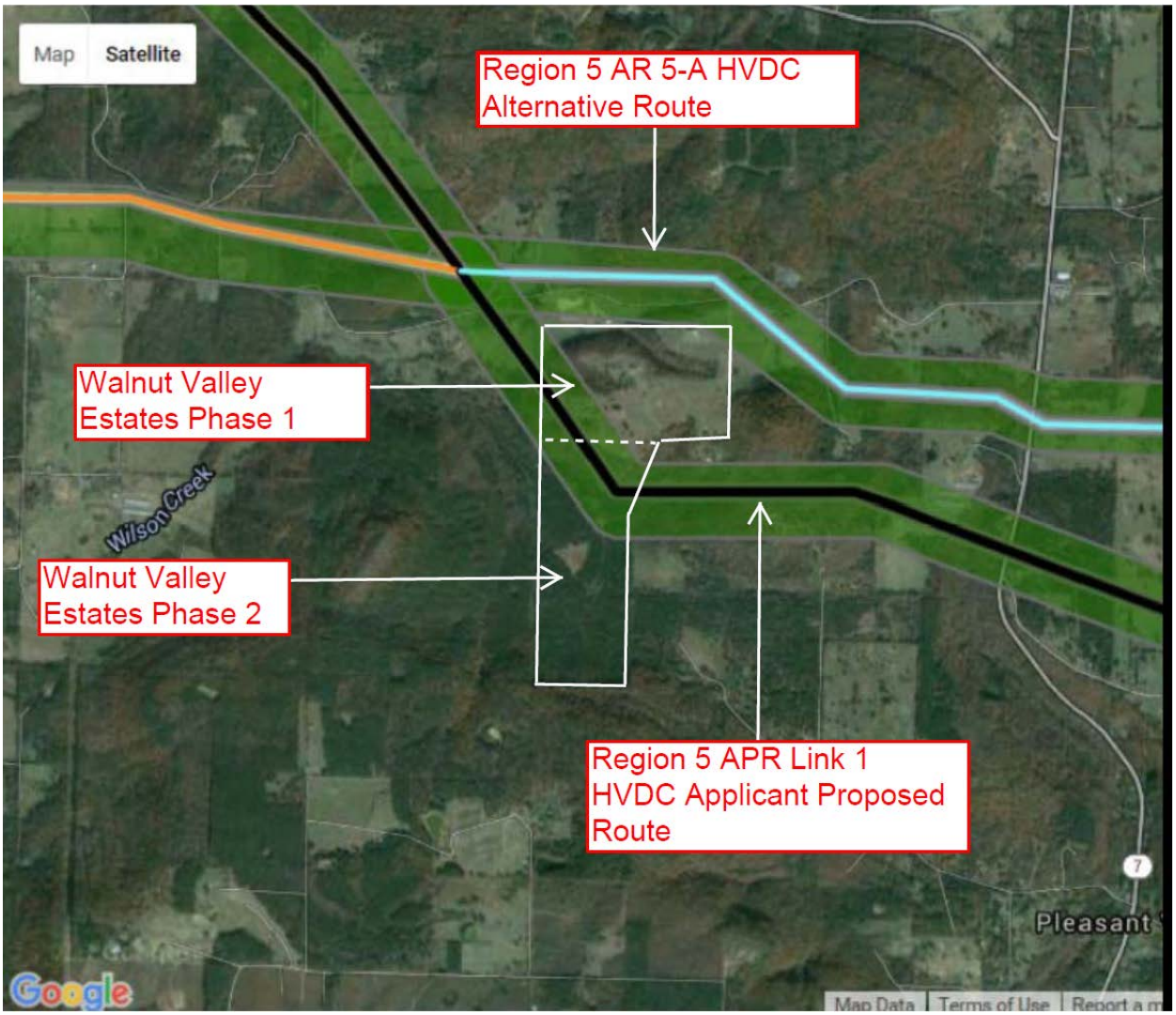
The covenant subdivision requires all utilities to be buried (see covenant agreement also provided page 4 of 6). The covenant subdivision has strict enforcements on architecture and lawn care and comprised of homes that are of significant value.

The proposed route "Region 5 APR Link 1 (HVDC Applicants Proposed Route)" impacts 5-8 homes within the legal covenant.

We are opposed of the "Region 5 APR Link 1 (HVDC Applicants Proposed Route)". Please consider route "5 AR 5-A (HVDC Alternative Route)" as the proposed route. See illustration below.

There are minimal residing residents in the alternative route 5 AR 5-A (HVDC Alternative Route)". The alternative route also has minimal impact in the area of the legal binding covenant.

Sincerely, Steve Clair on behalf of the residents of Walnut Valley Estates.


Map
Satellite
Region 5 AR 5-A HVDC Alternative Route
Walnut Valley Estates Phase 1
Wilson Creek
Walnut Valley Estates Phase 2
Region 5 APR Link 1 HVDC Applicant Proposed Route
Pleasant
Google
Map Data
Terms of Use

Please see page 4 or 6, item #11.

SEAL OF THE CIRCUIT COURT ★ POPE COUNTY ARKANSAS ★

CLERKS CERTIFICATE OF RECORD
STATE OF ARKANSAS - COUNTY OF POPE
I, FERN TUCKER, Circuit Clerk and Recorder of the County attested do hereby certify that this instrument was filed for record the 12/08/2004 03:39:37 PM. and the same is now duly recorded in Miscellaneous Book 2004-91 Page 373 - 378
Witness my hand and the seal of said court this the 12/08/2004
Fern Tucker Circuit Clerk and Recorder
By Betty Adams D.C.

BILL OF ASSURANCE AND DECLARATION OF RESTRICTIONS

WALNUT VALLEY ESTATES PHASE I

KNOW ALL MEN BY THESE PRESENTS:

That Nick Branton and Monica Branton, husband and wife and Doug Skelton and Gina Skelton, husband and wife, fee owners of the following described real estate property now duly platted as Walnut Valley Estates Phase I, in Pope County, Arkansas. Phase I of said plat is now recorded in Record Book C at Page 789-A of the records of the office of the Circuit Clerk of the County of Pope, State of Arkansas. The legal description of the entire subdivision is described as follows:

A part of the NE 1/4 and a part of the N 1/2 of the SE 1/4 of Section 6 and a part of the W 1/2 of the SW 1/4 of the NW 1/4 of Section 5, all in T-9-N, R-20-W, Pope County, Arkansas, more particularly described as follows:

Beginning at the SE Corner of the SE 1/4 of the NE 1/4 of said Section 6; thence N 17°14'52" W, 235.66 ft.; thence S 70°51'22" W, 100.09 ft.; thence S 84°25'56" W, 199.92 ft.; thence N 88°00'34" W, 216.04 ft.; thence S 86°09'00" W, 196.36 ft.; thence S 71°25'42" W, 245.96 ft.; thence S 53°53'15" W, 108.22 ft.; thence S 20°14'30" W, 159.78 ft.; thence S 02°51'26" E, 86.26 ft.; thence S 41°04'03 E, 280.63 ft.; thence N 88°49'21" W, 1688.97 ft. to a point on the West line of the NW 1/4 of the SE 1/4 of said Section 6; thence N 01°04'22" E, along said West line, 442.28 ft. to the SW Corner of the SW 1/4 of the NE 1/4 of said Section 6; thence N 01°04'22" E, along the West line thereof, 1315.03 ft. to a point on the centerline of Walnut Valley Road; thence along said centerline as follows: N 78°10'35" E, 208.77 ft.; N 83°52'12" E, 340.87 ft.; N 89°06'35" E, 101.14 ft.; S 80°32'00" E, 88.79 ft.; S 68°12'30" E, 96.05 ft.; S 64°11'35" E, 245.07 ft.; S 72°27'14" E, 112.90 ft.; S 83°35'06" E, 92.63 ft.; S 87°16'05" E, 73.61 ft; S 89°07'03" E, 293.60 ft.; N 87° 24'05" E, 382.95 ft.; N 84°11'50" E, 293.76 ft.; N 81°40'10" E, 267.60 ft.; N 86°44'00" E, 85.13 ft.; S 80°33'35" E, 88.83 ft. ; S 72°42'57" E, 133.18 ft.; S 68°39'45" E, 298.25 ft.; S 71°47'00" E, 101.48 ft.; S 85°12'50" E, 78.04 ft. to the Point on East line of the W 1/2 of the SW 1/4 of the NW 1/4 of said Section 5; Thence S 0°53'07" W, along said East line, 1137.76 ft. to a Point on the South line of said SW 1/4 of the NW 1/4 of Section 5; Thence N 89°22'09" W, along said South Line, 664.16 ft. to the Point of Beginning. Containing 108.87 acres, more or less. Subject to any right of way dedications and easement of record.

That the following are declarations as to limitations, restrictions, and uses to which the lots or tracts constituting **WALNUT VALLEY ESTATES PHASE I** may be put,

04-91-373

and GRANTORS hereby specify that such declarations shall constitute covenants to run with all the land, as provided by law, and shall be binding on all parties and all persons claiming under them and for the benefit and limitations on all future owners in said subdivision, this declaration of restrictions being designated for the purpose of keeping said subdivision desirable, uniform, and suitable in architectural design and use as specified herein.

1. No building or structure of any kind whatsoever other than a single family dwelling of at least 1800 square feet of heated and cooled living area or related structures shall be erected on each building lot, and all such dwellings shall be used for residential purposes only. Each dwelling shall have an enclosed two car garage or two-car carport that matches the architectural exterior of the home and there shall be only one dwelling per lot.

2. No Mobile home, Manufactured home, trailer, tent, shack, metal or wood outbuilding or other outbuilding shall be erected or moved onto the premises. A landowner shall be permitted to build a barn for horses provided the barn is located behind the dwelling and the exterior of the barn conforms with the architectural design of the dwelling.

3. No house, appurtenance or outbuilding shall be less than ten (10) feet from the side of any lot.

4. No portion of any home, appurtenance, or outbuilding shall be less than twenty-five (25) feet from the front or rear line of any lot. For purposes of this restriction, windows, porches, eaves, gutters, and other normal projections from said building shall not be considered a portion of any house, appurtenance or outbuilding.

04-91-374

5. No animals, livestock, or poultry, with the exception of horses and no more than three (3) shall be raised, bred, or kept on any lot, except that dogs, cats, or other household pets may be kept, provided that they are not kept, bred, or maintained for any commercial purposes. No Pit Bull, Rotwiller, Doberman or chow dogs will be allowed or any other dog with a vicious disposition.

6. Iron pins have been set on all lot corners and points of curve, and all curve data as shown on the attached plat is centerline curve data. In the event of minor discrepancies between the dimensions or distances as disclosed by the established pins, the original pins as set shall control.

7. No oil drilling, oil development operations, oil refining, quarrying or mining operations of any kind shall be permitted upon or in any lot, nor shall oil wells, tanks, tunnels, mineral excavations or shafts be permitted upon or in any lot. No derrick or other structure designed for use in boring for oil or natural gas shall be erected, maintained or permitted upon any lot.

8. No inoperative vehicles shall be parked or allowed to remain on any lot in said subdivision. No wooded area on any lots shall be commercially logged or clear-cut.

9. There shall be no open burning of trash, rubbish or other similar materials on any lot.

10. Persons, firms or corporations engaged in supplying electric power, gas, telephone, water and sewer shall have the right to use and occupy said easements of way and streets for the installation, maintenance, repair and replacement of such utility services. Other easements for the installation, maintenance, repair and replacement of utility services and drainage have been reserved, said easements being of various

04-91-375

widths, reference being made to the recorded plat for a more specific description of width and location. The agents, servants and employees of any parties giving any utility service shall have the right of ingress to and from and in, over, and across said easements. In the event any improvements, trees, fences, or other hindrances are grown, built or maintained within the areas of such easements, no utility shall be liable for the destruction or repair of the same.

11. It is specifically agreed that utilities ran from the road and utility easement, reference being made to the recorded plat, shall be underground, including but not limited to, water, electric and telephone.

12. There shall be no change in the Bill of Assurance, either by termination or amendment unless such change has been agreed to by each utility having facilities situated in this addition.

13. These convenants and restrictions shall be binding upon all parties and all persons claiming under them until twenty (20) years from the date of this instrument, at which time said convenants and restrictions shall automatically be extended for successive periods of ten years from each termination, unless a majority in area of the owners of the lots agree in writing to amend said covenants and restrictions, either in whole or in part, except no easements may be changed. So long as the original fee owners own more than forty percent (40%) of the lots in the subdivision they shall be permitted to modify the lots and make modifications to the Bill of Assurances to ensure the intent of the Bill of Assurances is carried out.

14. Each and all of the covenants, conditions, restrictions, and agreements contained herein shall be deemed and construed to be continuing, and the extinguishment of any right of re-entry or reversion for any breach shall not impair or

04-91-376

affect any of the convenants, conditions, restrictions, or agreements, so far as any future or other breach is concerned. It is understood and agreed by and between the parties hereto that no waiver of a breach of any of the convenants, conditions, restrictions, and agreements herein contained shall be construed to be a waiver of any other breach of the same, or other convenants, conditions, restrictions, and agreements; nor shall failure to enforce any one of such restrictions, either by forfeiture or otherwise be construed as a waiver of any other restrictions or condition.

15. It is expressly agreed that if any convenant or condition or restriction hereinabove contained, or any portion thereof, is invalid, or void, such invalidity or voidness shall in no way affect any other convenant, condition or restriction.

16. In addition to the remedies set forth above, GRANTORS reserve the right to enforce any covenants, conditions, or restrictions contained herein by any other appropriate action at GRANTORS' option.

IN WITNESS WHEREOF, GRANTORS hereunto set their hands and seals this 8th day of December, 2004.

WM. DOUGLAS SKELTON

GINA MARIE SKELTON

CHARLES NICHOLAS BRANTON

MONICA BRANTON

04-91-377

ACKNOWLEDGEMENT

STATE OF ARKANSAS)
) SS.
COUNTY OF POPE)

Be it Remembered, that on this day came before me, the undersigned, a Notary Public, within and for the county aforesaid, duly commissioned and acting, Wm. Douglas Skelton, Gina Marie Skelton, Charles Nicholas Branton and Monica Branton, to me well known as the GRANTORS in the foregoing instrument, and stated that they had executed the same for the consideration and purposes therein mentioned and set forth.

WITNESS my hand and official seal as such Notary Public on this 8th day of December, 2004.

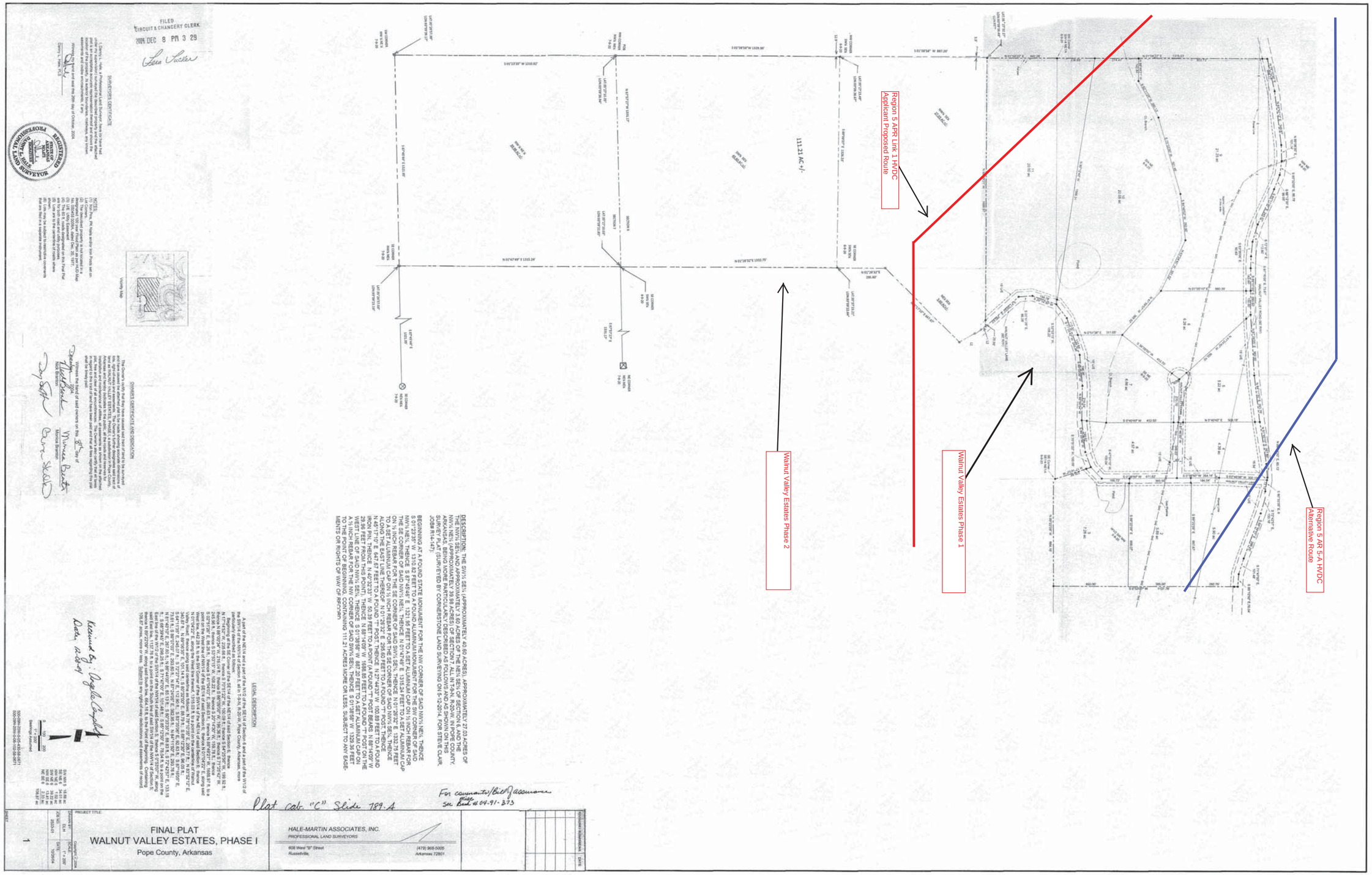
KRISTIN JAYNE CLARK
Notary Public
POPE COUNTY, ARKANSAS
My Commission Expires 8-19-2008

Kristin Jayne Clark
NOTARY PUBLIC

COMMISSION EXPIRES: 8-19-2008

This instrument prepared by
NAME Skelton Law Firm
ADDRESS 414 E. Parkway
Russellville, Ar.

04-91-378


Region 5 APR Link 1 HVDC
Applicant Proposed Route
Walnut Valley Estates Phase 2
Walnut Valley Estates Phase 1
Region 5 AR 5-A HVDC
Alternative Route
111.21 AC +/-
FILED
CIRCUIT & CHANCERY CLERK
2004 DEC 8 PM 3 29
SURVEYOR'S CERTIFICATE
OWNER'S CERTIFICATE AND DEDICATION
Vicinity Map
LEGAL DESCRIPTION
DESCRIPTION: THE SW¼ SE¼ (APPROXIMATELY 40.60 ACRES), APPROXIMATELY 27.03 ACRES OF THE NW¼ SE¼ AND APPROXIMATELY 43.58 ACRES OF THE NE¼ SE¼ SECTION 1, ALL IN T.5N., R.20W., IN POPE COUNTY, ARKANSAS, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS AND AS SHOWN ON THIS SURVEY PLAT (SURVEYED BY CORNERSTONE LAND SURVEYING ON 5-12-2014 - FOR STEVE CLAIR, JOB R14-147):
BEGINNING AT A FOUND STATE MONUMENT FOR THE NW CORNER OF SAID NW¼ NE¼, THENCE S 01°23'35" W 1310.62 FEET TO A FOUND ALUMINUM MONUMENT FOR THE SW CORNER OF SAID NW¼ NE¼, THENCE S 01°23'35" W 1315.24 FEET TO A FOUND ALUMINUM MONUMENT FOR THE SE CORNER OF SAID NW¼ NE¼, THENCE N 01°34'58" E 1315.24 FEET TO A SET ALUMINUM CAP ON ½ INCH REBAR FOR THE SE CORNER OF SAID SW¼ SE¼, THENCE N 01°38'32" E 1332.75 FEET TO A SET ALUMINUM CAP ON ½ INCH REBAR FOR THE SE CORNER OF SAID NW¼ SE¼, THENCE ALONG THE EAST LINE THEREOF, N 01°34'58" E 1315.24 FEET TO A SET ALUMINUM CAP ON ½ INCH REBAR FOR THE NE CORNER OF SAID NW¼ SE¼, THENCE N 48°17'10" E 647.67 FEET TO A FOUND ¾" POST, THENCE N 27°44'33" W 100.89 FEET TO A FOUND IRON PIN, THENCE N 40°32'33" W 50.39 FEET TO A POINT (A FOUND ¾" POST BEARS N 88°14'00" W 28.98 FEET FROM THIS POINT), THENCE N 88°14'00" W 1329.36 FEET TO A POINT ON THE WEST LINE OF SAID SW¼ SE¼ (A FOUND ¾" POST BEARS N 88°14'00" W 28.98 FEET FROM THIS POINT), THENCE N 01°38'58" W 887.20 FEET TO A SET ALUMINUM CAP ON A ½ INCH REBAR FOR THE NW CORNER OF SAID SW¼ SE¼, THENCE S 01°38'58" W 1329.36 FEET TO THE POINT OF BEGINNING, CONTAINING 111.21 ACRES MORE OR LESS. SUBJECT TO ANY EASEMENTS OR RIGHTS OF WAY OF RECORD.
Plat Cat. "C" Slide 789-A
For comments/Bill of assessment
See Book 14 04-91-373
FINAL PLAT
WALNUT VALLEY ESTATES, PHASE I
Pope County, Arkansas
HALE-MARTIN ASSOCIATES, INC.
PROFESSIONAL LAND SURVEYORS
608 West "B" Street
Russellville, Arkansas 72801
(479) 968-5005
1

From: Mcavoy, Lance
To: Hank Seltzer
Subject: RE: Draft 8/24 meeting minutes and additional information CRM:0060003
Date: Monday, September 14, 2015 1:44:33 PM
Attachments: 20150914110741.pdf

Hank,

Here is what I was able to get today. The narrative on the wild life area is in the PDF and the jpg give the cemetery location.

I'm still checking on the shape files.

Let me know if you have any other questions or need anything else. I am sending these to you and have not sent anything to DOE. Please forward the information to Jane.

Thank you,

Lance A. McAvoy,
Environmental Manager
Fort Smith Utility Department
City of Fort Smith

Protecting Our Resources Through Sound Science
Reduce, Reuse, Recycle
Please consider the environment before printing any electronic document

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From: Hank Seltzer [mailto:HSeltzer@cleanlineenergy.com]
Sent: Thursday, August 27, 2015 17:50
To: Mcavoy, Lance <LanceM@FortSmithAR.gov>
Cc: Jason Thomas <JThomas@cleanlineenergy.com>
Subject: Draft 8/24 meeting minutes and additional information CRM:0060003

Good afternoon, Mr. McAvoy:

On behalf of Clean Line, thank you and Mr. Parke, Mr. Clover, and Mr. Guthrie for taking the time to meet with us earlier this week at the Utility Department's offices. We value the information you shared with us during the meeting and look forward to following up on several items that we discussed on Monday.

Attached to this email are draft meeting minutes from Monday that I hope accurately reflect our discussion. Please review these draft minutes and make corrections or suggest revisions as you see fit. Once you are finished reviewing, please return your revised copy to me and I will assemble a pdf document that contains the final meeting minutes and a copy of the presentation we provided. I will distribute a final document to you for your records when completed.

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2. A copy of the DEIS comment letter provided to DOE by Mr. Richard Hatcher, Director of the Oklahoma Department of Wildlife Conservation. We discussed this on Monday and I think you will find it useful when evaluating Region 4 Link 3 Variation 3.

Finally, here is contact information for Dr. Jane Summerson, DOE's NEPA Document Manager for the Plains and Eastern project. I understand that Dr. Summerson is currently on vacation and is expected to return sometime the week of September 8th.

Jane Summerson, Ph.D.
DOE NEPA Document Manager
U.S. Department of Energy
NNSA
PO Box 391 Building 401
Kirtland Air Force Base East, Albuquerque, NM 87185
Email: Jane.Summerson01@nnsa.doe.gov
Phone: (505) 845-4091

If you would like a response from DOE or its NEPA consultant (Tetra Tech) sooner than September 8th, I encourage you to try one (or both) of the following email addresses:

info@plainsandeasterneis.com OR CES.CommentsPlainSan@tetratech.com

I look forward to receiving your feedback on the meeting minutes and continuing our dialogue. Should you need anything between now and then, you are always welcome to contact me.

Regards,

Hank

Hank Seltzer

CLEAN LINE ENERGY PARTNERS LLC
Nashville, Tennessee

CELL 615.218.6124
FAX 832.319.6311
hseltzer@cleanlineenergy.com
WWW.CLEANLINEENERGY.COM

Lee Creek Unnamed Cemetery
© 2015 Google
Google earth
1994
Imagery Date: 10/5/2013 35°29'49.75" N 94°27'13.74" W elev 467 ft eye alt 4260 ft

Attachment B

March 24, 1988 FERC Order Issuing License (Minor)

19880405-0039 FERC PDF (Unofficial) 03/24/1988

42 FERC ¶ 61,362

00002852

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Martha O. Hesse, Chairman;
Anthony G. Sousa, Charles G. Stalon,
Charles A. Trabandt and C. M. Naeve.

City of Fort Smith, Arkansas) Project No. 5251-001

ORDER ISSUING LICENSE (MINOR)

(Issued March 24, 1988)

The City of Fort Smith, Arkansas (Fort Smith) has filed an application for a license under Part I of the Federal Power Act (FPA) to construct, operate, and maintain the Lee Creek Project No. 5251, to be located on Lee Creek in Crawford County, Arkansas, and in Sequoyah County, Oklahoma. Lee Creek at the project site is a navigable waterway of the United States.

Notice of the application has been published, and comments have been received from interested federal, state, and local agencies. A draft and a final environmental impact statement (FEIS) were prepared for this project. 1/ The following entities have been granted intervention: the Arkansas Canoe Club; Region 6 of the Environmental Protection Agency (EPA); the Lee Creek Rural Water District; the Lee's Creek Concerned Citizens Association; the National Wildlife Federation, et al.; the state of Oklahoma; the Oklahoma Water Resources Board, the Oklahoma Wildlife Federation and the Arkansas Wildlife Federation; the Ozark Society; the Scenic Rivers Association of Oklahoma; and the Sierra Club.

The intervenors raise a number of environmental concerns respecting the proposed project. Many of these concerns are directed to a possible future enlargement of the project, as distinguished from the project proposed for licensing now. In addition, the intervenors variously argue that there is no need for the power from the project, the project is not economically feasible, an environmental impact statement is needed, a hearing is necessary, and the hydropower function of the project is a sham, designed to secure the power of eminent domain under the FPA.

1/ Final Environmental Impact Statement, Lee Creek Project, FERC Docket No. 5251, Federal Energy Regulatory Commission, Office of Hydropower Licensing, February 1987. This document is in the Commission's public file and is available for inspection at the Commission's Office of Public Information in Washington, D.C.

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In determining whether to issue this license, the Commission has considered all comments filed by agencies, individuals, and intervenors in the proceeding. The significant concerns of the intervenors and the commenting agencies are discussed below.

PROJECT DESCRIPTION

The proposed project will consist of the following: (1) a new concrete dam, approximately 1,000 feet long, and having a maximum height of 40 feet; (2) a reservoir with a normal pool elevation of 420.0 feet mean sea level (msl), a surface area of 634 acres, and a storage capacity of 7,118 acre-feet; (3) a concrete powerhouse integral with the dam, 23 feet wide by 68 feet long, and housing one turbine-generator unit with an installed capacity of 1.5 megawatts (MW); (4) a water intake structure and pump house; and (5) support facilities. Approximately 3 miles of an existing, 161-kilovolt transmission line will be relocated to a route immediately north of the proposed reservoir. Of the 634 acres to be inundated by the project, about 597 acres will be located within the State of Arkansas and the remaining 37 acres in the State of Oklahoma. The proposed project will inundate approximately 3.7 miles of free-flowing stream habitat and will inundate about 1.5 miles, out of 49 miles, of Lee Creek that is currently listed in the Nationwide Rivers Inventory.

In addition to the hydroelectric development, the project reservoir will be used primarily as storage for domestic and industrial water supply, which Fort Smith will distribute to its customers and to surrounding communities in western Arkansas and eastern Oklahoma. For this reason, Fort Smith will construct a water treatment plant and a treated water pump house adjacent to the project powerhouse. Fort Smith will also construct a water pipeline, 5.2 miles long, to convey treated reservoir water to its distribution system. A local utility will install approximately three miles of new distribution line at 12.5 kilovolts to supply pumping power to the water supply system and power to the water treatment plant when the hydropower facility will not meet pumping requirements. The raw water pump house will be an integral part of the impounding structure and, as such, is part of the Lee Creek Project. The water treatment plant, treated water pump house, water pipeline, and distribution line, however, are not included in the licensed project.

JURISDICTION

The Commission has not previously ruled on the navigability of Lee Creek. In 1969, the Department of the Army, Corps of Engineers, completed construction of Lock and Dam No. 13 on the Arkansas River below Fort Smith. Lee Creek enters the Arkansas River about two miles upstream from Van Buren. The Little Rock Arkansas Gazette reported that "the Arkansas River was declared

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open Monday for navigation as far upstream as Fort Smith ... . The trip was the first official use of Lock and Dam No. 13, the farthest upstream of the locks and dams that made navigation possible to Fort Smith. The spillway gates at No. 13 were lowered December 20 to form the navigation pool for the Fort Smith-Van Buren area." ("Arkansas River Channel Open for Navigation as Far As Fort Smith", Arkansas Gazette, December 30, 1969.) 2/

A Corps navigation report in 1970 stated that the Arkansas River "is considered a navigable stream from its mouth to the mouth of the Verdigris River." It also discusses the creation of a 29-mile navigation pool upstream. (Lock and Dam No. 13, Arkansas River Navigation Project, Technical Report H-70-8, July 1970.) A second Corps report, dated November 1983, describes a 9-foot navigation channel from Lock and Dam No. 13 (mile 292.8) to Lock and Dam No. 14 (mile 319.7) and the requirement of constant dredging to keep the channel open. (Shoaling Conditions in Lock and Dam 13 Pool, Arkansas River: Final Report, Technical Report HL-83-20, November 1983).

Lee Creek and its tributaries are free-flowing streams, except for the 1-mile section impounded by the Van Buren weir above river mile 4.9 and the lower 4.3 mile stretch of Lee Creek that is inundated by the pool behind Lock and Dam No. 13 on the Arkansas River. River recreational activities such as canoeing, kayaking, and floating are most common in the portion of upper Lee Creek, which originates in Arkansas. Portions of lower Lee Creek are reported to afford excellent stream fishing, and fishing pressure is high, particularly during spring and fall. Lee Creek Park, at the confluence of the Arkansas River and Lee Creek, is a major staging area affording boat access for fishing and pleasure boating in lower Lee Creek. (Lee Creek Project, FERC No. 5251, Final Environmental Impact Statement, February 1987, pp. 3-16-18).

We conclude that Lee Creek is a navigable waterway of the United States under the FPA. The navigation pool, created by Lock and Dam No. 13 in 1969 and extending 4.3 river miles on Lee Creek, is extensively used by pleasure boats. The project would be placed at river mile 3.2 on Lee Creek and would therefore be located within the existing navigation pool which extends to river mile 4.3. It is clear that this location has been improved specifically for navigation and is currently suitable for navigation. Thus, in accordance with Section 23(b) of the FPA, 16 U.S.C. § 817, Fort Smith must obtain a license for the construction, operation, and maintenance of the Lee Creek Hydropower Project No. 5251. See generally, U.S. v. Appalachian Electric Power Company, 311 U.S. 377

2/ Van Buren is a town near Fort Smith, but on the opposite site of the Arkansas River.

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(1940); Rochester Gas and Electric Company v. FPC, 344 F.d 594 (1965).

ENVIRONMENTAL CONSIDERATIONS

On May 8, June 15, and July 1, 1987, Fort Smith supplemented its license application with additional mitigative proposals. Fort Smith proposes to: implement a plan to control soil erosion during project construction and operation; comply with the recommendations of the State of Arkansas concerning reservoir operation for power generation; preserve streamside tracts of land in Arkansas and Oklahoma in their present, undeveloped conditions, in order to protect wildlife and recreational resources; consult and cooperate with federal and state fish and wildlife agencies concerning possible measures to mitigate the project's effect on the longnose darter (Percina nasuta), a candidate for federal listing as threatened or endangered; implement a program to conserve water; analyze its service area's long-term need for water; and stock the waters of Lee Creek in Oklahoma with smallmouth bass to replace any bass lost as a result of the project reservoir.

By letters dated July 17 and August 31, 1987, the Environmental Protection Agency (EPA) stated that agreement had been reached with Fort Smith on proposed mitigation measures for this project. EPA submitted for inclusion in any license that may be issued a number of conditions designed to ensure that the project will not result in significant degradation of Lee Creek or of the existing beneficial uses of the stream in either Arkansas or Oklahoma.

Soil Erosion

Project activities, such as construction of borrow and spoil areas and cofferdams, and excavation, clearing, and use of heavy construction equipment, will disturb soils that are prone to mass movement and erosion. Soil mass movement and erosion caused by wave action and fluctuations in water level will contribute to turbidity in the reservoir and reservoir discharges. 3/ Soil erosion and mass movement will affect three archeological sites, located near the reservoir shoreline, that meet the eligibility criteria for the National Register of Historic Places.

Fort Smith has submitted a preliminary plan to control erosion and slope stability. The likelihood of soil mass movement and the effects of erosion can be reduced to insignificant levels by suitable slope treatment, drainage control, mitigation of soil compaction, revegetation, monitoring, and maintenance. Article 401

3/ See Section 4.1.1 of the FEIS.

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requires the licensee to consult with appropriate resource agencies before completing and implementing a plan to control erosion and slope stability, and to mitigate soil compaction at the project. The plan must be filed at least 60 days before land-disturbing activities begin. We reserve the right to modify the plan if necessary.

Air Quality Impacts

The staff's analysis indicates that, to meet the air quality standards of Arkansas, Fort Smith must reduce fugitive dust during project construction by 90 percent. To do so, there will have to be periodic applications of chemical dust suppressants. 4/ Fort Smith has prepared a preliminary dust control plan that includes this measure. To ensure the protection of the project area's air quality, article 402 requires the licensee to consult with the appropriate agencies, and to develop, file, and implement a dust control plan for project construction.

Construction Noise Impacts

Without noise-suppression devices on construction equipment, disturbance from project construction noise would be severe, because of the proximity of residents to the construction area. Fort Smith proposes to employ noise-suppression devices on all equipment used for project construction. Even if the contractor uses fully quieted construction equipment, noise will adversely affect five residences when leaves are on the trees. After leaf-fall, construction noise will adversely affect 18 residences, and construction noise levels at six residences may be great enough to result in complaints or threats of legal action. Fort Smith can avoid some of these effects by lengthening the project's construction schedule to prevent noisy activities from occurring simultaneously and by utilizing construction equipment with noise-abatement design. 5/ The disturbance of residents by project construction noise should be avoided, to the extent possible. Therefore, article 403 requires the licensee to consult with appropriate agencies, and to develop, file for Commission approval, and implement a plan for mitigating noise impacts. The plan must be filed at least 60 days before any construction begins.

4/ See Section 4.1.2.1 of the FEIS.

5/ See Section 4.1.2.2 of the FEIS.

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Water Quality

Section 401(a)(1) of the Clean Water Act 6/ requires any applicant for a federal license to construct or operate facilities which may result in any discharge into navigable waters to obtain water quality certification "from the state in which the discharge originates or will originate. In response to a request from Fort Smith dated June 8, 1983, the Arkansas Department of Pollution Control and Ecology (ADPCE) issued a letter on June 13, 1983, providing a water quality "certificate of approval" for the proposed Lee Creek Project. On March 25, 1987, ADPCE issued conditional water quality certification for the project. By letter dated April 9, 1987, ADPCE stated that its June 13, 1983, letter should not be interpreted as conveying water quality certification.

Since the June 13, 1983 certification was unconditional, and since ADPCE's March 25, 1987 conditional certification was issued beyond the waiver period set forth in Section 401(a)(1) of the Clean Water Act, 7/ we consider the June 13, 1983 certification to be valid. However, we will consider the conditions contained in the March 25, 1987 ADPCE letter as recommendations for inclusion in the license. Conditions included in the license, particularly articles 405 and 407, generattly adopt ADPCE's recommendations. The conditions also reflect additional, somewhat broader, environmental concerns.

As noted above, Section 401(a)(1) requires certification only from the state in which the discharge into navigable waters originates. In the case of the Lee Creek Project, the discharge will occur over the dam and from the powerhouse tailrace, both of which will be located several miles within border of Arkansas. Accordingly, certification by Oklahoma is not necessary. 8/ Nevertheless, we have a responsibility under the FPA and NEPA to examine, and mitigate where possible, all environmental impacts of a proposed project. Thus, the FEIS evaluated the potential water

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6/ 33 U.S.C. § 1341(a)(1).

7/ See Order No. 464, 38 FERC ¶ 61,146 (Feb. 11, 1987), 52 Fed. Reg. 5446 (Feb. 23, 1987), FERC Statutes and Regulations III ¶ 30,370 (effective May 11, 1987), reconsideration petition dismissed, 41 FERC ¶ 61,206 (Nov. 23, 1987). Pursuant to Order No. 464, a certifying agency has one year from the date of receipt of a certification request to grant or deny it; thereafter, certification is deemed waived.

8/ Kentucky v. NRC, 626 F.2d 995 (D.C. Cir. 1980); EPA General Counsel Opinion 78-8, Environmental Law Publishing Service at 411 (1979).

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quality impacts in Oklahoma and proposed mitigation measures which are incorporated in various license articles as discussed below.

ADPCE, in its letter dated March 25, 1987, provided the following recommendations for the operation of the reservoir for power generation:

1. The proposed Lee Creek lake level shall not be lowered below elevation 417.3 feet mean sea level (msl) during the period of March 1 through June 30 of any given year.

2. The maximum diurnal fluctuation shall be limited to 0.495 feet and shall not in the aggregate exceed a 2.7 foot drop below spillway elevation in any 30-day period during the period of March 1 through June 30 of any given year.

3. Hydroelectric generation and lake fluctuation simulations shall be derived from the seven-day ten-year low flow at the USGS gauging station near the state line on Lee Creek, adjusted for drainage area at the dam site. The City of Fort Smith shall submit such simulations to the Department for its review and approval and correlate it to the clearing and grubbing plan sufficient to demonstrate that adequate littoral habitat will remain available in the proposed reservoir during critical reproductive cycles to protect the propagation of warm-water fisheries.

4. Hypolimnetic water shall not be discharged from the proposed dam during any period when the resulting water temperature at the mouth of Lee Creek exceeds 22 degrees Centigrade.

5. Monitoring of lake level, turbidity, and dissolved oxygen shall be conducted as follows:

   A. Lake Level: Levels shall be monitored at the dam and recorded daily.

   B. Turbidity: Location - Mid-depth at upper end of reservoir
      - At 5 foot depth at the dam
      - Mid-depth in tail-race below dam
      Frequency - Once per week except for the months of May through October, at which time sampling shall be three times per week
      Period - Year round

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C. Dissolved Oxygen
Location - Mid-depth in tail-race
Frequency - Three times per week
Period - July through October

Results shall be submitted on a monthly basis within 15 days of the last day of the month.

The City of Fort Smith shall submit for Department review and approval a proposed monitoring program for condition 5 above. The program shall include a map showing sample locations, sampling procedures including equipment, analytical techniques, and proposed sampling schedule.

Erosion, siltation, and other potential effects of project operation that would degrade water quality would adversely affect the color, taste, and other characteristics of the reservoir water, and Fort Smith would have to treat the water to correct those effects. Consequently, it is in the licensee's interest to protect the quality of its water supply, and Fort Smith agrees to implement the ADPCE recommendations.

The proposed project dam will be constructed on a segment of Lee Creek that is currently impounded by the Arkansas River Lock and Dam No. 13. The proposed project reservoir will inundate 2.1 miles of backwater area and 3.7 miles of free-flowing stream. Most of the reservoir will be located in Arkansas, but the upper 1.5 miles of the reservoir will be located in Oklahoma. Oklahoma designates the reach of Lee Creek above elevation 420 feet msl (the proposed normal reservoir surface elevation) as a scenic river area.

The proposed reservoir will develop thermal stratification for short periods (45 to 75 days) in late summer and early fall. In the first few years of reservoir operation, eutrophic-like conditions will occur, and deep water in the reservoir will lose oxygen. The Arkansas and Oklahoma water quality standards call for dissolved oxygen (DO) levels to be maintained at 5.0 milligrams per liter (mg/l). During stratified periods, DO levels will drop below 5.0 mg/l in the deeper portions of the reservoir. The quality of water in the tailrace discharges could also fall short of Arkansas water quality standards for short periods in the initial years of operation. 9/

The FEIS for the proposed project recommends the construction of a multi-level intake structure for the powerhouse to ensure that tailwater discharges contain adequate levels of dissolved oxygen

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9/ See Section 4.1.3 of the FEIS.

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(DO). 10/ Adequate DO levels are necessary to protect the aquatic life in Lee Creek and the Arkansas River. A multi-level intake will enable the licensee to withdraw water selectively from various depths of the reservoir, so that tailwater discharges into Lee Creek downstream from the dam meet DO requirements. The licensee should construct such a multi-level intake structure to meet downstream DO requirements and water quality standards during project operation. Therefore, article 404 requires the licensee to consult with appropriate agencies and to file functional design drawings and details for implementing a plan for operating a multi-level intake structure.

The FEIS for the proposed project recommends that releases from the project meet state water quality standards and that the releases be monitored to determine if standards are met. 11/ ADPCE recommends that the licensee monitor the temperature, turbidity, and DO of the reservoir and of the releases from the project powerhouse, because project operation will affect these water quality variables. The monitoring of releases is essential to ensure the effective operation of the powerhouse's multi-level intake. The licensee, after consulting with ADPCE and the Oklahoma Water Resources Board (OWRB), should prepare and implement a plan to monitor the temperature, DO, and turbidity levels of the reservoir and of the releases from the Lee Creek Project powerhouse. Article 405 requires consultation, preparation, and filing of the monitoring plan.

The applicant proposes to reduce the potential for eutrophic-like conditions in the reservoir by filling the reservoir in stages. A gradual filling of the reservoir would help to maintain reservoir water quality. The licensee, after consulting with ADPCE, therefore should provide a plan for filling the Lee Creek Project reservoir. Article 406 requires the licensee to file a plan for the staged filling of the project reservoir.

As already discussed, project operation can adversely affect water quality by contributing to high levels of turbidity and lowering DO in the reservoir and reservoir discharge. For example, lake level fluctuations would expose large areas of the lake bed after drawdown, and these areas would be eroded by the receding waters. Erosion would significantly increase the turbidity and sedimentation of the reservoir. Similarly, during the late summer and early fall, DO in the hypolimnion would be lowered as a result of thermal stratification; if discharges of hypolimnetic water occur at this time, then downstream water quality would be lowered also. Article 407 requires the licensee, after consulting with

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10/ See Section 5.4 of the FEIS.

11/ Id.

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ADPCE and the Arkansas Game and Fish Commission (AGFC), to file a reservoir operation plan that reduces the potential adverse effects on water quality (especially on turbidity and DO) caused by operating the project for water supply and for power generation.

Fishery Impacts

The proposed project will inundate 3.7 miles of free-flowing stream, restrict fish movement between Lee Creek and the Arkansas River, and change existing riverine habitat into lacustrine habitat. Those species that are adapted to riverine habitat will therefore be lost.

Project operation will have a significant impact on the fishery in the reservoir. Fort Smith predicts that full use of the water supply storage of the reservoir may occur with a frequency of once in 50 years, when water demands exceed storage during very dry years. Should the reservoir water supply storage be completely used, the reservoir fishery would be eliminated, until the reservoir refills and fish recolonize the reservoir from the upstream reaches of Lee Creek, or until restocking occurs. 12/

The combined operation of the project for water supply and power generation will affect the reservoir fishery and especially fluctuations of the lake level. Lake level fluctuations can adversely affect fishery resources by periodically exposing shallow-water spawning habitat and by reducing cover, especially for young-of-the-year fish. Reservoir drawdowns also expose the productive littoral zone and adversely affect the reservoir's food production. The licensee, after consulting with AGFC and ADPCE, should provide a plan for reservoir operation that minimizes the potential adverse effects of operating the project for water supply and for power generation. The proposed plan should provide for the propagation of the warmwater fishery. Article 407 requires such a plan.

In the FEIS, the staff concludes that smallmouth bass can survive, reproduce, and support a fishery in reservoirs. 13/ OWRB recommends, however, that Fort Smith stock smallmouth bass in the Oklahoma waters of Lee Creek that will be impounded by project implementation. Fort Smith has agreed to OWRB's recommendation. To ensure that the project's effect on the smallmouth bass fishery is minimal, the licensee, after consulting with OWRB, the Oklahoma Department of Wildlife Conservation (ODWC), and the U.S. Fish and Wildlife Service (FWS), should prepare a plan for stocking smallmouth bass in the Oklahoma reach of the project reservoir.

12/ See Section 4.1.4.1 of the FEIS.

13/ See Section 4.1.4.2 of the FEIS.

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The plan should include a determination of the time to stock and the numbers and subspecies of smallmouth bass to stock. Article 408 requires the licensee to file a stocking plan.

The Department of the Interior (Interior) and the staff recommend that the intake structures at the project be screened to protect reservoir fish from entrainment. Screening the intakes will lessen the entrainment of fish into the powerhouse and into the raw water pump house intakes and will reduce the subsequent injury and mortality associated with passage through the facilities. The licensee, after consulting with FWS and AGFC, should prepare a plan for constructing fish screens on the project intakes. Article 404 requires the licensee to file functional design drawings and a plan for the operation of fish screens, along with the drawings and plans for the multilevel intake.

Longnose Darter

The longnose darter is a riverine species found in Lee Creek at the proposed project site. 14/ Oklahoma designates the longnose darter as an endangered species. The species is also a "category 2" candidate for federal listing as a threatened or endangered species. The federal category 2 designation indicates that insufficient information is available to determine if the species would qualify for listing as threatened or endangered.

The distribution of the longnose darter is diffuse in Missouri and Arkansas, but population densities are low in all locations. The only known population of the longnose darter in Oklahoma is in Lee Creek. The proposed project could eliminate the darter population from Lee Creek in the project area, because the reservoir will inundate the darter's riverine habitat.

In the June 15, 1987, filing, Fort Smith agreed to determine the extent of longnose darter habitat affected by the proposed project and, in cooperation with the state and federal fish and wildlife agencies, to develop measures to mitigate any potential impact. Fort Smith stated that mitigation would include, if appropriate, creating riffle and pool habitat in Lee Creek adequate to enhance propagation of the longnose darter.

Currently, there is limited information about the distribution and habitat requirements of the longnose darter. Since Lee Creek now supports a longnose darter population, a study of the extent of the darter's distribution and the extent of its habitat will provide information that may be helpful in implementing measures to minimize any long-term adverse effects on longnose darters. The licensee, after consulting with state and federal fish and wildlife

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14/ See Section 4.1.6.1 of the FEIS.

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agencies and before constructing the project, should conduct this study to determine the present distribution of longnose darter habitat in Lee Creek and the scope of measures needed to minimize the potential effects of project construction and operation on the longnose darter. Article 409 requires the licensee to file the results of the study. While we are prepared to accept the loss of these fish at this site in exchange for the overall benefits to be produced by this project, we require the studies under Article 409 in an effort to do what is possible to save them while proceeding with the construction and operation of the Lee Creek Project.

Wildlife Habitat Impacts

A total of 693 acres of wildlife habitat will be lost because of the construction of new facilities and the creation of the reservoir. The proposed reservoir will inundate 530 acres of wildlife habitat. Constructing the nonproject water treatment plant and water pipeline and rerouting an existing electrical transmission line that crosses the site will destroy or extensively modify an additional 130 acres of existing terrestrial habitat. Approximately 33 acres of terrestrial habitat will also be affected by the establishment of a new distribution line and right-of-way between the water treatment plant and an existing substation near Fort Smith. 15/

Interior states that the 809 acres of terrestrial habitat that the applicant proposes for inclusion in the reservoir buffer zone will adequately mitigate the loss of terrestrial wildlife habitat inundated by the reservoir. Fort Smith, however, states that timber harvesting may occur within the buffer zone. Interior states that the commercial harvest of bottomland hardwood forest, which provides valuable habitat, within the buffer zone would adversely affect wildlife resources. Interior therefore recommends that the licensee, in cooperation with FWS and AGFC, develop a management plan for the reservoir buffer zone that would improve wildlife habitat values.

Timber harvesting could have a significant adverse effect on the buffer zone's value for wildlife habitat. Timber harvesting could also make the buffer zone less desirable to recreationists for hiking, birdwatching, and other activities and present serious impacts to the public water supply. Any proposal to harvest timber within the buffer zone should be carefully evaluated by the licensee before requesting Commission approval to disturb the buffer zone and its purpose. The licensee should consult with FWS and with the fish, wildlife, and recreation agencies of Arkansas and Oklahoma about managing the reservoir buffer zone for wildlife and recreational purposes. The licensee should also consult the

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15/ See Section 4.1.5 of the FEIS.

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Arkansas Department of Health (ADOH) to ensure that the management of the buffer zone is consistent with protection of water quality of the reservoir for public water supply purposes. The licensee should then develop a buffer zone management plan and file the plan with the Commission for approval. Article 410 requires the licensee to develop and file such a buffer zone management plan.

In addition to managing the reservoir buffer zone for wildlife, Fort Smith proposes either to manage or to arrange for a conservation organization to manage 40 acres of land abutting Lee Creek, 3.7 miles upstream from the proposed reservoir in Oklahoma, and 72.7 acres of land in Arkansas, associated with Fort Smith's two existing water supply reservoirs. The lands in Arkansas would consist of a 22-acre tract on the east side of Frog Bayou, 2.5 miles upstream from Lake Shepherd Springs, and four adjoining tracts, totalling 50.7 acres of land, just downstream from Lake Fort Smith. Fort Smith states that this measure would preserve bottomland hardwood forest and wetlands as wildlife habitat and would enhance stream recreational opportunities.

The preservation of such streamside areas would benefit wildlife and would maintain the existing visual resources and recreational uses of segments of Lee Creek and Frog Bayou. Ordering Paragraph (F) below therefore approves Fort Smith's proposal.

Protection of Raptors

Interior recommends that the 12.5-kilovolt transmission line be designed to prevent the electrocution of large raptors in the project area. However, this line will be constructed, owned, and operated by a local utility to supply the treatment plant when the on-site hydropower facility cannot meet the plant's needs. Since the line is not a primary line and therefore not a part of the project, the Commission has no jurisdiction over it and cannot condition its design.

Endangered Species

No plant or animal species that is federally listed as threatened or endangered is known to occur in the project area.

Recreational Impacts

The National Park Service (NPS) includes in the Nationwide Rivers Inventory (Inventory) the reach of Lee Creek that extends from its headwaters in Arkansas for a distance of 49 miles through Oklahoma to the point where the creek reenters Arkansas. The proposed reservoir will inundate the lowermost 1.5 miles of the reach of Lee Creek in the Inventory, thereby disqualifying the 1.5-mile-long segment from any future consideration for inclusion

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as a wild river in the National Wild and Scenic Rivers System. For this reason, NPS opposes the construction of the proposed project. However, only rivers that are identified in Sections 3 and 5 of the Wild and Scenic Rivers Act are afforded legal protection. 16/ Thus, there is no legal bar under that act to Commission action here.

The segment of Lee Creek from its headwaters downstream to the point where the creek enters Oklahoma, a reach about 36 miles long, is currently listed on the registry for consideration as a potential component of the Arkansas Natural and Scenic Rivers System. Listing on the registry is not synonymous with inclusion in the Arkansas Natural and Scenic Rivers System. The project reservoir will not affect the reach of Lee Creek listed on the registry.

Oklahoma designated the 15-mile-long segment of Lee Creek that is located in Oklahoma as a scenic river area. In 1986, Oklahoma removed the reach of Lee Creek that will be inundated by the project reservoir from the state scenic river system.

Construction of the proposed reservoir will remove 3.8 miles of free-flowing stream from use for float fishing, white-water and stream canoeing, and stream fishing. Inundation of 1.5 miles of stream in Oklahoma will conflict with such beneficial uses as stream smallmouth bass fishery and primary recreation, which are defined in Oklahoma's water quality standards. These recreational uses will be replaced by flat-water fishing and boating during periods when the reservoir is not drawn down for water supply use. 17/

Fort Smith has prepared a draft recreational plan that proposes two boat-launch sites, one on Lee Creek downstream from the proposed reservoir and another on the north side of the reservoir. The plan also proposes allowing access for such activities as hiking and birdwatching in the 300-foot-wide buffer zone surrounding the proposed reservoir. The Arkansas Department of Health (ADOH), however, has not yet specified the recreational uses that may occur on the reservoir and within the buffer zone.

Interior recommends that Fort Smith be required to implement its proposed recreation plan. As discussed in the section on wildlife habitat, any recreational use of the buffer zone should be coordinated with plans for wildlife habitat management, timber management, and the protective measures to maintain the reservoir's

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16/ 16 U.S.C. §§ 1274 and 1276 (1987). See, generally, City of Rome, 35 FERC ¶ 61,175 (1986).

17/ See Section 4.1.8 of the FEIS.

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water quality. Therefore, article 412 requires the licensee, after consulting with ADOH, the Arkansas and Oklahoma recreation, fish, and wildlife agencies, and FWS, to complete the recreational plan for the project.

Impacts on Archeological Sites

Thirteen sites that meet the eligibility criteria for the National Register of Historic Places (National Register) will be directly or indirectly affected by the proposed project. These sites include prehistoric artifact scatters, prehistoric bluff shelters, spanning a period from 5,000 years to 7,000 years before the present, and historic farmsteads. Two sites will be partially or wholly inundated at normal maximum reservoir level. Three sites near the reservoir shoreline will be affected by slope destabilization and erosion caused by reservoir drawdown and wave action, and two of these sites may be affected by increased water elevation during floods. Increased vandalism and unauthorized collecting could occur at eight sites, because of increased access to and recreational use of the site. 18/

The Arkansas State Historic Preservation Officer has approved the applicant's proposed cultural resource management plan to avoid and mitigate impacts to the eligible sites. The Commission staff, in a letter dated March 26, 1987, consulted the Advisory Council on Historic Preservation (Council) about the effects of the project on the archeological sites determined to be eligible for the National Register. The Council agrees with Commission staff's recommendation that Fort Smith's cultural resource management plan should be implemented to protect these sites (personal communication, Marjorie Ingle, Advisory Council on Historic Preservation, Golden, Colorado, July 10, 1987). Article 413 requires the licensee to implement the plan.

FUTURE DEVELOPMENT

Fort Smith's licensing proposal includes a 634-acre reservoir, with a storage capacity of 7,118 acre feet, that would yield ten million gallons of water per day (mgd) for consumptive uses. This capacity would be able to supply Fort Smith's demands for domestic and industrial water for only the next ten to fifteen years. As a result, Fort Smith envisions possible development of a Phase II at some future date, which would involve raising the dam by 42 feet, en- larging the reservoir capacity to 71,305 acre-feet, and replacing the proposed 1.5-MW generating unit with a 4.25-MW unit. 19/

18/ See Section 4.1.10 of the FEIS.

19/ See Section 2.1.10 of the FEIS.

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The present application does not propose, and we do not approve in this order, construction of Phase II.

FWS, NPS, AGFC, ODWC, the Oklahoma State Archeologist, environmental groups, and individuals oppose any future expansion of the Lee Creek Project. For this reason, EPA, the National Wildlife Federation (NWF), Interior, and other intervenors express concern that the proposed facilities, as described in the license application, are designed to accommodate the future development of Phase II. For instance, the raw water pump house, which will be an integral part of the dam, was designed for a maximum pumping capacity of 90 mgd. In response to the concerns of the agencies and the intervenors, Fort Smith, by letter dated May 8, 1987, provided revised drawings showing proposed modifications of the intakes, pump house, and non-project water transmission line that remove features that would accommodate the future development of Phase II.

Since Phase II is not a part of the license application for Project No. 5251, the FEIS did not contain a full analysis of the potential environmental impact of Phase II. In light of Fort Smith's stated intention to eventually develop Phase II, as well as the original design of some Phase I facilities to accommodate Phase II, federal, state, and local agencies, as well as individual citizens and various organizations, argued that the EIS should have fully considered Phase II. We do not agree.

In Kleppe v. Sierra Club, 427 U.S. 390 (1976), the Supreme Court interpreted the language of Section 102(2)(C) of NEPA 20/ to mean that an EIS is required only for proposed actions actually pending before an agency. The Court stated:

> The statute ... speaks solely in terms of proposed actions; it does not require an agency to consider the possible environmental impacts of less imminent actions when preparing the impact statement on proposed actions. Should contemplated actions later reach the stage of actual proposals, impact statements on them will take into account the effect of their approval upon the existing environment; and the condition of that environment presumably will reflect earlier proposed actions and their effects.

427 U.S. at 410 n. 20.

20/ 42 U.S.C. § 4332(2)(c) (1986).

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The regulations of the Council on Environmental Quality provide that actions are connected or closely related if they: (1) automatically trigger other actions which may require EISs, (2) cannot or will not proceed unless other actions are taken previously or simultaneously, or (3) are interdependent parts of a larger action and depend on the larger action for their justification. 21/ None of these criteria apply to the situation that exists here, and there is no irreversible or irretrievable commitment of resources for Phase II involved in our approval of Phase I. Approval of Phase I stands on its own merits and commits the Commission in no way to approval of Phase II. If Fort Smith proposes Phase II expansion, 22/ the appropriate environmental, technical and economic evaluation will take place. Prior to filing such an application, Fort Smith would be required to consult with the appropriate agencies and to evaluate fully the environmental impacts of and the feasible alternatives to that action. Under the Commission's established procedures, there would be public notice of the application and opportunity for intervention in and comments on the proposal.

ALTERNATIVES TO THE PROPOSED PROJECT

Because the primary purpose of the reservoir is to supply water for domestic and industrial uses, the alternatives to the proposed project include consideration of alternative water supplies, without regard to whether the alternatives would be suitable for hydropower generation. The staff identified seven alternative water sources that could provide 10 mgd, the same amount of water as the Lee Creek Project. Descriptions of those seven alternatives follow. 23/

Fort Smith currently withdraws water from Lake Shepherd Springs and Lake Fort Smith, which are impoundments on Frog Bayou,

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21/ See 40 C.F.R. § 1508.25(a)(1) (1986).

22/ To delay the need to develop a long-term water supply, Fort Smith proposes to develop and implement a comprehensive water conservation program. Fort Smith also proposes to analyze long-term water supply alternatives after consultation with and in cooperation with all interested federal and state agencies and environmental organizations. Further, Fort Smith proposes to cooperate and coordinate with EPA and ADOH in any future study initiated by the two agencies to assess the potential for using Arkansas River water and water from Arkansas River alluvium for a long-term water supply and to assess the treatment required for such use.

23/ See generally Sections 1.4, 1.5, 2.4 to 2.10, 3.4 to 3.10, 4.4 to 4.10, and Appendices B and E of the FEIS.

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east of the Lee Creek Basin. The applicant could raise its existing Lake Shepherd Springs dam by 42 feet to provide an additional 10 mgd yield. A powerhouse with an installed capacity of 1.3 MW might be economically feasible to install downstream from the dam.

The storage of an existing Corps reservoir could be reallocated. The most likely such reservoir is Blue Mountain Lake, which is located on the Petit Jean River, about 47 miles southeast of Fort Smith. Any hydropower development would be physically separated from a water supply intake structure, because the powerhouse would have to be built near the dam in order to use the hydraulic head needed to generate power. A water supply intake, on the other hand, would be located on the reservoir, as far to the north and west as possible, to shorten somewhat the water transmission distance to Fort Smith.

Fort Smith could build a new reservoir on Cedar Creek, which is a tributary of Frog Bayou. This alternative could include a powerhouse with an installed capacity of 300 kilowatts (kW), but such hydropower facilities would most likely be uneconomical.

Fort Smith could build a new reservoir on Lee Creek, about 32.5 miles upstream from the proposed dam site, at Pine Mountain. This alternative could include a powerhouse with an installed capacity of 1 MW, although at present market energy values such an investment might be economically marginal.

Fort Smith could build a 210-acre reservoir on Lee Creek, at river mile 3.2 (the proposed dam site), and a 270-acre storage reservoir on Cedar Creek, connecting both by a pipeline. Under this alternative, Fort Smith would use flows from Lee Creek first, and any excess Lee Creek flow would be pumped to the Cedar Creek reservoir. During low-flow periods at Lee Creek, Fort Smith would transmit water stored in the Cedar Creek reservoir via the pipeline to the Lee Creek water treatment plant. This alternative could include a 800-kW generating facility, but its economic feasibility would be marginal.

Fort Smith could pump water from the Arkansas River. The only site on the river near Fort Smith that could provide the hydraulic head necessary for power generation is at Lock and Dam No. 13. The Lock and Dam No. 13 Project, FERC No. 3043, 24/ is under construction at that site already, so this alternative would not include hydropower facilities.

24/ Arkansas Electric Cooperative Corporation and Arkansas Valley Electric Cooperative Corporation, 25 FERC ¶ 62,059 (1983).

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Fort Smith could pump groundwater from alluvium in the floodplain of the Arkansas River. This alternative has no potential for hydroelectric generation.

The staff also analyzed water conservation and no action as alternatives to the proposed project. 25/

The Lake Shepherd Springs alternative would have less adverse environmental effect than the proposed Lee Creek Project. The yield of the Frog Bayou watershed, however, is not enough to meet Fort Smith's long-term water needs, and Fort Smith could be expected to develop another water source in a different watershed, incurring further environmental impacts. Moreover, the Lake Shepherd Springs alternative is almost twice as costly as the proposed Lee Creek Project, and those costs would be passed on to the consumer in water rates that would be substantially increased, compared to the rate increases resulting from the proposed project. Raising the dam would disrupt operation of Fort Smith's existing water supply, and Fort Smith would run a substantial risk of water shortages until construction is completed and Lake Shepherd Springs is filled to the higher surface elevation. If Fort Smith had a source of water other than the Frog Bayou reservoirs, so that water supply would not be disrupted and there would be no risk of water shortages, the Lake Shepherd Springs alternative would be preferred over the proposed project.

The adverse environmental impacts of the Blue Mountain alternative would be substantially less than those of the proposed project, because the Blue Mountain alternative would not involve constructing a dam and a reservoir. The Blue Mountain alternative would be almost twice as costly as the proposed project, however, and would require increases in water rates substantially greater than those required for the proposed project. In addition, the Blue Mountain alternative would reduce environmental effects compared to those of the proposed project only for the short term, until Fort Smith requires additional sources of water. If Fort Smith wished to secure further allocations of storage, the Corps might require the City to replace the lost flood storage by constructing another reservoir on the Petit Jean River. Should this occur, many of the environmental advantages of the Blue Mountain alternative would be lost.

The Pine Mountain, Cedar Creek, and Lee Creek-Cedar Creek alternatives would impound streams that are currently free-flowing. The Pine Mountain alternative would have greater adverse environmental effects and would be more costly than the

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25/ See generally Sections 2.2, 2.3, 3.2, 3.3, 4.2, and 4.3 of the FEIS.

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proposed project. Further, the Pine Mountain alternative would have negative effects in terms of hydropower. The adverse effects of the Cedar Creek alternative would be less than those of the proposed project, and the adverse effects of the Lee Creek-Cedar Creek alternative would be slightly less than those of the proposed project. Neither the Cedar Creek nor the Lee Creek-Cedar Creek alternative could provide hydropower generating capacity. Both the Cedar Creek and the Lee Creek-Cedar Creek alternatives would be more expensive than the proposed project to construct. Under the Cedar Creek alternative, Fort Smith could not meet its long-term water needs without developing a water supply in another watershed. Since the Lee Creek-Cedar Creek alternative would include reservoirs in two watersheds, Fort Smith would have flexibility in managing storage and withdrawal of water on Lee Creek, Cedar Creek, and Frog Bayou in order to obtain maximum storage and supply.

The Arkansas River alternative and the Arkansas River alluvium alternatives would have substantially less adverse environmental impact and would be less expensive to construct than the proposed project, because neither alternative would require building a dam and impoundment. The policies of ADOH, however, have generally discouraged development of the Arkansas River as a water supply, and ADOH believes that advanced treatment of Arkansas River water would be necessary. Therefore, the alternatives based on water from the Arkansas River would cost more than twice as much as the proposed project, with costs passed on to the consumer in the form of very large increases in water rates, which would have substantial adverse economic impacts.

The no-action alternative would delay the implementation of a water supply project, thus increasing the risk of water shortages for Fort Smith and adversely affecting the economic environment of the city. The alternative of conserving water would decrease the risk of water shortages, but because existing demand has already exceeded the firm yield of Fort Smith's water supplies, future increased demand would soon cause the City to seek additional supplies.

Fort Smith's currently preferred alternative for development of a long-term water supply beyond 10 mgd is the Phase II enlargement of the proposed Lee Creek reservoir to supply 70 mgd. Interior, AGFC, ODWC, and the intervenors state that Phase II would have significant adverse effects on water quality, fisheries, recreation, and other resources; however, Fort Smith also has the option of constructing a reservoir in the Cedar Creek watershed to store Lee Creek water, thus providing an additional 60 mgd supply. The costs of that option would be comparable to those of Phase II, and the staff's analysis indicates that this alternative would have substantially less adverse impacts than Phase II.

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The flexibility provided by the proposed project in developing future water supplies is a significant socioeconomic advantage. The Cedar Creek-Lee Creek alternative provides the same disadvantages (Phase II development of Lee Creek) and advantages (reservoir the size of the proposed project on Lee Creek, further development of Cedar Creek). Whether a long-term water supply would be developed from the proposed project or a Cedar Creek-Lee Creek alternative, the end result for Lee Creek would be the same -- a reservoir the size of the proposed project located near river mile 3.2. Therefore, since the Lee Creek Project will result in much less immediate escalation of water user rates, and since this project can be built without the socioeconomic impacts of prolonging Fort Smith's period of water shortages, the proposed project is preferred, even though its immediate impacts on the natural environment will be greater than those of the Lee Creek-Cedar Creek alternative. 26/

OTHER CONSIDERATIONS

Safety and Adequacy

As discussed in the attached Safety and Design Assessment, the project site was inspected by Atlanta Regional Office personnel, and the proposed dam was classified as one with high hazard potential because of the proximity of the cities of Van Buren and Fort Smith downstream. The spillway capacity has been designed for the probable maximum flood, and the cross section of the concrete overflow dam has been proportioned in accordance with the requirements of gravity stability analysis under normal, earthquake and extreme flood loading conditions. Staff has checked the design and factors of safety of the dam and found them to conform to the criteria given in the Commission's Engineering Guidelines. However, because of the size and downstream hazard potential, we are including article 306 in the license, requiring the retention of a board of consultants during the detailed design, construction, and commissioning of the project.

Need for Power

Available data show that growth in the demand for electric power and energy will continue. Timing of the need would vary in different systems, depending upon such factors as the rates of load growth, load characteristics, available existing power resources and reliability criteria established for each system. A power generating facility may, however, be added to a system before a generating resource deficit exists, if, over its operating life, the generating addition provides benefits that would not be available through operation of the system without the addition.

26/ See Section 5.2 of the FEIS.

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The proposed project is located in the Southwest Power Pool (SPP) region, and the SPP, in the April 1986 Regional Reliability Council Coordinated Bulk Power Supply Program, projects average annual growth rates of 2.3 percent for summer peak demand and 2.2 percent for annual energy requirements. Existing generating resources in the SPP area as of January 1, 1986, include approximately 60,560 MW of thermal generating capacity. An additional 6,359 MW of thermal capacity were projected for installation in the next 10 years to meet load growth in the area.

Because of the small size of the proposed project in relation to the existing and projected generating capability in the region, the traditional approach of linking project development with a forecasted need for a specific project is inapplicable to assessing need for the project.

The power from the project would be useful in meeting a small part of the need for power projected by the SPP. From the time the project goes on line it would be available to serve the water supply load, and thus to displace fossil-fueled power generation in the region and thereby conserve nonrenewable fossil fuels and reduce the emission of noxious by-products caused by the combustion of fossil fuels.

Need for the Project and Economic Evaluation

The primary purpose of this project is to provide storage for domestic and industrial water supply to the City of Fort Smith, Arkansas, and surrounding communities in western Arkansas and eastern Oklahoma. The hydropower plant will utilize surplus flow that will not be needed for the water supply system.

There has been shown to be a definite need for a new water supply source for Fort Smith. The most recent data demonstrate that existing supplies are already being taxed to their limit.

Even with construction of the proposed project, or an equivalent 10 mgd source of water supply, estimates of water demand to the year 2000 indicate that the additional 10 mgd of water would be taxed to its limit of reliability by about 1996-98, depending on contract usage and industrial growth. 27/

The additional mitigation measures submitted by Fort Smith in mid-1987 include proposals to implement a new program to conserve water and to analyze its service area's long-term need for water. Like conservation measures have been successfully implemented in the past by Fort Smith. Such measures may postpone the time when

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27/ See Section 1.3 of the FEIS.

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additional facilities, beyond the instant project, will be needed. But even the strongest conservation measures would not likely assure reliability of Fort Smith's water supply system, with the proposed project, beyond the year 2000. 28/ Thus, the source of water supply to be provided by the project is clearly needed for water supply development.

Fort Smith and the Commission staff identified and evaluated alternative water supplies that could supply quantities equivalent to the proposed project. These alternatives included conservation of existing supplies, expansion of existing supplies, reallocation of storage from existing reservoirs, and construction of new supplies. Hydropower, where possible, was considered as a part of each alternative. The Commission staff identified and examined nineteen alternative sources of water. Besides conservation and no action, the most promising seven of these were selected for more detailed analysis. The environmental impacts of these alternatives were summarized above. The economic evaluation is summarized in Table 1-7 of the FEIS. 29/ The annual levelized cost of the Lee Creek Project was determined to be $2.91 million. This was by far the least expensive source of additional water supply. 30/ We agree with this analysis.

The hydropower installation at the Lee Creek site is proposed to supply pumping energy to the water supply portion of the project. The hydropower generation facilities will only be utilized when there are flows in excess of the needs for water supply. In the early years of operation, when the demand for water will not generally reach the capacity of this project, there could be excess generation of electricity, which probably would be transmitted into the system of, and sold to, Arkansas Valley Electric Cooperative. 31/ This could also occur whenever the water pumping and treatment plant is not in operation. However, the 1500-KW hydropower project is designed to operate with a plant factor of approximately 39 percent, and the treatment plant will require a plant load slightly higher than the proposed installed generation. Thus it appears that the project over time would normally consume all generation at the site.

28/ See generally Sections 1.3, 2.3, and 4.3 of the FEIS.

29/ See also Section 1.5 of the FEIS.

30/ The staff assumed a repayment period of 50 years and an interest rate of 8 percent for the comparison. See Table 1-7, FEIS page 1-14.

31/ AVEC is the licensee for FERC Project No. 3043, located at the nearby Arkansas River Lock and Dam No. 13. See supra n. 21.

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In the FEIS staff calculated the levelized annual economic benefits of hydropower operation for the Lee Creek Project. 32/ The staff considered interest rates of 7, 8, and 9 percent, and annual escalation rates of 4 to 9 percent for the value of generated power for the first ten years of operation. 33/ Only in the case of an interest rate and an escalation rate at 7 percent is there a positive annual net benefit. 34/ Fort Smith maintains, however, that the hydropower facilities will be economically beneficial. Fort Smith excludes the powerhouse structure from separable hydropower facilities, reasoning that a similarly costly outlet structure would be needed in the absence of the powerhouse in order to control discharges from the reservoir. Fort Smith also escalates the energy costs at the rate of 10 percent per year for the first 20 years of project operation, significantly enhancing the value of generation by the proposed project.

We have reviewed the various estimates and conclude that the staff's estimate of costs is most probable. However, the staff estimates are conservative. Depending on a variety of circumstances, it is possible that interest rates may be lower to Fort Smith than currently estimated. Further, the annual escalation rates for purchased power by Fort Smith may increase more than anticipated. As can be seen on Table 1-8 of the FEIS, such changes would increase the annualized net benefit of the hydropower component of the project. But even if this were not so, the fact that this project may result in a net loss for the hydropower portion thereof is not dispositive. A balancing of all the costs and benefits of this project, that is, an examination of the overall scheme, leads to the conclusion that the project is economically beneficial.

First, this proposal differs from the typical hydropower project in that it is being built primarily as a water supply project. The hydropower generation is secondary, although important, since it will be the primary source of pumping power for the water supply system and the water treatment plant. In the event of an outage on the single line serving the water supply source, the at-site hydropower generation could enable Fort Smith's water supply system to keep functioning. This reliability benefit is an important advantage for the at-site hydro facility. Also, when there is an excess of flow or when the water system is operating at a low capacity, then some of the power generated can

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32/ See Table 1-8 of the FEIS.

33/ The escalation rate was assumed to be zero for the remaining 40 years.

34/ See Section 1.5.2 of the FEIS.

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be sold to AVEC or elsewhere, and extra revenues can be obtained by Fort Smith.

Most important, however, is the comparison of this project with the alternatives. As discussed above, the staff compared the Lee Creek project with a number of alternative water supply projects. Where feasible, a hydropower component was included in the alternative. For all of these sites, the hydropower component was marginally economic at best, except for the Lake Sheppherd site. However, the Lake Sheppherd site was one of the most expensive alternatives, and far more costly than the Lee Creek site. 35/ Compared to the least cost alternative, even including the hydropower component's annual loss of $83,900 as calculated by staff, the Lee Creek Project would provide savings of $1.29 million per year to the City of Fort Smith. 36/ We conclude that taking all costs into consideration the Lee Creek Project is the most economical site available to the City of Fort Smith to satisfy its water supply needs.

Also, as discussed in the FEIS, this project is the least cost alternative and is potentially financially feasible compared to other sources of water supply for the City of Fort Smith. 37/

As noted, supra, certain intervenors argue that the hydropower aspect of Fort Smith's proposal is a sham, designed to secure the power of eminent domain under the FPA. It is not uncommon for the generation of hydroelectric power to be but one of several aspects of a development entailing the use of a waterway. However, the Commission's authority to issue licenses for the generation of hydroelectric power is not predicated on a finding that hydropower is the only or primary function of the development. Rather, the Commission is required by Section 10(a)(1) of the FPA to assure that any project that it licenses will be best adapted to a comprehensive plan for improving or developing a waterway for beneficial public uses, "including irrigation, flood control, water supply, and recreational purposes." Upon such a finding a license application may be granted, and with the license comes the powers of eminent domain necessary to develop the project as approved.

35/ See Table 1-7 of the FEIS at p. 1-14.

36/ The hydropower component would increase the levelized annual cost of the project by less than three percent ($2.99 vs $2.91 million).

37/ See Horseshoe Bend Hydroelectric Company, 42 FERC ¶ 61,072 (1988).

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Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the FPA, as amended by the Electric Consumers Protection Act of 1986 (ECPA), Pub. Law No. 99-495 (Oct. 16, 1986), requires the Commission to include license conditions based on recommendations of federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife. The FEIS for the Lee Creek Project, the Commission staff's meetings with the parties, as well as our discussion in this order, have addressed the concerns of the federal and state fish and wildlife agencies. We believe that the mitigation requirements of the license are generally consistent with those of the agencies and that they satisfy the requirements of Section 10(j).

Comprehensive Plans

At least one intervenor argues that the Commission should not issue the license until it has prepared a comprehensive plan for the waterway under Section 10(a) of the FPA. However, we do not read Section 10(a)(1) of the FPA as requiring that a single comprehensive plan be prepared against which a proposed project is measured before a license issued. Rather, a proposed project is measured against the aggregate of information on beneficial public uses of the waterway developed in the record of a licensing proceeding. 38/ The various information requirements and procedures that we use in a licensing proceeding, including our pre-filing consultation requirements, are designed to collectively elicit the type of information we need, such as information on a project's environmental impacts, to develop a record on all aspects of beneficial public uses relating to comprehensive development of the waterway or waterways involved. 39/

Section 10(a)(2) of the FPA, as amended by ECPA, requires the Commission to consider the extent to which a project is consistent with comprehensive plans (where they exist) for improving, developing, or conserving a waterway or waterways affected by the project that are prepared by an agency established pursuant to federal law that has the authority to prepare such a plan or by the state in which the facility is or will be located. The Commission considers plans to be within the scope of Section 10(a)(2) only if such plans reflect the preparers' own balancing of the competing uses of a waterway, based on their data and on applicable policy considerations (i.e., if the preparers consider and balance all relevant public use considerations). With regard to plans

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38/ See Skykomish River Hydro, et al., 42 FERC ¶ 61,283 (1988); Jack M. Fuls, 36 FERC ¶ 61,136 at 61,340-41 (1986).

39/ See id. at 61,341.

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prepared at the state level, such plans are within the scope of Section 10(a)(2) only if they are prepared and adopted pursuant to a specific act of the state legislature and developed, implemented, and managed by an appropriate state agency. 40/

No comprehensive plans of the types referred to in Section 10(a)(2) of the FPA relevant to this project have been identified. One resource plan that touches on various aspects of waterway management was brought to our attention and has been reviewed in relation to the proposed project as part of our broad public interest examination under Section 10(a)(1) of the FPA. 41/

The proposed project will result in conflict with the Arkansas Statewide Comprehensive Outdoor Recreation Plan (SCORP). The SCORP identifies a need to protect the recreational values of the Arkansas River Valley's free-flowing streams. The situation is especially critical in instances where Arkansas River tributaries are being considered for impoundment. Lee Creek is such a tributary. Numerous tributaries of the Arkansas River are already experiencing a heavy amount of canoeing and kayaking use, especially on weekends and holidays. Construction and operation of the proposed project will displace boaters from Lee Creek and will transfer boating use to other streams, probably to Big Piney Creek and the Mulberry River. These free-flowing streams are already experiencing over-crowding during certain periods of the year. The proposed project thus will exacerbate a problem identified in the SCORP and will conflict with Arkansas' goal of protecting sufficient numbers of free-flowing streams for boating purposes.

On the other hand, Fort Smith needs additional water supply, both for distribution to its own customers and to supply surrounding communities in western Arkansas and eastern Oklahoma. Without additional supplies, as demand increases, Fort Smith's water system will become increasingly unreliable. Operation of the Lee Creek Project will provide a dependable short-term water supply, but this benefit will be at the expense of impacts on recreational resources, as just described, and on other aspects of the human environment.

Need for a Hearing

Several intervenors requested that a hearing be held on this application. We conclude that a hearing is not required and will therefore deny the request. An evidentiary hearing is necessary if

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40/ See Fieldcrest Mills, Inc., 37 FERC ¶ 61,264 (1986). See also Order No. 481, 41 FERC ¶ 61,042 (Oct. 20, 1987).

41/ Arkansas Department of Parks and Tourism - Arkansas Statewide Comprehensive Outdoor Recreation Plan - 1985.

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there are material issues of fact in dispute. See Sierra Association for the Environment v. FERC, 744 F.2d 661 (9th Cir. 1984); City of Ukiah v. FERC, 729 F.2d 793 (D.C. Cir. 1984); Cerro Wire and Cable Co. v. FERC, 677 F.2d 124 (D.C. Cir. 1982). Here, the objections result from "different assessments of environmental values, energy independence goals, and future energy prices. These assessments are, of course, very relevant to the wisdom of licensing the hydroelectric project, however, trial-type procedure is not helpful in resolving such value and policy conflicts." Sierra at 663-64.

CONCLUSION

We conclude that the Lee Creek Project is best adapted to a comprehensive plan for Lee Creek and the Arkansas River Basin, taking into consideration the beneficial public uses described in Sections 4(e) and 10(a)(1) of the FPA. 42/

The Commission orders:

(A) This license is issued to the City of Fort Smith, Arkansas (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Lee Creek Water Power Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, shown by Exhibit G:

Exhibit G-	FERC No. 5251-	Showing
1	1	Project Map-Dam and Reservoir

(2) Project works consisting of: (a) a dam which comprises: (1) a 220-foot-long west abutment; (2) a 1,000-foot-long 34-foot-high ogee section having spillway crest elevation 420 feet m.s.l.; (3) a 23-foot-wide by 68-foot-long powerhouse containing one generating unit rated at 1,500 kW and (4) a 67-foot-wide by 56-foot-long raw water pumphouse; (b) a reservoir with a surface area of 634 acres and a storage capacity of 7,188 acre feet at elevation 420 feet m.s.l.; (c) an intake structure; (d) a tailrace

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42/ The project would use a renewable resource for generation, saving the equivalent of about 5,930 barrels of oil or 1,670 tons of coal annually.

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channel; (e) the 4.16-kV generator leads, all connecting 5-kV cables between the site buildings, and the 4.16/12.5-kV transformer; and (f) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of Exhibits A and F recommended for approval in the attached Safety and Design Assessment.

(3) All of the structures, fixtures, equipment and facilities used to operate or maintain the project and located within the project boundary, all portable property that may be employed in connection with the project and located within or outside the project boundary, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The Exhibit G described above and those sections of Exhibits A and F recommended for approval in the Safety and Design Assessment are approved and made part of the license.

(D) The following sections of the FPA are waived 43/ and excluded from the license for this minor project:

> 4(b), except the second sentence; 4(e), insofar as it relates to approval of plans by the Chief of Engineers and the Secretary of the Army; 6, insofar as it relates to the acceptance and expression in the license of terms and conditions of the Act that are waived here; 10(c), insofar as it relates to depreciation reserves; 10(d); 10(f); 14, except insofar as the power of condemnation is reserved; 15*; 16; 19; 20; and 22.

* At the expiration of this license, any license application filed, including the licensee's, will be treated as an original license application. The municipal preference provisions of Section 7(a) of the Federal Power Act will apply.

(E) This license is subject to the articles set forth in Form L-14 (October 1975), entitled "Terms and Conditions of License for Unconstructed Minor Project Affecting Navigable Waters of the United States". The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charge, effective the first day of the month in which this license is issued:

43/ By letter filed November 20, 1987, Fort Smith agreed to accept this standard waiver paragraph under Section 10(i) of the FPA.

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For the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 2,000 horsepower.

Article 301. The licensee shall commence construction of project works within two years from the issuance date of the license and shall complete construction of the project within four years from the issuance date of the license.

Article 302. The licensee shall file, for approval by the Commission, revised Exhibit F drawings showing the final design of project structures. The revised Exhibit F drawings shall be accompanied by a supporting design report. The licensee shall not commence construction of any project structure until the corresponding revised Exhibit F drawing has been approved.

Article 303. The licensee shall, at least 60 days prior to start of construction, submit one copy to the Commission's Regional Director and two copies to the Director, Division of Inspections, of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Director, Division of Inspections, may require changes in the plans and specifications to assure a safe and adequate project.

Article 304. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations prior to the start of construction and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall submit to the Commission's Regional Director and Director, Division of Inspections, one copy each of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 305. The licensee shall within 90 days of completion of construction, file for approval by the Commission revised Exhibits A, F, and G to describe and show the project as built.

Article 306. The licensee shall retain a board of three or more qualified, independent, engineering consultants to review the design, specifications, and construction of the project for safety and adequacy. The names and qualifications of the board members shall be submitted to the Director, Office of Hydropower Licensing, for approval, with a copy to the Commission's Regional Director. Among other things, the board shall assess the geology of the project site and surroundings; the design, specifications, and

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construction of the dikes, dams, spillways, powerhouse, electrical and mechanical equipment, and emergency power supply; instrumentation; the filling schedule for the reservoir(s) and plans and surveillance during the initial filling; and construction procedures and progress. The licensee shall furnish to the board, with a copy to the Regional Director and two copies to the Director, Office of Hydropower Licensing, prior to each meeting, allowing sufficient time for review, documentation showing details and analyses of design and construction features to be discussed, significant events in design and construction that have occurred since the last board of consultants meeting, drawings, questions to be asked, a list of items for discussion, an agenda, and a statement indicating the specific level of review to be performed by the board. Within 30 days after each board of consultants meeting, the licensee shall submit to the Director, Division of Inspections, copies of the board's report and a statement of intent to comply with the board's recommendations, or a statement identifying a plan to resolve the issue(s). In the event of noncompliance, the licensee shall provide detailed reasons for not doing so. The board's review comments for each portion of the project shall be submitted prior to or simultaneously with the submission of the corresponding Exhibit F final design drawings and design memoranda. The licensee shall also submit a final report of the board upon completion of the project. The final report shall contain a statement indicating the board's opinion with respect to the construction, safety, and adequacy of the project structure(s).

Article 401. The licensee, after consulting with the Little Rock District of the Corps of Engineers, the Soil Conservation Service of the Department of Agriculture, and the Arkansas Department of Pollution Control and Ecology, and within 6 months from the date of issuance of this license, shall file with the Commission a plan to control erosion, turbidity, and slope stability and to mitigate soil compaction at the project, including any project-related preconstruction, construction, and postconstruction activities. The plan shall include functional design drawings and map locations of control measures, an implementation schedule, monitoring and maintenance programs for project construction and operation, and provisions for periodic review of the plan and for making any necessary revision to the plan. Documentation of agency consultation shall be included in the filing. If the licensee disagrees with any agency recommendations, the licensee shall provide a discussion of the reasons for disagreeing, based on actual geological, soil, and groundwater conditions at the site. The Commission reserves the right to require changes to the plan. Unless the Director of the Office of Hydropower Licensing directs otherwise, the licensee may commence project-related land-clearing, land-disturbing, and spoil-producing activities at the project 60 days after filing this plan.

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Article 402. The licensee, after consulting with the Arkansas Department of Pollution Control and Ecology, and within 6 months from the date of issuance of this license, shall file with the Commission a plan to control fugitive dust emission during project construction. The plan shall include a description of mitigative measures, map locations of control measures, an implementation schedule, a monitoring program, and provisions for periodic review for making any necessary revisions to the plan. Documentation of agency consultation shall be included in the filing. The Commission reserves the right to require changes to the plan. Unless the Director of the Office of Hydropower Licensing directs otherwise, the licensee may commence project-related land-clearing, land-disturbing, and spoil-producing activities at the project 60 days after filing this plan.

Article 403. The licensee, within 6 months from the date of issuance of this license, shall file with the Commission a plan for mitigating the effect of the noise from project construction. The plan shall include a description of equipment noise-suppression devices, a construction schedule that will reduce construction noise levels by preventing noisy activities from occurring simultaneously, an implementation schedule, a monitoring program, and provisions for periodic review for making any necessary revisions to the plan. The Commission reserves the right to require changes to the plan. Unless the Director of the Office of Hydropower Licensing directs otherwise, the licensee may commence project-related land-clearing, land-disturbing, and spoil-producing activities at the project 60 days after filing this plan.

Article 404. The licensee, after consulting with the Arkansas Game and Fish Commission, the Arkansas Department of Pollution Control and Ecology, the Little Rock District of the Corps of Engineers, and the U.S. Fish and Wildlife Service, and within 6 months from the date of issuance of this license, shall file for Commission approval functional design drawings of a multi-level intake structure and fish screens for all water intakes at the Lee Creek Project. The filing shall include a plan describing the proposed mode of operation of the fish screens and the intake structures, as well as the agencies' comments on the plan. The Commission reserves the right to require changes to the proposed fish screens and intake structures or their proposed operation. The licensee shall file as-built drawings with the Commission within 6 months after completing construction of such facilities.

Article 405. The licensee, in cooperation with the Arkansas Department of Pollution Control and Ecology and the Oklahoma Water Resources Board, shall develop a plan to monitor temperature, dissolved oxygen, and turbidity in the reservoir and downstream from the Lee Creek Project. The plan shall include methodologies, sampling locations, duration, and a schedule for filing recommendations for modifying project structures or operation in

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the event that the monitoring results indicate that project operation has resulted in violation of state water quality standards. The plan shall be filed for Commission approval within 6 months from the date of issuance of this license. Comments from the consulted agencies on the plan shall be included in the filing. The Commission reserves the right to require changes to the proposed plan.

Article 406. The licensee, after consulting with the U.S. Fish and Wildlife Service, the Arkansas Game and Fish Commission, the Arkansas Department of Pollution Control and Ecology, the Oklahoma Department of Wildlife Conservation, and the Oklahoma Water Resources Board, and within 6 months from the date of issuance of this license, shall file with the Commission a plan for the staged filling of the Lee Creek Project reservoir, including a schedule for making incremental changes in surface elevation to the maximum elevation of 420 feet mean sea level at the dam. The plan also shall include a description of the measures proposed to reduce the potential for eutrophic-like conditions and to maintain reservoir water quality at state standards, including measures for monitoring reservoir water quality throughout the staged filling and measures for providing monitoring data to the resource agencies. Agency comments on the plan shall accompany the filing. The Commission reserves the right to require changes to the plan.

Article 407. The licensee, after consulting with the Arkansas Department of Pollution Control and Ecology and the Arkansas Game and Fish Commission, and within 6 months from the date of issuance of this license, shall file for Commission approval a plan of reservoir operation that minimizes the potential adverse effects on the reservoir fishery resulting from operating the project for water supply and power generation. The proposed plan shall include the following restrictions from March 1 through June 30: (1) reservoir surface elevations shall not be lowered below 417 feet mean sea level; (2) daily fluctuations in the reservoir surface elevation shall not exceed 0.5 foot; and (3) total changes in reservoir surface elevation over a 30-day period shall not exceed a 2.7-foot decrease below spillway elevation. Further, the plan shall provide for propagation of the warmwater fishery, including measures to maintain littoral habitat in the reservoir during critical reproductive periods, and shall provide for daily monitoring and recording of reservoir surface elevations at the project dam. Agency comments on the plan shall accompany the filing. The Commission reserves the right to require changes to the plan.

Article 408. The licensee, after consulting with the U.S. Fish and Wildlife Service, the Oklahoma Water Resources Board, and the Oklahoma Department of Wildlife Conservation, shall prepare a plan and an implementation schedule for stocking smallmouth bass in the Oklahoma reach of Lee Creek. The plan should include a

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determination of the time to stock and the numbers and subspecies of smallmouth bass to maintain the fishery in Lee Creek at existing levels. Within 6 months from the date of issuance of this license, the licensee shall file the plan and schedule for Commission approval. Agency comments on the plan and schedule shall accompany the filing. The Commission reserves the right to require changes to the plan and schedule.

Article 409. The licensee, after consulting with the U.S. Fish and Wildlife Service, the Arkansas Game and Fish Commission, and the Oklahoma Department of Wildlife Conservation, and within 1 year from the date of issuance of this license, shall conduct a study and file a report on the distribution of the longnose darter (*Percina nasuta*) in Lee Creek. The report shall be of sufficient detail to determine the extent of the longnose darter habitat affected by the project reservoir. In the report, the licensee shall submit for Commission approval the measures necessary to mitigate any potential impacts to the longnose darter in Lee Creek. Agency comments on the report and on the proposed mitigative measures shall accompany the filing.

Article 410. The licensee, after consulting with the U.S. Fish and Wildlife Service, the Arkansas Game and Fish Commission, the Arkansas Department of Parks and Tourism, the Arkansas Department of Health, the Oklahoma Department of Wildlife Conservation, and the Oklahoma Tourism and Recreation Department, shall prepare a plan for the management of the reservoir buffer zone for the benefit of wildlife and recreational purposes. The plan shall include the following: (1) a description of any measures or facilities to protect or enhance the wildlife habitat value of the buffer zone; (2) an identification of the dispersed recreational activities to be permitted in the undeveloped parts of the buffer zone; (3) a description of the means by which dispersed recreational use would be controlled to protect the public water supply and wildlife habitat value; (4) an implementation schedule for any measures or facilities to protect or enhance the wildlife habitat value of the buffer zone; and (5) the comments of the Arkansas Department of Health on the compatibility of the plan with the protection of the public water supply. Within 1 year from the date of issuance of this license, the licensee shall file the plan for Commission approval, and shall include documentation of agency consultation and agency comments and recommendations on the plan. The Commission reserves the right to require changes to the plan.

Article 411. The licensee, after consulting with the Arkansas Department of Health, the Arkansas Department of Parks and Tourism, the Arkansas Game and Fish Commission, the Oklahoma Department of Wildlife Conservation, the Oklahoma Tourism and Recreation Department, and the U.S. Fish and Wildlife Service, and within 1 year from the date of issuance of this license, shall file for Commission approval a recreation plan for the project. The plan

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shall include drawings showing the locations of project features, recreational facilities, all trails and roads, and areas of mitigation for terrestrial habitat loss. The plan also shall include a description of the following: each recreational facility and mitigative area; provisions for access for the handicapped to any picnic area or sanitary facility; an implementation schedule; a plan for managing, maintaining, and monitoring recreational facilities and mitigative areas and for fencing of the reservoir buffer zone; provisions for coordinating recreational activities with mitigation for terrestrial habitat loss; and provisions for making any necessary revisions to the plan. Documentation of agency consultation and agency comments on the plan shall be included in the filing. The Commission reserves the right to require changes to the plan.

Article 412. The licensee shall implement the cultural resources management plan described in the report by T.C. Klinger and S.M. Imhoff, and filed with the Commission by the licensee on December 22, 1986. The plan shall be implemented in a manner satisfactory to the Arkansas State Historic Preservation Officer and the Corps. After construction of the project, and sixty days before any commercial operation of the project, the licensee shall file with the Commission, for approval, copies of the following: (1) a report which documents the results of investigations to mitigate impacts to archeological sites eligible for inclusion in the National Register of Historic Places, and which indicates the status of procedures designed to avoid impacts to other such sites in the project area; and (2) letters from the SHPO and the Corps accepting the report. No commercial operation shall begin until the licensee is notified that this filing has been approved. If any previously unrecorded archeological or historical sites are discovered during the course of the construction or development of any projects works or other facilities at the project, construction activity in the vicinity shall be halted, a qualified archeologist shall be consulted to determine the significance of the sites, and the licensee shall consult with the Corps and the State Historic Preservation Officer of the state in which the site or sites were found to develop a mitigative plan for the protection of significant archeological or historical resources. The licensee shall make available funds in a reasonable amount for any such work as required. If the licensee and the State Historic Preservation Officer cannot agree on the amount of money to be expended for archeological or historical work related to the project, the Commission reserves the right to require the licensee, at its own expense, to conduct any such work found necessary.

Article 413. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission

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approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

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(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior

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approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

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(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(F) The resource mitigative proposal to enhance stream and river recreational opportunities and preserve bottom land forest and wetlands, filed by the City of Fort Smith on June 15, 1987, as section (II)(B) of the Final Proposed Conditions of a FERC license, page 5, is approved.

(G) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(H) This order is final unless a request for rehearing is filed within 30 days from the date of its issuance, as provided in Section 313(a) of the Act. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of this order.

By the Commission.

(S E A L)

Lois D. Cashell

Lois D. Cashell,
Acting Secretary.

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SAFETY AND DESIGN ASSESSMENT
LEE CREEK HYDROELECTRIC PROJECT
FERC NO. 5251-001, AR/OK

DAM SAFETY

The proposed Lee Creek Hydroelectric Project dam is to be located at mile 3.2 of Lee Creek, a tributary of the Arkansas River near Van Buren, Arkansas.

The site was inspected by the Atlanta Regional Office on September 30, 1986. At that time the dam was classified as one with high hazard potential because of the proximity of the cities of Van Buren and Fort Smith downstream. The spillway capacity has been designed for the probable maximum flood, calculated to be 316,000 cfs at this site. Also the cross section of the concrete overflow dam has been proportioned in accordance to the requirements of gravity stability analysis under normal, earthquake, and extreme flood loading conditions. Staff has checked the design and factors of safety of the gravity overflow dam and has found that they conform to the criteria given in the Commission's Engineering Guidelines.

The design submitted as part of the license application, including the proposed powerhouse and the raw water pumphouse, is preliminary in nature and subject to change during the detailed design phase. A special article is recommended to require the licensee to file final design Exhibit F drawings and a supporting design report before commencement of construction.

The size and downstream hazard potential of the dam and integral impounding structures is such that a special article is recommended requiring the retention of a board of consultants during detailed design, actual construction and commissioning.

PROJECT DESIGN

The project will consist of a concrete gravity dam integral with a reinforced concrete hydro powerhouse and a reinforced concrete raw water pumphouse, all of which will impound a reservoir whose main purpose will be a domestic water supply source for the City of Fort Smith and adjacent communities in Arkansas and Oklahoma.

The project will exclude a proposed water treatment plant just east of the damsite and a domestic water transmission line about five miles long, connecting the new treatment plant with existing water transmission facilities in Van Buren and Fort Smith. The project will also exclude the 12.5-kV distribution line connecting the treatment plant with the Arkansas Valley Electric Cooperative's Kilgore Substation about two miles to the south, even though this is the only electrical connection to the

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outside. It has been determined that this line's primary function is bringing energy into the treatment plant.

The project dam will have a maximum height of 34 feet, an ogee overflow segment 1000 feet long and an east abutment non-overflow segment 220 feet long. The ogee dam crest will be at elevation 420, which will also fix the normal full reservoir level. The abutment dam crest will be at elevation 440. The dam's foundation will be on hard sandstone after excavation of from 8 to 25 feet of sediments and 1 to 3 feet of weathered rock, the present overburden.

The proposed powerhouse will be located east of the overflow dam and would measure 23 feet wide, 68 feet long and 67 feet high above bedrock. The top of the powerhouse would be at elevation 440. There would be one axial flow turbine-generator unit rated 1,500 kW at a head of 27 feet. The maximum hydraulic capacity of the unit would be 733 cfs.

The raw water pumphouse will be constructed of reinforced concrete and will be located between the powerhouse and the east bank of the reservoir, completing the impounding structures. It will measure about 67 feet wide, 56 feet long and 60 feet high. Several pumps will be capable of supplying the adjacent domestic water treatment plant with raw water from Lee Creek under variable demand conditions. The pumphouse is to be considered part of the licensed project only because it is an integral impounding structure.

Since the primary purpose of the Lee Creek Project will be domestic water supply, the hydro powerplant will utilize surplus flow that will not be needed by the water supply system. The powerhouse discharge will return to Lee Creek downstream of the dam and will enter the Arkansas River navigation pool which backs up to the dam and powerplant tailwater, normally at elevation 391.8.

Lee Creek flows in excess of raw water demand and powerplant capacity will be discharged over the 1,000-foot long ogee spillway. The spillway has been designed to pass 316,000 cfs, the calculated probable maximum flood.

The proposed reservoir will cover an area of 634 acres and have a total storage of 7,188 acre feet, 5,715 acre feet of which will be usable for water supply.

ECONOMIC EVALUATION

A multi-purpose water development project such as Lee Creek requires some allocation of the total development costs in order to provide justification for separable project features. Since

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the primary purpose of the project is to provide for domestic water supply, and the Lee Creek dam and reservoir are needed for this purpose, all project land, structures and equipment, with the exception of specific hydroelectric facilities, are allocated to the water supply scheme. These include the gravity dam, the reservoir and the fully equipped pumping plant. Hydroelectric features such as the powerhouse structure, all powerplant machinery and equipment and associated contingencies and overheads are allocated to the electric power portion of the scheme.

The hydroelectric features of the Lee Creek Project will be economically beneficial so long as their projected levelized cost is less than the long-term levelized cost of alternative energy to any utility in the region that can be served by the project.

Staff has calculated the projected levelized alternative energy costs in the region for annual escalation rates of from four to nine percent for the first ten years of project operation, with no escalation for the remaining 40 years of project life. Staff has also calculated the effect of interest rates or cost of money for discounting future costs and benefits over the entire 50 year life of the project. This interest rate was varied from 7.0 percent to 9.0 percent as indicative of the yield of tax-free municipal bonds issued by the City of Fort Smith.

Details of the economic benefit calculations and their tabulated results are given in the Final Environmental Impact Statement, issued February 1987, in paragraph 1.5.2 beginning on page 1-15. It is noted from the summary in Table 1-8 that annual net benefits are negative for all cases except case 1D, which postulates an interest rate of 7 percent and a power value escalation rate of 7 percent.

At the present time (December, 1987), staff estimates that Fort Smith's cost of money would be about 9% annually for 50 years of project amortization, and a conservatively high rate of escalation for power revenues would be about 6% annually for the first 10 years of operation and no escalation thereafter. This best judgment scenario would result in a net annual loss of $83,900 for Lee Creek's hydropower facilities. (See F.E.I.S. Table 1-8).

The applicant, City of Fort Smith, has maintained that the hydro facilities, planned in conjunction with the water supply scheme, will be economically beneficial on their own account. The applicant excludes the powerhouse structure from separable hydro facilities with the explanation that a similarly costly outlet structure would be needed in the absence of the powerhouse in order to control discharges from the reservoir. The applicant

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also escalates alternative energy costs at the rate of 10% per year for the first 20 years of project operation, significantly enhancing the value of the hydropower project.

The staff considers Fort Smith's assumptions of energy cost escalation at 10% per year, and the need for an expensive outlet structure to replace the powerhouse, as unrealistic.

Staff has reviewed the costs of alternative water supply and treatment schemes that could be substituted for the Lee Creek Project. These alternatives are listed in Table 1-7, of the Final Environmental Impact Statement. The least cost alternative to the Lee Creek Project is the Arkansas River as a raw water source, combined with a treatment plant using activated carbon filters. This scheme would have an average annual cost of $4,280,000 compared to $2,910,000 for the Lee Creek Project. Taking into account the losses incurred by the hydropower plant, the Lee Creek Project would have an average annual cost of about $2,990,000, which is less then the least cost alternative.

For the present it should be recognized that the construction of hydropower facilities would be uneconomic with presently foreseeable interest rates, cost escalation rates and alternative energy costs. Staff believes that it would be in the public interest for the city of Fort Smith as a municipality to construct the hydropower facilities to enhance its own electrical energy and capacity security and independence at relatively small cost to the water supply system. With the hydro project included, the Lee Creek water supply project will cost $1,290,000 per year less than the least cost alternative.

WATER RESOURCE PLANNING

The project as proposed by the Applicant will be operated as an auxiliary hydro powerplant to a raw water storage reservoir for domestic water supply. All streamflows not required by the water works will be discharged through the powerhouse to generate electricity. Streamflows in excess of water treatment plant demand and the maximum powerhouse capacity will be discharged over the uncontrolled dam crest. The downstream tailwater level will normally be controlled by the Arkansas River navigation pool.

The project as proposed will have an installed capacity of 1500 kW and will produce an estimated 3,610,000 kWh annually over the first 50 years of operation.

The turbine-generator unit will be capable of operating in a flow range between 250 cfs and 733 cfs. The maximum hydraulic capacity of the turbine will be equivalent to the 28 percent exceedance point on the flow-duration curve.

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Staff has checked the flow records of Lee Creek and finds the proposed plant capacity and energy production potential given by the application reasonable and accurate. Installation of additional capacity would not be economically feasible at this time.

The Corps of Engineers has made a detailed study of Lee Creek's Pine Mountain site, located about 32 stream miles above the Lee Creek site. The Corps' proposal was a multi-purpose scheme including flood control storage, recreational benefits and domestic water supply storage for Fort Smith. The City of Fort Smith subsequently withdrew its participation and opted for its present Lee Creek application. The Lee Creek project would not interfere topographically with the Pine Mountain dam site, so it could be developed as a separate project in the future.

The Lower Arkansas River Basin Planning Status Report includes no projects, either proposed or constructed, that this project would impact, and the project would not conflict with any pending applications for exemption, license or preliminary permit.

Some interveners have questioned the economic feasibility of the hydro facilities, however none have questioned the water supply capability or the dam safety aspects of the project.

Based on the above, staff concludes that the proposed Lee Creek Project adequately utilizes the available flow and head at the site and would not conflict with any other planned development.

ENERGY CONSERVATION AND LOAD MANAGEMENT

The Applicant is a City which does not sell electric power directly to consumers. The applicant intends to use the generated energy in its water treatment plant and sell the excess project output to a second party but, at this time, has no firm power contract (one that is free of potentially nullifying contingency clauses) with a power purchaser.

Consideration of any electricity consumption efficiency improvement program that the applicant might have, as the result of being a customer of the utility serving the applicant, may be irrelevant with regard to the use of project power, since the applicant does not intend to use project power to meet any of its requirements and may not sell the project power to the utility that does. In addition, the applicant could not reasonably be expected to have a program to encourage potential purchasers of project power to conserve electricity in lieu of purchasing project power. Furthermore, since the applicant does not have a firm power sales contract, consideration of a potential

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purchaser's electricity consumption efficiency improvement program would be based on conjecture and could result in findings totally unrelated to how the power is ultimately disposed of.

Based on the above, further consideration of electricity consumption efficiency in relation to issuing a license for the project is deemed unwarranted.

EXHIBITS

The following Exhibit A and Exhibit F drawings conform to the Commission's rules and regulations and should be included in the license:

Exhibit A, pages A-1 and A-2 describing the mechanical, electrical and transmission facilities.

Exhibit F Sheet	FERC No.	Title
1	5251-1	Dam Structure: Plan, Profile - Elevation & Section
2	5251-5	Powerhouse - Plan & Section

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00002897

LEE CREEK HYDROELECTRIC PROJECT
FERC NO. 5251-001, ARKANSAS/OKLAHOMA

RESOURCE DEVELOPMENT

A. Purpose

The proposed project would provide an estimated average annual generation of 3,610,000 kWh of electric energy which would be used in the water treatment plant with the excess output sold to the local utility, Arkansas Valley Electric Co-Op.

B. Need for Power

Section 1.2 entitled NEED FOR POWER-SOUTHWEST POWER POOL REGION of the Final Environmental Impact Statement of February 1987 is incorporated by reference.

C. Alternatives to the Proposed Project

Section 1.4 entitled ALTERNATIVE ACTIONS of the aforementioned FEIS is incorporated by reference.

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Form L-14
(October, 1975)

00002898

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR UNCONSTRUCTED MINOR PROJECT AFFECTING NAVIGABLE WATERS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project works shall be constructed in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes

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made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Upon the completion of the project, or at such other time as the Commission may direct, the Licensee shall submit to the Commission for approval revised exhibits insofar as necessary to show any divergence from or variations in the project area and project boundary as finally located or in the project works as actually constructed when compared with the area and boundary shown and the works described in the license or in the exhibits approved by the Commission, together with a statement in writing setting forth the reasons which in the opinion of the Licensee necessitated or justified variation in or divergence from the approved exhibits. Such revised exhibits shall, if and when approved by the Commission, be made a part of the license under the provisions of Article 2 hereof.

Article 4. The construction, operation, and maintenance of the project and any work incidental to additions or alterations shall be subject to the inspection and supervision of the Regional Engineer, of the Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of the project and for any subsequent alterations to the project. Construction of the project works or any feature or alteration thereof shall not be initiated until the program of inspection for the project works or any such feature thereof has been approved by said representative. The Licensee shall also furnish to said representative such further information as he may require concerning the construction, operation, and maintenance of the project, and of any alteration thereof, and shall notify him of the date upon which work will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance

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of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and oppor-

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tunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 7. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 8. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 9. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the

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interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 10. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 11. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

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Article 12. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests in lands, reservoirs, waterways and project works as may be reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 13. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 14. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 15. The Licensee shall consult with the appropriate State and Federal agencies and, within one year of the date of issuance of this license, shall submit for Commission approval a plan for clearing the reservoir area. Further, the Licensee shall clear and keep clear

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to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. Upon approval of the clearing plan all clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 16. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 17. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission

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may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 18. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 19. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

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Document Content(s)

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From: Alexandra Lange Cortes
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 1:18:47 PM

To Whom It May Concern:

The proposed Plains and Eastern Clean Line transmission project would greatly expand wind energy access to the Southeast. The project could positively impact land and natural resource use.

While the Plains and Eastern Clean Line project will use land, this project may actually help reduce natural resource usage overall. As noted in the EIS, the project would likely displace other forms of energy usage, like coal or natural gas powered generation.

Compared to other threats to land use, the Clean Line project uses a relatively small amount of land. According to the Farmland Information Center, nearly 2.5 million acres of rural land was lost to development nationwide from 2007-2010. That's a loss of about 0.2% out of the nearly 1.4 billion acres of rural land. According to the National Resources Inventory by the U.S. Department of Agriculture, the United States loses about an acre of agricultural land every minute. Additionally, every year, about 7-11 million acres of cropland fails or is abandoned. That's about 3-5% of all cropland. Specifically in Arkansas, Oklahoma, Tennessee and Texas, about 122,000 acres of agricultural land are lost annually across the four states due to development.

Given that Clean Line's one-time-use of 5,916 acres is a very small portion of rural land development, many of the acres used can ultimately be returned to production, the project footprint is smaller than other forms of existing power generation, and that the clean wind power produced can offset the negative effects that other energy resources have on natural resources and public health, it's clear the Plains and Eastern Clean Line project is a net benefit to land and natural resource conservation.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Alexandra Lange Cortes
1901 Brickell Ave Apt B403
Miami, FL 33129

From: Marie Curtis
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 2:40:59 PM

To Whom It May Concern:

The proposed Plains and Eastern Clean Line transmission project would greatly expand wind energy access to the Southeast. The project could positively impact land and natural resource use.

While the Plains and Eastern Clean Line project will use land, this project may actually help reduce natural resource usage overall. As noted in the EIS, the project would likely displace other forms of energy usage, like coal or natural gas powered generation.

Compared to other threats to land use, the Clean Line project uses a relatively small amount of land. According to the Farmland Information Center, nearly 2.5 million acres of rural land was lost to development nationwide from 2007-2010. That's a loss of about 0.2% out of the nearly 1.4 billion acres of rural land. According to the National Resources Inventory by the U.S. Department of Agriculture, the United States loses about an acre of agricultural land every minute. Additionally, every year, about 7-11 million acres of cropland fails or is abandoned. That's about 3-5% of all cropland. Specifically in Arkansas, Oklahoma, Tennessee and Texas, about 122,000 acres of agricultural land are lost annually across the four states due to development.

Given that Clean Line's one-time-use of 5,916 acres is a very small portion of rural land development, many of the acres used can ultimately be returned to production, the project footprint is smaller than other forms of existing power generation, and that the clean wind power produced can offset the negative effects that other energy resources have on natural resources and public health, it's clear the Plains and Eastern Clean Line project is a net benefit to land and natural resource conservation.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Marie Curtis
7 Robin Drive
Oakhurst, NJ 07755

From: Marie Curtis
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Saturday, July 11, 2015 2:09:54 PM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Marie Curtis
7 Robin Drive
Oakhurst, NJ 07755

From: Donna Cuthbert
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 2:54:31 PM

To Whom It May Concern:

The proposed Plains and Eastern Clean Line transmission project would greatly expand wind energy access to the Southeast. The project could positively impact land and natural resource use.

While the Plains and Eastern Clean Line project will use land, this project may actually help reduce natural resource usage overall. As noted in the EIS, the project would likely displace other forms of energy usage, like coal or natural gas powered generation.

Compared to other threats to land use, the Clean Line project uses a relatively small amount of land. According to the Farmland Information Center, nearly 2.5 million acres of rural land was lost to development nationwide from 2007-2010. That's a loss of about 0.2% out of the nearly 1.4 billion acres of rural land. According to the National Resources Inventory by the U.S. Department of Agriculture, the United States loses about an acre of agricultural land every minute. Additionally, every year, about 7-11 million acres of cropland fails or is abandoned. That's about 3-5% of all cropland. Specifically in Arkansas, Oklahoma, Tennessee and Texas, about 122,000 acres of agricultural land are lost annually across the four states due to development.

Given that Clean Line's one-time-use of 5,916 acres is a very small portion of rural land development, many of the acres used can ultimately be returned to production, the project footprint is smaller than other forms of existing power generation, and that the clean wind power produced can offset the negative effects that other energy resources have on natural resources and public health, it's clear the Plains and Eastern Clean Line project is a net benefit to land and natural resource conservation.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Donna Cuthbert
1189 Foxview Road
Pottstown, PA 19465

From: Lisa Daniels
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 8:02:59 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

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Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Lisa Daniels
201 Ridgewood Ave
Minneapolis, MN 55403

From: Kristen Dorage
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 2:39:44 PM

To Whom It May Concern:

The proposed Plains and Eastern Clean Line transmission project would greatly expand wind energy access to the Southeast. The project could positively impact land and natural resource use.

While the Plains and Eastern Clean Line project will use land, this project may actually help reduce natural resource usage overall. As noted in the EIS, the project would likely displace other forms of energy usage, like coal or natural gas powered generation.

Compared to other threats to land use, the Clean Line project uses a relatively small amount of land. According to the Farmland Information Center, nearly 2.5 million acres of rural land was lost to development nationwide from 2007-2010. That's a loss of about 0.2% out of the nearly 1.4 billion acres of rural land. According to the National Resources Inventory by the U.S. Department of Agriculture, the United States loses about an acre of agricultural land every minute. Additionally, every year, about 7-11 million acres of cropland fails or is abandoned. That's about 3-5% of all cropland. Specifically in Arkansas, Oklahoma, Tennessee and Texas, about 122,000 acres of agricultural land are lost annually across the four states due to development.

Given that Clean Line's one-time-use of 5,916 acres is a very small portion of rural land development, many of the acres used can ultimately be returned to production, the project footprint is smaller than other forms of existing power generation, and that the clean wind power produced can offset the negative effects that other energy resources have on natural resources and public health, it's clear the Plains and Eastern Clean Line project is a net benefit to land and natural resource conservation.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Kristen Dorage
264 W Parkwood Rd
Decatur, GA 30030

From:	Pam Fair
To:	plainsandeastern@hq.doe.gov; askNEPA@hq.doe.gov; Mahar, Jay; CES.CommentsPlainSandEasternEIS; Jane.Summerson01@nnsa.doe.gov
Subject:	Comments on Part 1222 & NEPA/EIS of Marsha Fair and Pamela Fair, Poinsett County, Arkansas, Township 10 North, Section 15, Range 6 East Re Plains and Eastern Clean Line Transmission Line and Dept. of Energy
Date:	Monday, July 13, 2015 9:42:41 PM
Attachments:	EXH J-1 !!!!!CRITICAL EXHIBIT!!!! FAIR MARSHA&PAMELA SEC 15 SEPT 26, 2014 USDA SOIL REPORT INDICATING VERY LIMITED FOR BUILDINGS, HIGH EROSION 20150420_15483103822_10_Soil_Report_MFair.pdf EXH J-2 USDA CHRIS CULVER EMAIL IDENTIFYING SOIL REPORT FOR FAIR FARM.htm

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July 13, 2015

VIA EMAIL (*for Part 1222 comment*) plainsandeastern@hq.doe.gov

VIA EMAIL *(for NEPA comment)* at CES.CommentsPlainSan@tetratech.com & jay.mahar@tetratech.com

Clean Line Energy Partners

1001 McKinney, Suite 700

Houston, Texas 77002,

and,

VIA EMAIL *(for Part 1222 comment)* at **plainsandeastern@hq.doe.gov**

U.S. Department of Energy

Office of Electricity Delivery and Energy Reliability (OE-20)

1222 Program

1000 Independence Avenue SW

Washington, DC 20585,

and,

VIA EMAIL *(for NEPA comment)* at **askNEPA@hq.doe.gov**

ATTN: Carol Borgstrom

Director, Office of NEPA Policy and Compliance (GC-54)

US. Department of Energy

1000 Independence Avenue, SW

Washington, D.C. 20585,

and,

VIA EMAIL *(for NEPA comment)* at Jane.Summerson01@nnsa.doe.gov

ATTN: Jane Summerson, Ph.D.

DOE NEPA Document Manager

U.S. Department of Energy

NNSA

P.O. Box 391, Building 401

Kirtland Air Force Base East

Albuquerque. N.M. 87185

RE: PLAINS AND EASTERN CLEAN LINE TRANSMISSION LINE

COMBINED COMMENTS ON PART 1222 and NEPA/EIS

By Marsha and Pamela Fair, FAIR FARMS, 33298 Fair Road, Marked Tree, Arkansas 72365,

Or, that Part of Section 15, Township 10 North, Range 6 East, lying South and West of the St. Francis River, and

North and East of Public Road State Highway 75 containing 225 acres, more or less

(together all of which is situated South of The City of Marked Tree, Arkansas, and North of the Community known as "Joyland,"

Or, In or about the area known as "Yellow Banks, Arkansas.")

Dear DOE and Clean Line Energy Partners/Plains and Eastern Personnel:

A. The Proposed Route for the Transmission Line at Issue is Not Entirely Feasible, Runs Contrary to the Public Interest and Would Cause Significant Loss, Environmental Damage and Other Important Damages to Property and to the Surrounding Communities, All in Opposition

to the Principles of the National Environmental Policy Act (NEPA)

and of the Statutory Criteria of Part 1222(b) of the Energy Policy Act of 2005

and of the DOE's 2010 RFP on File in this Matter.

Please find here the comments of Marsha Fair and Pamela Fair **(hereinafter "the Fairs")** concerning the multitude of adverse impacts and economic and environmental losses, among other significant losses, that will be suffered by the Fairs and by the Public Interests of other Poinsett County residents if the Department of Energy **(hereinafter "DOE")** approves the current proposed route of Plains and Eastern Clean Line Transmission Line **(hereinafter "the Line")** and if the Line is constructed according to the current proposed, sometimes nonsensical, illogical and somewhat circuitous route that the Line proposes taking. We are baffled and dumbfounded as to why the Line proposes to proceed as follows:

from or about the vicinity of Fischer, Arkansas proceeding Southeasterly in the general direction of its ultimate

destination in the Memphis, TN area, moving somewhat on a deliberate, somewhat logical course through Poinsett

County, until just Northeast of Birdeye the route takes an inexplicable turn to the Northeast, perhaps to follow a levee

or drainage ditch?, but for no apparent reason whatsoever, the proposed route turns away from a route toward

Memphis and veers Northward, eventually toward the vicinity of an area known as the "Northern Ohio Community;"

then, when well North of any route that would have taken it more directly toward, for instance, Gilmore and then toward

the Memphis area, the proposed route turns East again, as if the Line is specifically targeting the northern edge of the

Fair Farm near the North side of Section 15 of Township 10 North, Range 6 East, or the North edge of the Fair Farm.

B. Background and Historical Significance of the Fair Farm and the Surrounding Land and Its Importance to Northeast Arkansas and the Mid-South Region.

Should the Transmission Line pick up where we left its course as described above, the route would continue from the vicinity of the Northern Ohio Community,

along the Northern boundary of Section 15 of Township 10 North, across Highway 75 onto the Fair property, thence that ill-advised route would take the Transmission Line across a long stretch of some seriously unstable but extremely valuable and historic Fair Farm land near the banks of the St. Francis River,

to an area called "Yellow Banks" because of the yellow hues of the deciduous trees native to that section of the St. Francis River that there runs south, slicing

across the imaginary center of Section 15, and pointed downriver toward the area of the Parkin Archaeological State Park. In 1966, the Parkin State Park was

listed in the National Register of Historic Places and was once home to a thriving community of as many as 3,500 or more Mississippian Indians who were farmers and hunters and who undoubtedly roamed the banks of the St. Francis River around Yellow Banks and the Fair Farm, just 13 miles to the North of Parkin's well-preserved 17-acre mound dwelling site that was settled around 1000 A.D. At the Fair Farm, we still have a hand-carved wooden dugout canoe that was made by early Native Americans from the area, and that dugout canoe was given to our Mother Jeanne Bradsher Fair when she was a small girl living on the banks of the river on the Fair land near Yellow Banks. Nestled in among the more prominent hardwood trees that populated the area, stately yellow-leafed oak, maple, ash, hickory, beech and sassafras trees, among others, once stood adorning the banks of the St. Francis River, where the house in which the Fairs grew up and continue today to live is located**. (See Exhibit A and area marked as "Fair House.")** Many such colorful trees still grace the scenic landscape of the riverbanks of the Fair Farm today. The entire area is rich in Native American culture and heritage, and an active archaeological dig is still underway just 2 miles north of the Fair Farm at the Whitt Bolton Family Farm. The Boltons are close lifelong family friends of the Fairs, and our maternal grandparents and our Mother lived for a short time made at that scenic location just up the river from the Fair Farm, prior to the construction of the Fair House near Yellow Banks. Following respective careers primarily out of state for the major portion of our adult lives, we were both pleased to return to our Family Farm and former Family Home, which were luckily still here for us when disabilities forced us each of us into poorly planned early retirements, and it is reassuring to find that the farm and homeplace are virtually unchanged from the natural pastoral state in which we knew our home and farm as children. We would be harmed beyond anyone's ability to compensate us if, for instance, a power company were to construct unsightly, noisy and perhaps harmful electrical towers on this land that has survived well in our family for well over one hundred years. The placement of gargantuan concrete and metal structures would blemish the surroundings to such an extent that many residents might find life here greatly changed and diminished in

quality; hunters, outdoorsmen and women, naturalists and tree-hugging tourists would undoubtedly find they would no longer be so drawn as they are now to visit this peaceful countryside that is steeped in a rich and slow-paced, pleasing way of living. An entire way of life might be lost here if the landscape became blemished by a monstrous spires of man-made "monuments" constructed under the guise of "progress." The aesthetic damage to country life and simple pleasures could be forever changed for the worse. There is simply no way to compensate people who cherish and hold dear a simple way of life such as the simple and gentle life that comes with a horizon void of pillars of steel and concrete…

Turning back to the Line's proposed route at the Northern boundary of Section 15 on the Fair Farm land, that route would continue on an Easterly leg of the River as it runs alongside the Fair land, in our opinion unnecessarily traversing the Fair property—in effect, splitting the Fair Farm in half and all but destroying the ability to farm the historic Yellow Banks land, which has been in our family since around 1910. Attached here are documents that comprise a sampling of the sorts of original ownership records for the land still in our possession. These papers document our family's long and close relationship with this land. Please examine **Exhibit B through Exhibit H,** as they serve to paint a picture of the life of this farm and the story of this land as we have known it. Please know that these Exhibits are merely exemplars of the hundreds of pages of Abstracts, deeds, plat maps, correspondence, pleadings, court papers and other historical papers that document the settling of this area by our European ancestors and other such immigrants to America. The Abstracts of Property and other land-related documents create a fairly extensive trail of tales and stories long known to our Family about our Great-Grandfather J. A. "Thal" Bradsher, then-Sheriff of Poinsett County, who resided in nearby Harrisburg, but harbored a dream of adventure and exploration that led him to make a series of bold, calculated actions and dealings in a place where nothing but opportunity or misfortune lay ahead for most. Thal Bradsher slowly built his small "empire" in this unforgiving, godforsaken swampland in the middle of nowhere, a land known then only to outlaws and adventurers and enterprising pioneers. Our Great-Grandfather eventually amassed over 625 acres of uncleared swampland in this part of Poinsett County, which was known then and is known today as "The Historic Sunken Lands of Poinsett County." The Sunken Lands of this area were formed at the time of a pair of massive earthquakes in the area around the Fair Farm caused by intraplate movement on the New Madrid Fault that runs from New Madrid, Missouri to Harrisburg, Arkansas and forms the gentle foothills around Harrisburg known as Crowley's Ridge. This area's 1811-12 earthquakes remain the most powerful earthquakes to hit the contiguous United States east of the Rocky Mountains in the country's recorded history. The New Madrid Fault is still extremely active and the risk remains extremely high that an earthquake even more powerful than the pair in the early 1800s is sure to become a reality someday not far off, based on the shared opinions of geological experts worldwide. Many homes in the Marked Tree area provide official seismic readings for U.S. government agencies, and FEMA often warns us that the New Madrid Seismic Zone, which includes the area of the Fair Farm, could soon result in the highest economic losses due to a natural disaster ever known to the United States. The 1812 quakes were so powerful that the waters of

the mighty Mississippi River ran backwards between its banks near Memphis and formed the nearby St. Francis Lake approximately eight miles northeast of the Fair Farm. Until a complex system of drainage ditches and siphons were completed around 1935 by the Army Corps of Engineers, the area around Marked Tree, including the Fair Farm area, used to be completely flooded at least half of the year. There are many parts of the Fair Farm that were routinely flooded and under water during our childhoods, and our Father as recently as the 1960s continued to take steps to guard against flooding in the exact location that the Transmission Line proposes for its transmission line route through our farmland. Flooding is a real and significant threat for this entire area, and the area around Payneway west of Marked Tree was flooded all the way to Fisher and Wynne three years ago. Many homes were severely damaged and crops were completely lost on a large scale at that time. Flooding was once so commonplace that this entire area remained a virtual "No Man's Land" until early in the 1900s when adventurous pioneers such as J. A Bradsher and other founders of Marked Tree and surrounding communities undertook to clear and reclaim the land and commence farming its rich Delta soil.

C. Further Evidence and Factors that Mitigate Against the Feasibility of the Proposed Route through the Fair Farm Land,

At this point, it should be carefully noted by the parties to this project that the area of the Fair Farm which the Line's route appears to aim for on its afore-mentioned, baffling turn to the Northeast somewhere approximately a mile or so back on the proposed route prior to the Northern Ohio Community, there is land within the boundaries of the Fair Farm that through the past decade **suffered such significant erosion, such massive washing away of farm land that created gigantic craters or "sink holes" from the powerful effects of erosion to the land over the width of the farm, that the Fairs were required in or about 2012 to spend substantial sums of money--approximately $20,000--in order to reclaim that land for farming purposes.** In fact, there can be no guarantee that the exact same sort of erosion to the land will not be repeated in the near future. The U.S. Department of Agriculture, through its Harrisburg, Arkansas Extension Office, performed a soil survey of this specific area of the Fair Farm in 2014 **(See Fair Exhibits J-1 & J-2, attached hereto),** which survey and study were based on 2011 aerial images **(Exhibit J-1 at p. 29.)** In that study, the DOA characterized over 200 acres of the area and soil as land that displays "somewhat limited" to "very limited" ability for even shallow excavations **(Exh. J-1 at p. 20),** and, among other significant negative characteristics, demonstrates a "somewhat limited" but primarily "very limited" rating with respect to the soil's value for purposes of constructing small, under three-story buildings on the soil **(Exh. J-1, p. 30.)**

Furthermore, the unstable and precarious condition of this part of the Fair Farm was reported in person by Pamela Fair to Houston representatives of the Line and to the DOE's Dr. Jane Summerson at the last Public Hearing the Line held in Marked Tree shortly before its proposed EIS was submitted to the DOE. Representatives of the Line seemed to have little interest in this critical information about the instability of

the soil along a major portion of the Line's route!!

It is significant to also note that prior to the northerly swing taken on the proposed route toward the Fair Farm, the Line's proposed route had already taken a somewhat unnecessary swing to the North from the vicinity of Bradford, Arkansas north toward Fisher, taking the route of an imaginary line almost parallel with Memphis, and putting the route significantly North of its eventual course, where it continues its meandering path. To our knowledge, when the Line originally proposed its route through Poinsett County, the Fair Farm was to be untouched by the Line's construction path and any inkling or whisper of its attendant destruction to the Fair Farm was absent from discussions at public meetings about the proposed route and project. It is for this reason that the Fairs were caught somewhat off-guard when we learned in late 2014 or so that the route proposed for the Transmission Line project now took the project squarely across our land. We regret that we were initially unprepared to comment in a timely manner on the proposed EIS during the designated comment period that ended on or about April 20, 2015. We apologize for any inconvenience caused by this late submission of our comments regarding the proposed EIS, but an unexpected and disturbing death in our family further prevented our comments to Part 1222 at an earlier time. Therefore, we thought it prudent to combine the two comments herein and to implore the parties to respectfully consider all our comments herein for both comment purposes. We hope you agree that the reasons for our concern are serious enough and the potential consequences to our land grave enough to warrant the parties taking the necessary steps, however inconvenient, to ensure that the proper persons with the Line and especially with the DOE give thoughtful attention to a proposed route which does not cross the Fair Farm. We suggest exploration of a more direct route that would take the Transmission Line farther South of the Fair Farm beginning in or about the Fisher area, perhaps at a place somewhat parallel to South Road, where the inhabitants are already accustomed to paved roads and heavier traffic and existing power lines run along that area for some distance. Even taking the route farther South of South Road closer to Highway 75 in the Joyland area would make more sense and be much more practicable and feasible, as it would take the route more directly across this portion of the County and across the St. Francis River. The parties may be amused to learn that such a route would closely match the route that early bootleggers in this area took. Folklore tells us that one particular family that our family knew and still knows quite well was responsible for the production of moonshine across the St. Francis River from Joyland or thereabouts, and the matriarch of that family carefully patrolled the river for enterprising businessmen who sought to buy or sell their 'shine without paying the "tariff" that that family imposed for others' use of the river for transporting product across and up into the Harrisburg hills. I have heard on more than one occasion the story from reliable sources that indicate that while that family made the moonshine, it was my Bradsher family that retrieved, distributed and sold the high-powered refreshment to customers farther from the swamplands near the river. Thus, the story goes, one of the first natural courses of commerce was created from the vicinity of the Fair Farm up into the hills, where my Great-Grandfather conveniently was Sheriff of the County for a time! So perhaps the suggestion that a natural route for the Plains & Eastern Transmission Line might more naturally align itself with one of the original business ventures that

was born out of necessity here in the Sunken Lands!! Good Luck!

D. Plans Being Made to Set Aside Land as Wetlands, as Nature and Animal Habitats and for Reforesting Which Have Been Discussed Among The Fair Family and Our Portis Cousins Who Farm the Remainder of the Original J. A. Bradsher 625 Acres of Land Situated to the South of the Fair Farm in Sections 22 and 27 of Township 10 North Will be Rendered Impossible if a Massive Power Transmission Line is Constructed Across this the Face of This Otherwise Serene and Natural Historic Landscape.

The land which is the Fair Farm had its earliest use by white men as a bear camp established by our Great-Grandfather. The house in which we live and were raised was originally built as a hunting lodge from cypress, pecan and other hardwoods cut in the area. Black bear, bobcats, deer, ducks and other wild animals were plentiful during the days of the original Bradsher-Burton Bear Camp. The land is situated on the flyway for migratory birds, most notably ducks and geese, which still bring droves of tourists and hunters to the area today. It has always been the plan of the Fairs and of our Portis cousins who farm the remainder of the Bradsher family land to the South of the Fair Farm to set aside as much of the original Bradsher land as is feasible to be designated as natural grassland or as bird and animal habitats. Discussions among the cousins had just begun in earnest for such purposes late last year, when we were met with the terrible and disturbing news of the proposed Power Line which would destroy the animal habitats, rob us of our tranquility and our right of quiet enjoyment of our historic land, and would without doubt greatly devalue the land and destroy significant portions of this beautiful, treasured part of the rich history of Northeast Arkansas. We beseech the parties to consider the environmental impact, the impact on our ability to preserve the historic land in its natural state, and of course the monetary and pecuniary loss to two aging (67 and 65 years of age respectively) almost totally disabled old women who barely survive on our Social Security and Disability funds and barely manage to support the land and our former hunting lodge/home on the little money that is made from farming these few acres. Any reduction in the amount of our farmland will be disastrous to us in our twilight years, years which we looked forward to spending in the peace and quiet enjoyment of a quiet and peaceful life one our small rural farm, which is a little bit of Heaven to folks such as us!

E. The Right of Eminent Domain Cannot and Must Not be Granted to a Private, For-Profit Corporation Such as Plains and Eastern Transmission Line and P&E Partners, Since Such Corporations Never Truly Act in the Best Interest of the Public but Rather Serve to Burden and Encumber the Public in Their Relentless Quests to Accumulate More and More Wealth for Their Shareholders and Board Members, Usually at the Expense of the Local Tax-Paying Residents Who Live in the Path of the Power Line's Proposed Route.

Research into the history of similar projects undertaken by Plains and Eastern and similarly-situated enterprises demonstrates a marked tendency toward shifting the

burden of bearing the major portion of the cost of such power line projects from the developing corporations to the tax-paying residents and/or consumers in the community in which the project is built. We are loathe to assign unethical tactics or deceit to Plains & Eastern; however, we find the generous and lofty predictions of the capital that is expected to be raised, the funds that are predicted to be infused in the State of Arkansas and the large number of jobs that are predicted to be created in Arkansas attributable to the Transmission Line at issue here somewhat suspect if not downright unbelievable. Furthermore, we do not believe that the current burgeoning state of development in the wind generator power industry in this country is anywhere close to being so developed within the next 20-25 years that entirely new lines of cross-country transmission lines for that power source would in reality be required in the United States. We believe that as long as the current system of buying and selling electrical power among the states for coal-based or nuclear-related electrical power continues to be profitable and lucrative within the confines of the existing power grid, strained as it must be, for the existing but limited pool of veteran "players" that the industry now successfully supports, simple economics and market forces, aided in part by the sort of near-monopoly of the industry that currently exists, will serve to restrict progress away from carbon-based industries in this country, despite the obvious advantages and improvements to the planet and the environment that clean energy would provide. The history of this nation indicates to us that the United States will avoid change in its key industries and businesses until the absolute last possible moment, despite the specter of certain doom that stares us in the face. If our collective attitude as a country toward climate change and destruction of the planet serves as any indication of our desire to change significantly even for the common good of mankind and the Earth is greatly outweighed in Western society by corporate and individual greed. If power companies were genuinely interested in the public good and the best interest of the public as a whole, then we would see a shift toward much more altruistic business practices than we have seen in the last century or so. When Winston Churchill continued to be asked and badgered about the absence of the United States' presence even at perhaps the most critical time and greatest threat to the future of Europe and the world, it is said that Churchill, in a moment of attempted levity, opined that he believed that the United States and President Roosevelt ALWAYS did the right thing—but only after exhausting every other possible venue known to man first! We believe that such a sentiment still prevails among the wealthiest and most successful businessmen and women in this country today—they may in fact do that right thing in the end, but it seems that we will try every possible way to avoid doing the right thing as long as it is convenient and profitable to us as individuals. I would caution the DOE to carefully examine the formulas and calculations used by the businesses to predict the future in the case at issue here; good statisticians can manipulate any set of facts to come up with the desired outcome if given the opportunity and enough time—just look at the pharmaceutical industry with its clinical trial "business" of producing profitable new wonder drugs that have been "shown" to have few harmful effects vs. the number of drugs that result in lawsuits early in the drugs' lifetime due to significant adverse impact on patients. In almost all cases, the pharma companies had solid "evidence" by way of statistics that supported its risk –benefit analysis for each "safe" drug. Don't the power companies and the auto industry and the oil and gas industries etc etc etc follow a similar pattern in a true capitalist society? How many monster towers

of steel and concrete do we really need on our country's natural landscape?? I would vote NO on this proposed project, and I would urge the Department of Energy to do the same.

Thank you all sincerely for your time and patience is plowing through the ramblings of an aging hippie who is coming face to face with the hard cold reality of the corporate world even years after practicing law out there swimming among the sharks. I hope some of these words have made some sense to you, and I truly hope that you will give careful consideration and thought to the certain destruction of our family farm that is sure to befall us if this project moves forward as planned.

Thank you again.

All the best,

Marsha Fair Pam Fair

arroz@eritter.net pamfair@att.net

Attachments:

<<...>> **<<...>>** **<<...>>** <<...>> <<...>> <<...>> <<...>> <<...>> <<...>> <<...>>

<<...>>

***First Name:** PAMELA and MARSHA

*Last Name: FAIR
Organization: FAIR FARMS
*Mailing Address: 33298 Fair Road

*City: Marked Tree
*State: Arkansas
*Zip Code: 72365
Phone Number: 870-358-2017— — Extension: na
Email: pamfair@att.net or arroz@eritter.net

Providing a phone number and/or e-mail address is optional. Clean Line appreciates your feedback on the project. If you choose to provide this information, Clean Line may follow up with you depending on the nature of the comment.

Would you like to join the mailing list?

Yes

(already on it I think??)

~~Yes, I support the Plains & Eastern Clean Line and would like to be added to your Friends of Plains & Eastern Clean Line group.~~

Comment Location Address: A portion of Section 15, of Township 10 North, Range 6 East of Poinsett County, Arkansas

City: Marked Tree
State: Arkansas
Zip Code: 72365
Comments: See above and the attached Exhibits A-J

I would like my comments to be confidential n/a

Map
Satellite
187
St. Francis River
75
SEVERE
EROSION ISSUES
& REPAIRS
180
FAIR HOME
Yellow Banks
St. Francis River
EXH. A
FAIR
149
71
75
345
Google
Map Data
Terms of Use
Report a map error

Yellow Banks (in Poinsett County, AR) Populated Place Profile

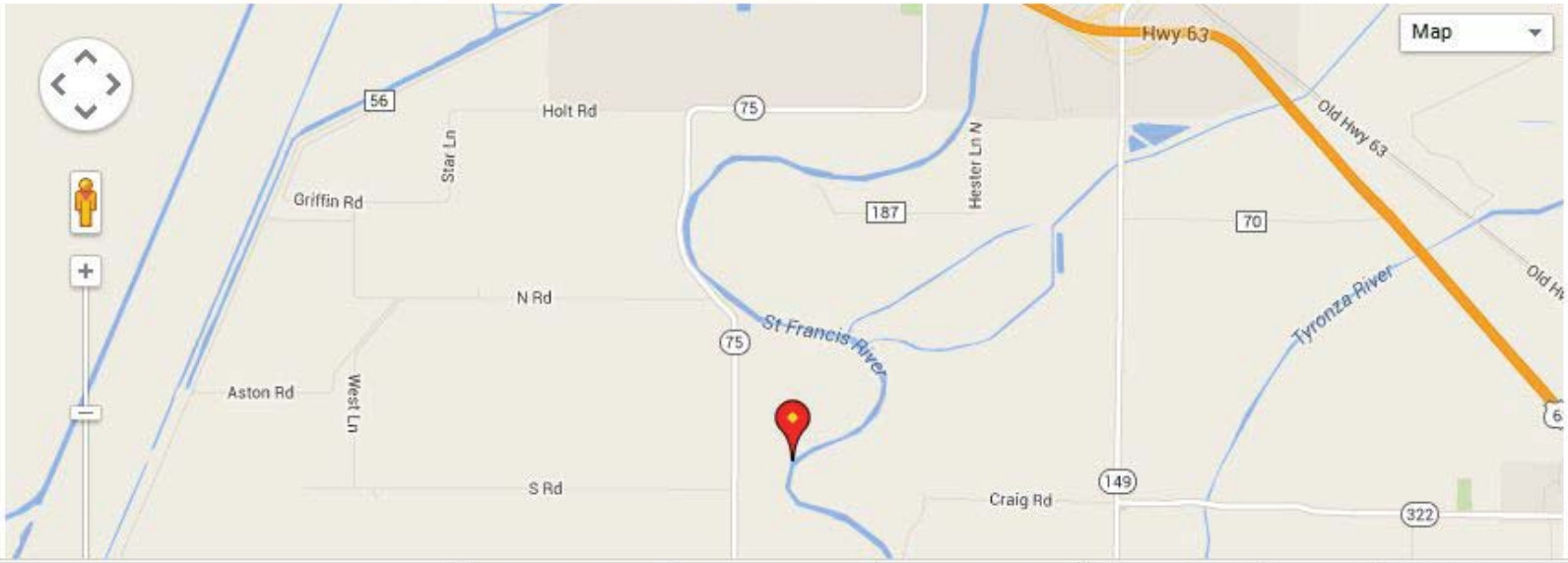
Yellow Banks is a populated place located in Poinsett County at latitude 35.487 and longitude -90.444.

The elevation is 217 feet. Yellow Banks appears on the ***Joyland*** U.S. Geological Survey Map. Poinsett County is in the **Central Time Zone** (UTC -6 hours).

Real Estate Resources

- Real Estate Near Yellow Banks
- Poinsett County Land, Farms, & Ranches

Poinsett County: Cities & Towns | ZIP Codes | Schools | Features (**airports, churches, hospitals, etc.**)



E. Ritter and Anna Ritter, his wife,	Grantors	: Deed Record	No. 5, Page 610
		: Date of Instrument	Jan. 5th, 1907
To		: Date of Filing	Oct. 9th, 1915
J. A. Bradsher	Grantee	: Kind of Instrument	Quit Claim Deed
		: Consideration	$4100.00 in hand paid

The acknowledgment of both Grantors herein was taken before M. W. Hazel a Notary Public for Poinsett County, Arkansas, on the 5th day of January, 1907.

The Acknowledgment recites came before me and to me well known and for the consideration and purposes therein mentioned and set forth and shows relinquishment of dower and homestead and separate examination of wife.

Granting Clause: "Do hereby grant, bargain, sell and convey."

Covenants: "And I hereby demise, and quit-claim all my right, title and interest in the above described land to the said J. A. Bradsher."

Land Conveyed

All of the land in Section 15, and Section 22, Township 10 North, Range 6 East, lying West of the St.Francis River, containing 625.63 acres according to the Gov. Survey.

E. J. Badinelli and Gussie Badinelli, his wife	Grantors	: Deed Record	"R" Page 469
To		: Date of Instrument	Dec. 1904
		: Date of Filing	Dec. 23d, 1904
J. F. Bennett and J. A. Bradsher,	Grantees.	: Kind of Instrument	Spec. Warranty Deed
		: Consideration	$1915.48 Paid
		:	

The acknowledgment of both grantors herein was taken before Geo. W. Eldridge, a Notary Public for Cross County, Arkansas, on December 12th, 1904.

The acknowledgment recites personally appeared and to me well known and for the consideration and purposes therein mentioned and set forth and shows relinquishment of dower and homestead and separate examination of wife.

Granting Clause: Have this day remised, released, sold and conveyed."

Covenants: "That we will forever warrant and defend the title to said lands against the lawful claims of all persons claiming the same by, through or under us but against none other.

Land Conveyed:

Frl N½ Sec. 22, Twp. 10 North, Range 6 East, containing 273.64 acres, according to plat of U.S. Survey

J. C. Mitchell and Lucile A. Mitchell, his wife	Grantors	: Deed Record	"Y" Page 595
To		: Date of Instrument	Oct. 21, 1911
J. A. Bradsher	Grantee	: Date of Filing	Oct. 21st, 1911
		: Kind of Instrument	Quit Claim Deed
		: Consideration	$1.00 in hand paid

The acknowledgment of both Grantors herein was taken before W. W. Nelms, a Notary Public for Poinsett County, Arkansas, on the 21st day of October, 1911.

The Acknowledgment recites came before me and to me well known and for the consideration and purposes therein mentioned and set forth and shows relinquishment of dower and separate examination of wife.

Granting Clause: "Do hereby remise, release, quit-claim and convey."

Covenants: None

Land Conveyed

Frl NE¼ Sec. 15, Twp. 10 N. R. 6 E., 31 Acres more or less, according to U. S. Survey

C. J. Hazel and Irene Hazel, his wife, Grantors

To

J. A. Bradsher and J. F. Bennett, Grantees

Deed Record	"W" Page 117
: Date of Instrument	August 17, 1905
: Date of Filing	August 19, 1905
Kind of Instrument	Quit Claim Deed.
: Consideration	$600.00 in hand paid.

The Acknowledgment of both Grantors herein was taken before M. W. Hazel, a Notary Public for Poinsett County, Arkansas, on August 17th, 1905.

The Acknowledgment recites came before me and to me well known and for the consideration and purposes therein mentioned and set forth and shows relinquishment of dower and homestead and separate examination of wife.

Granting Clause: "Do hereby grant, sell and quit-claim."

Covenants: None

Land Conveyed

Frl SE¼ Sec. 22, Twp. 10 North, Range 6 East, containing 149 acres, more or less, in Poinsett County, Arkansas.

(C. J. Hazel received deed for East of River S½ Sec. 22, 10-6, 149 acres, for levee taxes of 1899.)

Benj. Harris and Sarah M. Harris, his wife,	Grantors	: Deed Record	No. 9 Page 477
To		: Date of Instrument	Dec. 18, 1917.
J. A. Bradsher	Grantee	: Date of Filing	Dec. 28th, 1917.
		: Kind of Instrument	Quit Claim Deed
		: Consideration	$10.00 cash in hand paid.

The acknowledgment of both grantors herein was taken before M. M. Griffin, a Notary Public for Poinsett County, Arkansas, on December 18th, 1917.

The acknowledgment recites came before me and to me well known and for the consideration and purposes therein mentioned and set forth and shows relinquishment of dower and homestead and separate examination of wife.

Granting Clause "Do hereby grant, sell and quit-claim."

Covenants None

Land Conveyed

West of River, Section 27, Twp. 10 N. R. 6 E., 18 acres.

Benj. Harris and Sarah M. Harris, his wife, Grantors	: Deed Record No. 8	Page 380
To	: Date of Instrument	Oct. 1st, 1917.
J. A. Bradsher Grantee	: Date of Filing	Nov. 30th, 1917.
	: Kind of Instrument	Quit Claim Deed
	: Consideration	$10.00 cash in hand paid.

The acknowledgment of both Grantors herein was taken before M. M. Griffin, a Notary Public for Poinsett County, Arkansas, on October --- 1917.

The acknowledgment recites came before me and to me well known and for the consideration and purposes therein mentioned and set forth and shows relinquishment of dower and homestead and separate examination of wife.

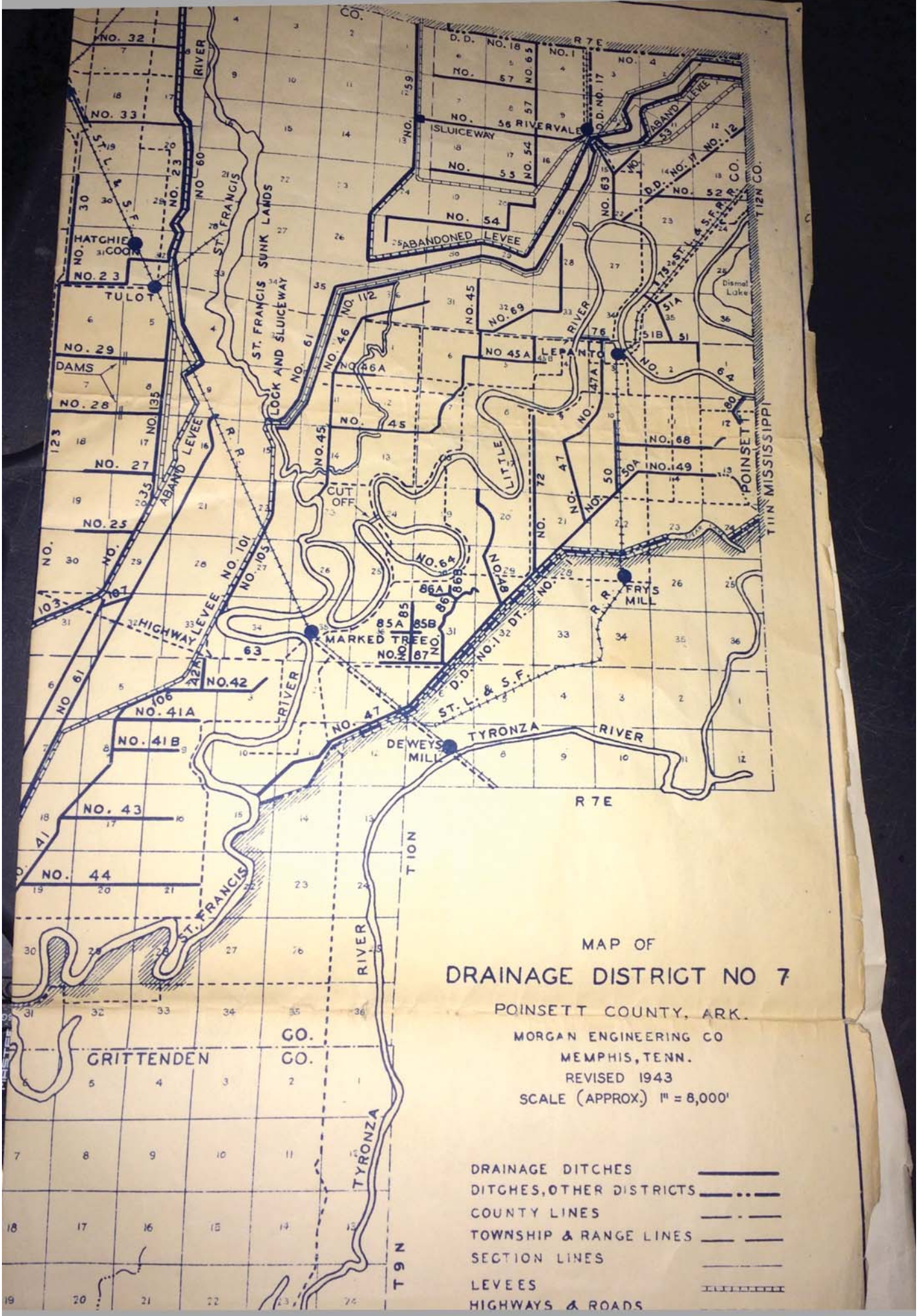
Granting Clause: "Do hereby Grant, bargain, sell and convey."

Covenants: None

This instrument recites: "This Deed is made to take the place of a former Deed executed and delivered by the Grantors to the Grantee herein during the month of May, 1908, which Deed has been lost or destroyed and is not of record.

Land Conveyed

West of River Sec. 27, Twp. 10 N. R. 6 E., containing 17.91 acres according to U. S. Survey.


MAP OF
DRAINAGE DISTRICT NO 7
POINSETT COUNTY, ARK.
MORGAN ENGINEERING CO
MEMPHIS, TENN.
REVISED 1943
SCALE (APPROX.) 1" = 8,000'
DRAINAGE DITCHES
DITCHES, OTHER DISTRICTS
COUNTY LINES
TOWNSHIP & RANGE LINES
SECTION LINES
LEVEES
HIGHWAYS & ROADS
HATCHIE COON
TULOT
DAMS
RIVERVALE
ISLUICEWAY
ABANDONED LEVEE
ST. FRANCIS SUNK LANDS
LOCK AND SLUICEWAY
ST. FRANCIS RIVER
LEPANTO
CUT OFF
LITTLE RIVER
MARKED TREE
FRYS MILL
DEWEYS MILL
TYRONZA RIVER
ST. L. & S.F.
HIGHWAY LEVEE
POINSETT CO.
MISSISSIPPI
GRITTENDEN CO.
R 7 E
T 10 N
T 9 N
T 12 N CO.
T 11 N

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Poinsett County, Arkansas

Marsha Fair

April 20, 2015

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (http://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means

for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

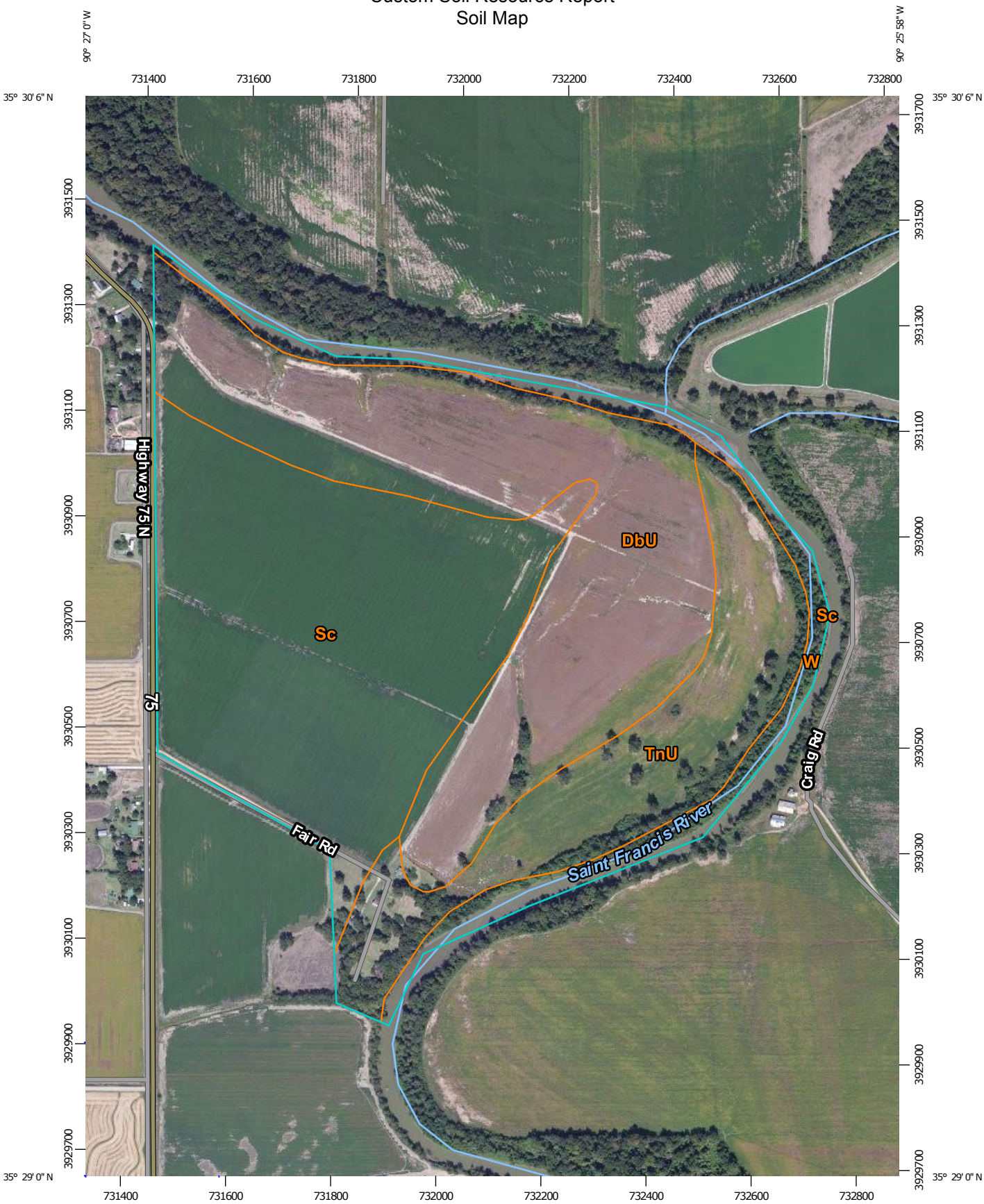
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:9,980 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features

- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Poinsett County, Arkansas
Survey Area Data: Version 12, Sep 26, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 22, 2011—Oct 9, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Poinsett County, Arkansas (AR111)			
Map Unit Symbol	**Map Unit Name**	**Acres in AOI**	**Percent of AOI**
DbU	Dubbs silt loam, undulating	105.6	37.0%
Sc	Sharkey clay, 0 to 1 percent slopes, protected	107.9	37.8%
TnU	Tunica clay, undulating	52.1	18.2%
W	Water	20.1	7.0%
Totals for Area of Interest		**285.7**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments

on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Poinsett County, Arkansas

DbU—Dubbs silt loam, undulating

Map Unit Setting

National map unit symbol: ly57
Mean annual precipitation: 39 to 55 inches
Mean annual air temperature: 51 to 72 degrees F
Frost-free period: 225 to 270 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dubbs and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dubbs

Setting

Landform: Natural levees
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy alluvium

Typical profile

A - 0 to 7 inches: silt loam
BE - 7 to 11 inches: silt loam
Bt - 11 to 37 inches: silty clay loam
BC - 37 to 82 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very high (about 12.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B

Minor Components

Aquents

Percent of map unit: 10 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Convex

Sc—Sharkey clay, 0 to 1 percent slopes, protected

Map Unit Setting

National map unit symbol: 2t22z
Elevation: 20 to 320 feet
Mean annual precipitation: 48 to 52 inches
Mean annual air temperature: 51 to 71 degrees F
Frost-free period: 225 to 285 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Sharkey and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sharkey

Setting

Landform: Flats, backswamps
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear
Parent material: Clayey alluvium

Typical profile

Ap - 0 to 5 inches: clay
Bssg - 5 to 49 inches: clay
Bssyg - 49 to 79 inches: silty clay loam

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline (0.0 to 2.0 mmhos/cm)
Available water storage in profile: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D

Minor Components

Dowling

Percent of map unit: 4 percent
Landform: Oxbows, backswamps
Landform position (three-dimensional): Talf, dip
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave

Commerce

Percent of map unit: 3 percent
Landform: Natural levees
Landform position (three-dimensional): Riser, talf
Down-slope shape: Linear
Across-slope shape: Linear

Tunica

Percent of map unit: 3 percent
Landform: Flood plains
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Linear

TnU—Tunica clay, undulating

Map Unit Setting

National map unit symbol: ly5w
Mean annual precipitation: 39 to 55 inches
Mean annual air temperature: 51 to 72 degrees F
Frost-free period: 225 to 270 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Tunica and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Tunica

Setting

Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex
Parent material: Clayey alluvium over loamy alluvium

Typical profile

Ap - 0 to 6 inches: clay
Bg - 6 to 24 inches: clay
BCg - 24 to 59 inches: silt loam
Cg - 59 to 80 inches: loamy fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: High (about 10.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D

Minor Components

Sharkey

Percent of map unit: 10 percent
Landform: Backswamps
Down-slope shape: Concave
Across-slope shape: Convex

W—Water

Map Unit Setting

National map unit symbol: ly5x
Mean annual precipitation: 39 to 55 inches
Mean annual air temperature: 51 to 72 degrees F
Frost-free period: 225 to 270 days
Farmland classification: Not prime farmland

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Building Site Development

Building site development interpretations are designed to be used as tools for evaluating soil suitability and identifying soil limitations for various construction purposes. As part of the interpretation process, the rating applies to each soil in its described condition and does not consider present land use. Example interpretations can include corrosion of concrete and steel, shallow excavations, dwellings with and without basements, small commercial buildings, local roads and streets, and lawns and landscaping.

Shallow Excavations

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected.

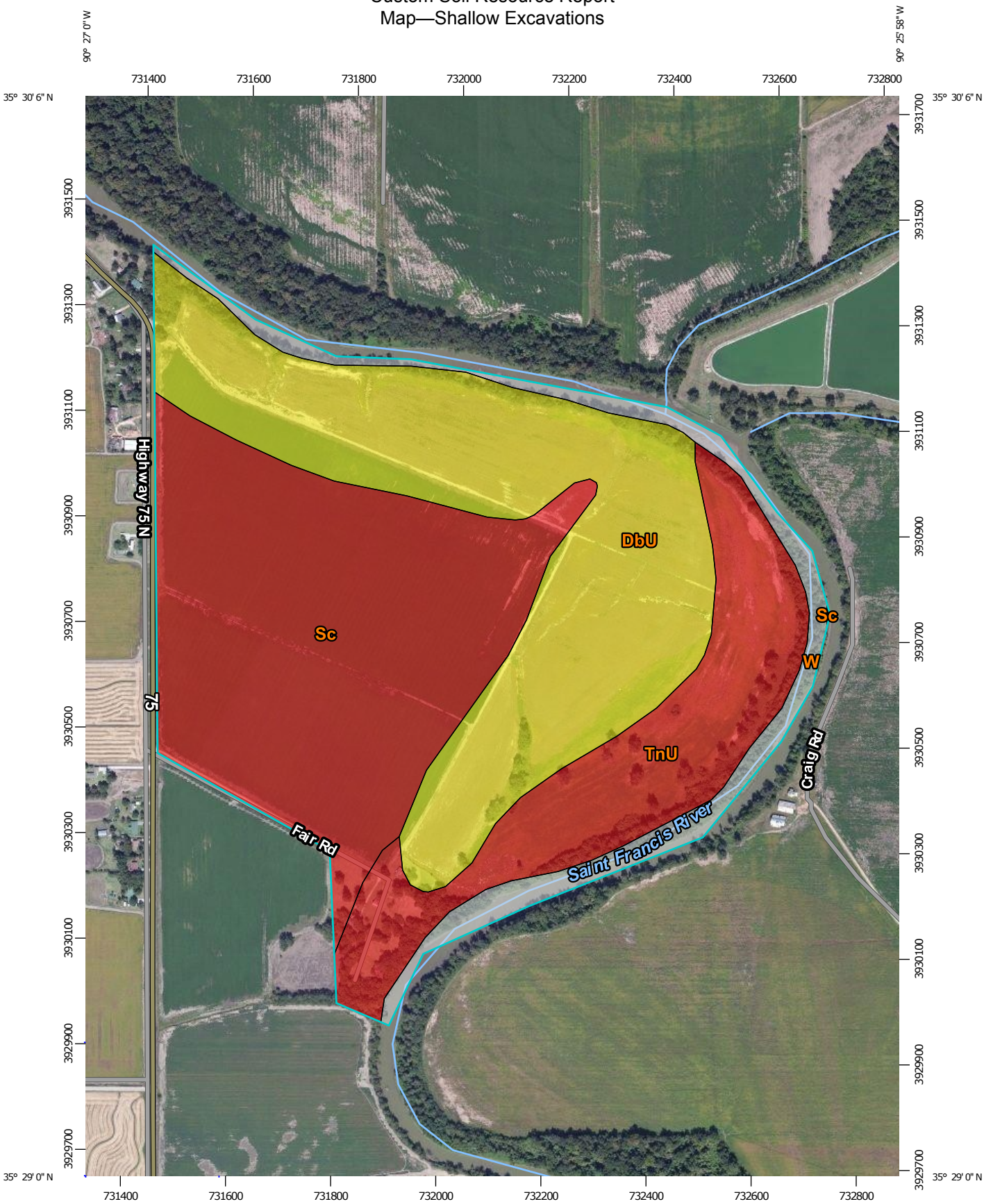
"Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Shallow Excavations



Map Scale: 1:9,980 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Lines

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Points

Very limited

Somewhat limited

Not limited

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Poinsett County, Arkansas
Survey Area Data: Version 12, Sep 26, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 22, 2011—Oct 9, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Shallow Excavations

Shallow Excavations— Summary by Map Unit — Poinsett County, Arkansas (AR111)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
DbU	Dubbs silt loam, undulating	Somewhat limited	Dubbs (90%)	Dusty (0.11)	105.6	37.0%
				Unstable excavation walls (0.01)		
Sc	Sharkey clay, 0 to 1 percent slopes, protected	Very limited	Sharkey (90%)	Depth to saturated zone (1.00)	107.9	37.8%
				Too clayey (1.00)		
				Unstable excavation walls (1.00)		
				Dusty (0.09)		
			Dowling (4%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Unstable excavation walls (1.00)		
				Too clayey (1.00)		
				Dusty (0.09)		
			Tunica (3%)	Depth to saturated zone (1.00)		
				Too clayey (0.88)		
				Dusty (0.09)		
				Unstable excavation walls (0.01)		
TnU	Tunica clay, undulating	Very limited	Tunica (90%)	Depth to saturated zone (1.00)	52.1	18.2%
				Too clayey (0.97)		
				Dusty (0.11)		
				Unstable excavation walls (0.01)		
W	Water	Not rated	Water (100%)		20.1	7.0%
Totals for Area of Interest					**285.7**	**100.0%**

Shallow Excavations— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Very limited	160.0	56.0%

Shallow Excavations— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Somewhat limited	105.6	37.0%
Null or Not Rated	20.1	7.0%
Totals for Area of Interest	**285.7**	**100.0%**

Rating Options—Shallow Excavations

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

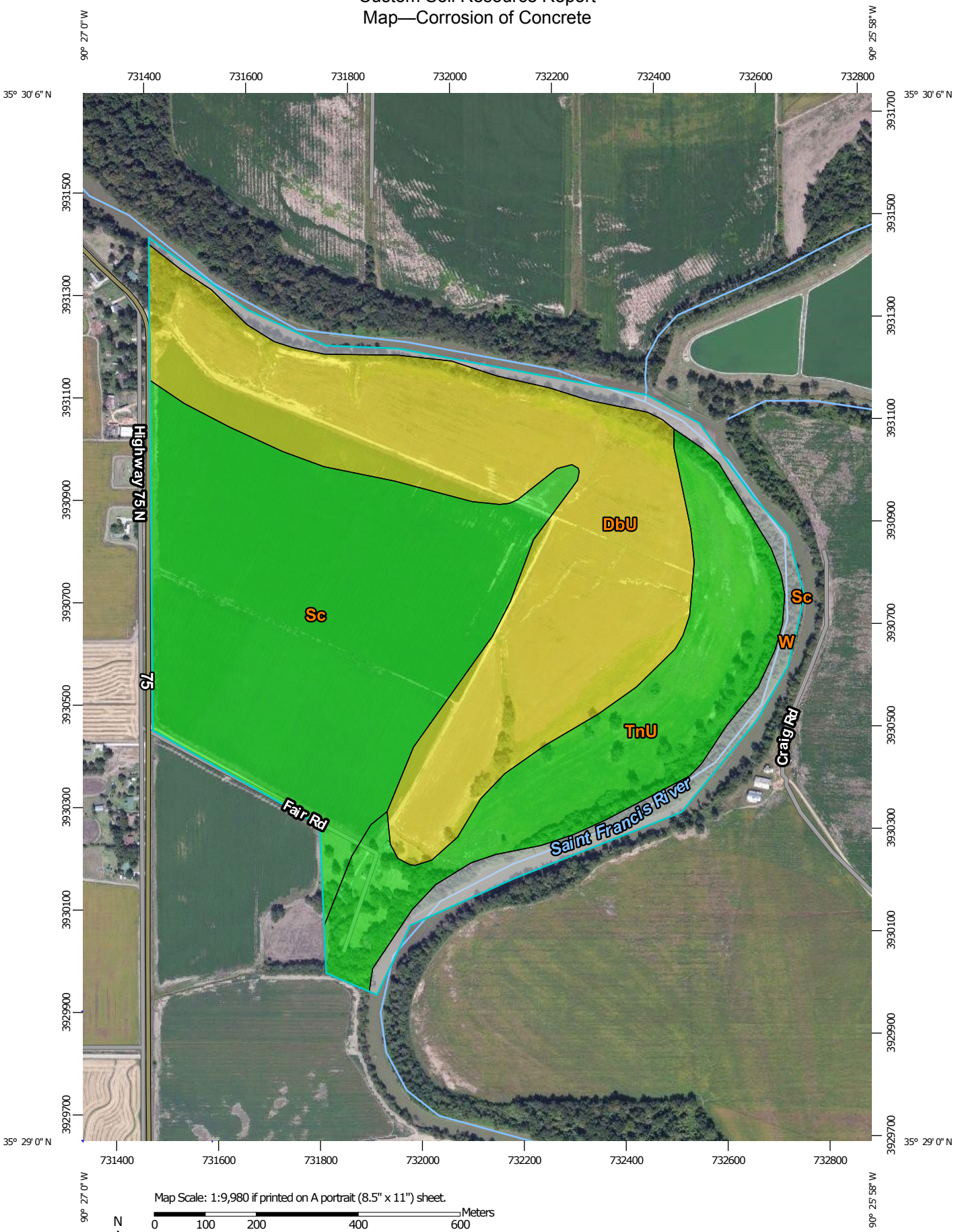
The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Corrosion of Concrete

"Risk of corrosion" pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens concrete. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the concrete in installations that are entirely within one kind of soil or within one soil layer.

The risk of corrosion is expressed as "low," "moderate," or "high."

Map—Corrosion of Concrete



MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

High

Moderate

Low

Not rated or not available

Soil Rating Lines

High

Moderate

Low

Not rated or not available

Soil Rating Points

High

Moderate

Low

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Poinsett County, Arkansas
Survey Area Data: Version 12, Sep 26, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 22, 2011—Oct 9, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Corrosion of Concrete

Corrosion of Concrete— Summary by Map Unit — Poinsett County, Arkansas (AR111)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
DbU	Dubbs silt loam, undulating	Moderate	105.6	37.0%
Sc	Sharkey clay, 0 to 1 percent slopes, protected	Low	107.9	37.8%
TnU	Tunica clay, undulating	Low	52.1	18.2%
W	Water		20.1	7.0%
Totals for Area of Interest			**285.7**	**100.0%**

Rating Options—Corrosion of Concrete

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be

considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Small Commercial Buildings

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification of the soil). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the specified use. "Not limited" indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. "Somewhat limited" indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. "Very limited" indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

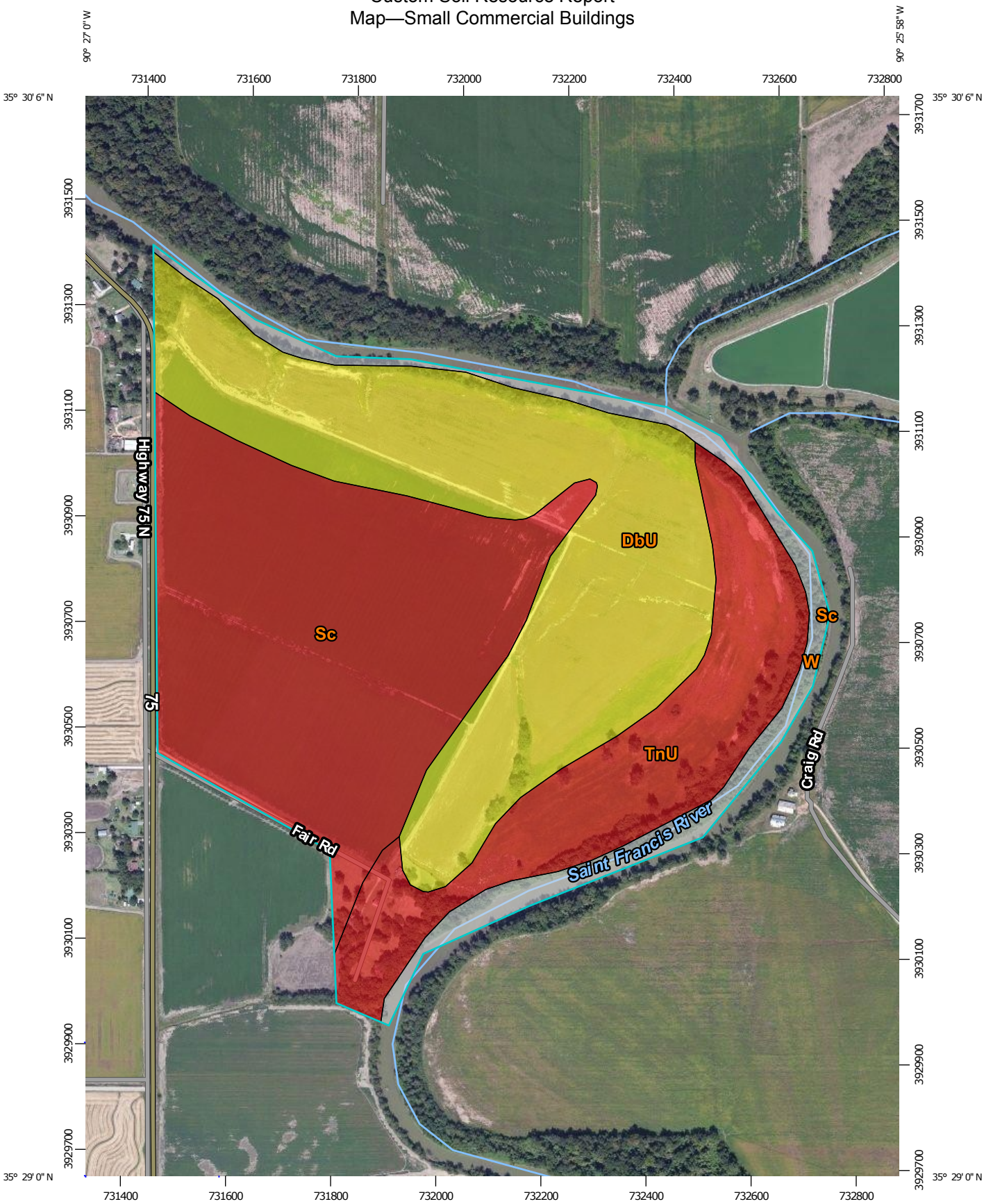
Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from

the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Small Commercial Buildings



Map Scale: 1:9,980 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 100 200 400 600

Feet: 0 450 900 1800 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Lines

Very limited

Somewhat limited

Not limited

Not rated or not available

Soil Rating Points

Very limited

Somewhat limited

Not limited

Not rated or not available

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Poinsett County, Arkansas
Survey Area Data: Version 12, Sep 26, 2014

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Feb 22, 2011—Oct 9, 2011

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Tables—Small Commercial Buildings

Small Commercial Buildings— Summary by Map Unit — Poinsett County, Arkansas (AR111)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
DbU	Dubbs silt loam, undulating	Somewhat limited	Dubbs (90%)	Shrink-swell (0.29)	105.6	37.0%
Sc	Sharkey clay, 0 to 1 percent slopes, protected	Very limited	Sharkey (90%)	Depth to saturated zone (1.00)	107.9	37.8%
				Shrink-swell (1.00)		
			Dowling (4%)	Ponding (1.00)		
				Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
			Tunica (3%)	Depth to saturated zone (1.00)		
				Shrink-swell (1.00)		
TnU	Tunica clay, undulating	Very limited	Tunica (90%)	Depth to saturated zone (1.00)	52.1	18.2%
				Shrink-swell (0.42)		
W	Water	Not rated	Water (100%)		20.1	7.0%
Totals for Area of Interest					**285.7**	**100.0%**

Small Commercial Buildings— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Very limited	160.0	56.0%
Somewhat limited	105.6	37.0%
Null or Not Rated	20.1	7.0%
Totals for Area of Interest	**285.7**	**100.0%**

Rating Options—Small Commercial Buildings

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value

for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

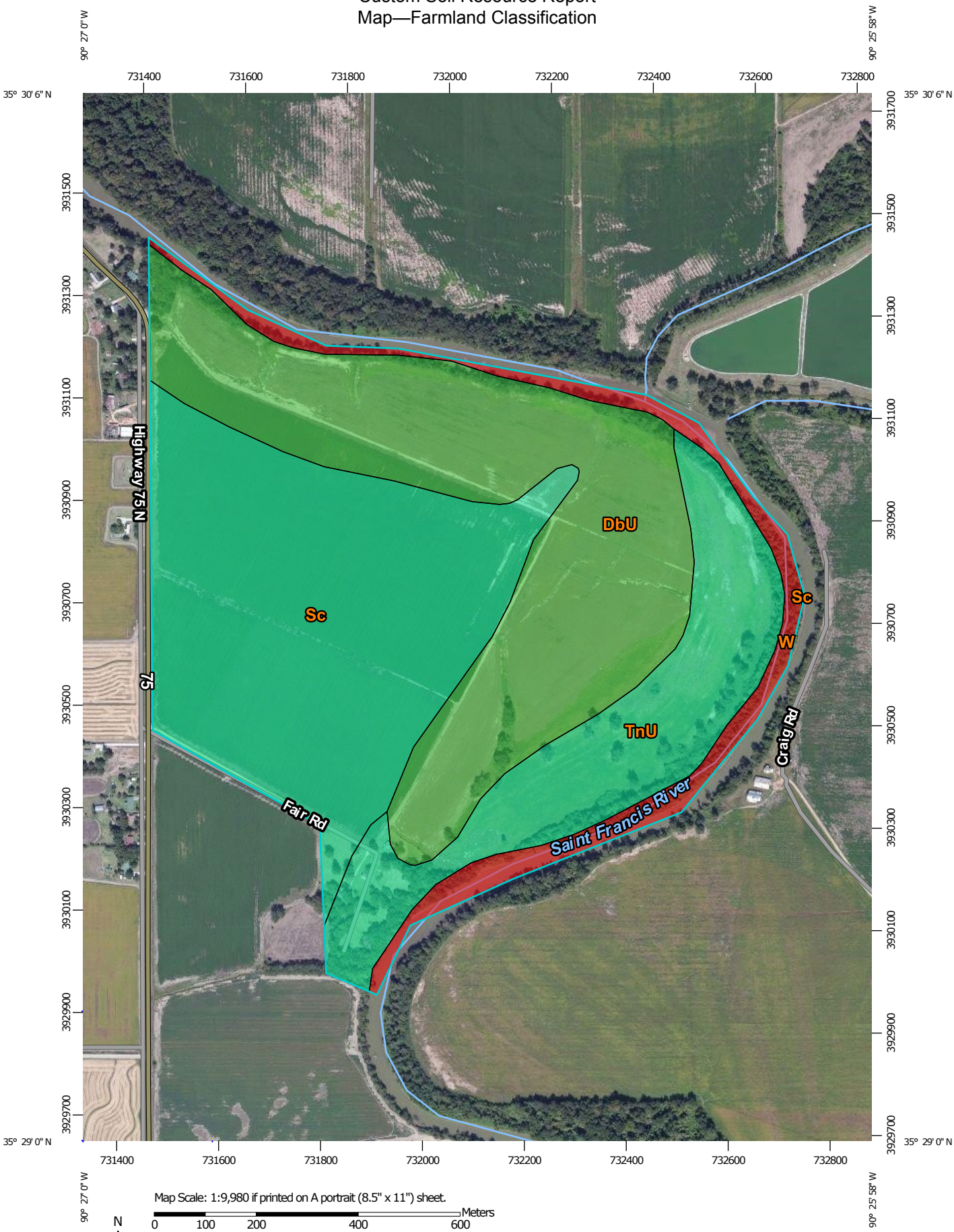
The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.



Map Scale: 1:9,980 if printed on A portrait (8.5" x 11") sheet.

N

Meters
0 100 200 400 600

Feet
0 450 900 1800 2700

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Lines

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Soil Rating Points

- Not prime farmland
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if irrigated and drained
- Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if subsoiled, completely removing the root inhibiting soil layer
- Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
- Prime farmland if irrigated and reclaimed of excess salts and sodium
- Farmland of statewide importance
- Farmland of local importance
- Farmland of unique importance
- Not rated or not available

Water Features

MAP INFORMATION

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

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Date(s) aerial images were photographed: Feb 22, 2011—Oct 9, 2011

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Table—Farmland Classification

Farmland Classification— Summary by Map Unit — Poinsett County, Arkansas (AR111)				
Map unit symbol	**Map unit name**	**Rating**	**Acres in AOI**	**Percent of AOI**
DbU	Dubbs silt loam, undulating	All areas are prime farmland	105.6	37.0%
Sc	Sharkey clay, 0 to 1 percent slopes, protected	Prime farmland if drained	107.9	37.8%
TnU	Tunica clay, undulating	Prime farmland if drained	52.1	18.2%
W	Water	Not prime farmland	20.1	7.0%
Totals for Area of Interest			**285.7**	**100.0%**

Rating Options—Farmland Classification

Aggregation Method: No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Land Management

Land management interpretations are tools designed to guide the user in evaluating existing conditions in planning and predicting the soil response to various land management practices, for a variety of land uses, including cropland, forestland, hayland, pastureland, horticulture, and rangeland. Example interpretations include suitability for a variety of irrigation practices, log landings, haul roads and major skid trails, equipment operability, site preparation, suitability for hand and mechanical planting, potential erosion hazard associated with various practices, and ratings for fencing and waterline installation.

Erosion Hazard (Off-Road, Off-Trail)

The ratings in this interpretation indicate the hazard of soil loss from off-road and off-trail areas after disturbance activities that expose the soil surface. The ratings are based on slope and soil erosion factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance.

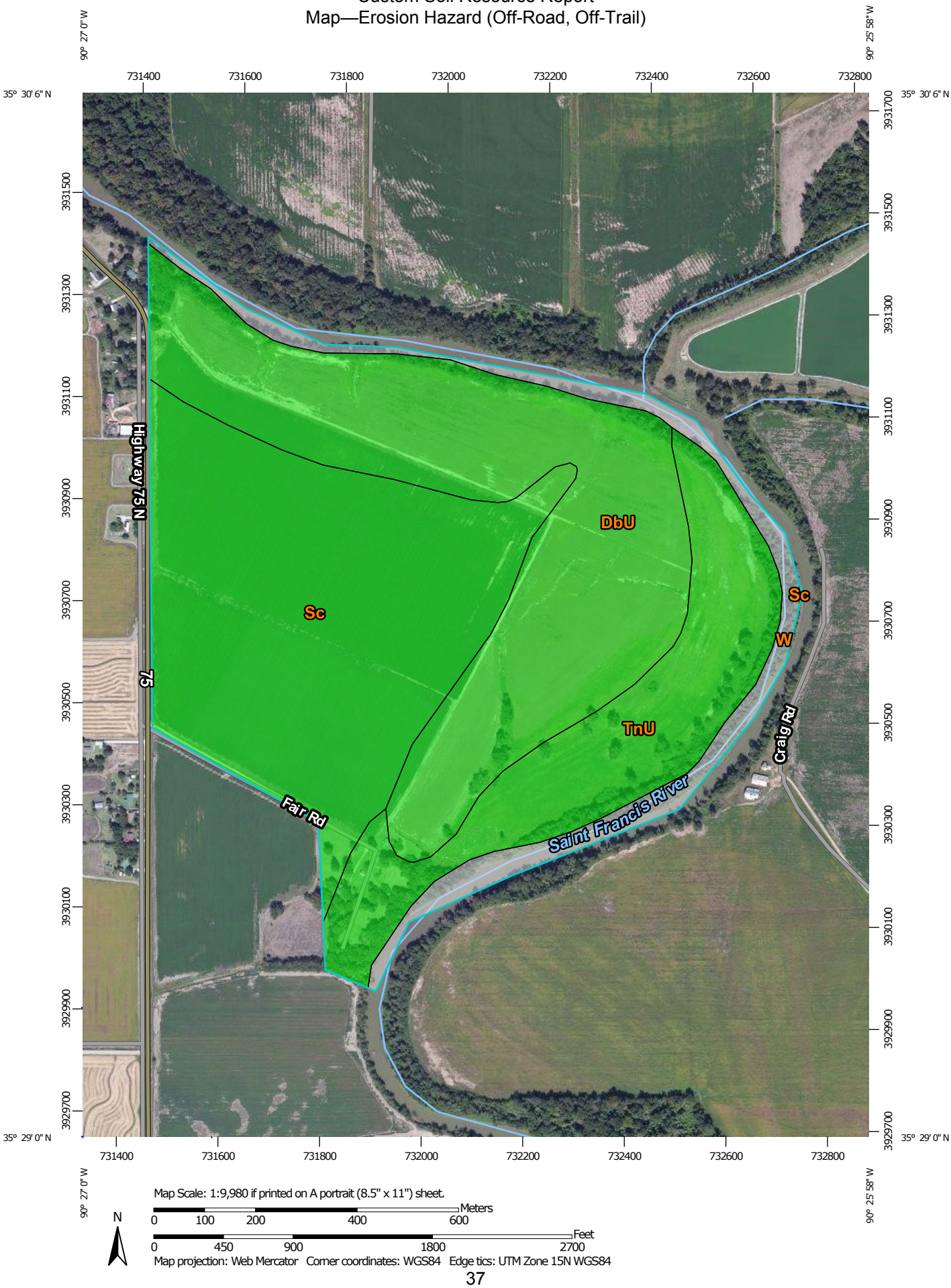
The ratings are both verbal and numerical. The hazard is described as "slight," "moderate," "severe," or "very severe." A rating of "slight" indicates that erosion is unlikely under ordinary climatic conditions; "moderate" indicates that some erosion is likely and that erosion-control measures may be needed; "severe" indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and "very severe" indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Map—Erosion Hazard (Off-Road, Off-Trail)



MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil Rating Polygons

- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Lines

- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Soil Rating Points

- Very severe
- Severe
- Moderate
- Slight
- Not rated or not available

Water Features

- Streams and Canals

Transportation

- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background

- Aerial Photography

MAP INFORMATION

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Please rely on the bar scale on each map sheet for map measurements.

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Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: Web Mercator (EPSG:3857)

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Tables—Erosion Hazard (Off-Road, Off-Trail)

Erosion Hazard (Off-Road, Off-Trail)— Summary by Map Unit — Poinsett County, Arkansas (AR111)						
Map unit symbol	**Map unit name**	**Rating**	**Component name (percent)**	**Rating reasons (numeric values)**	**Acres in AOI**	**Percent of AOI**
DbU	Dubbs silt loam, undulating	Slight	Dubbs (90%)		105.6	37.0%
Sc	Sharkey clay, 0 to 1 percent slopes, protected	Slight	Sharkey (90%)		107.9	37.8%
			Dowling (4%)			
			Commerce (3%)			
			Tunica (3%)			
TnU	Tunica clay, undulating	Slight	Tunica (90%)		52.1	18.2%
W	Water	Not rated	Water (100%)		20.1	7.0%
Totals for Area of Interest					**285.7**	**100.0%**

Erosion Hazard (Off-Road, Off-Trail)— Summary by Rating Value		
Rating	**Acres in AOI**	**Percent of AOI**
Slight	265.6	93.0%
Null or Not Rated	20.1	7.0%
Totals for Area of Interest	**285.7**	**100.0%**

Rating Options—Erosion Hazard (Off-Road, Off-Trail)

Aggregation Method: Dominant Condition

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The aggregation method "Dominant Condition" first groups like attribute values for the components in a map unit. For each group, percent composition is set to the sum of the percent composition of all components participating in that group. These groups now represent "conditions" rather than components. The attribute value associated

with the group with the highest cumulative percent composition is returned. If more than one group shares the highest cumulative percent composition, the corresponding "tie-break" rule determines which value should be returned. The "tie-break" rule indicates whether the lower or higher group value should be returned in the case of a percent composition tie. The result returned by this aggregation method represents the dominant condition throughout the map unit only when no tie has occurred.

Component Percent Cutoff: None Specified

Components whose percent composition is below the cutoff value will not be considered. If no cutoff value is specified, all components in the database will be considered. The data for some contrasting soils of minor extent may not be in the database, and therefore are not considered.

Tie-break Rule: Higher

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

AOI Inventory

This folder contains a collection of tabular reports that present a variety of soil information. Included are various map unit description reports, special soil interpretation reports, and data summary reports.

Map Unit Description (Brief, Generated)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this report, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

The Map Unit Description (Brief, Generated) report displays a generated description of the major soils that occur in a map unit. Descriptions of non-soil (miscellaneous areas) and minor map unit components are not included. This description is generated from the underlying soil attribute data.

Additional information about the map units described in this report is available in other Soil Data Mart reports, which give properties of the soils and the limitations, capabilities, and potentials for many uses. Also, the narratives that accompany the Soil Data Mart reports define some of the properties included in the map unit descriptions.

Report—Map Unit Description (Brief, Generated)

Poinsett County, Arkansas

Map Unit: DbU—Dubbs silt loam, undulating

Component: Dubbs (90%)

The Dubbs component makes up 90 percent of the map unit. Slopes are 0 to 3 percent. This component is on river valleys, natural levees. The parent material consists of loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is very high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Aquents (10%)

Generated brief soil descriptions are created for major components. The Aquents soil is a minor component.

Map Unit: Sc—Sharkey clay, 0 to 1 percent slopes, protected

Component: Sharkey (90%)

The Sharkey component makes up 90 percent of the map unit. Slopes are 0 to 1 percent. This component is on backswamps on Mississippi River alluvial plains. The parent material consists of clayey alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is moderate. Shrink-swell potential is very high. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 0 inches during January, February, March, April, May, June, July, August, September, October, November, December. Organic matter content in the surface horizon is about 4 percent. Nonirrigated land capability classification is 3w. This soil meets hydric criteria. The calcium carbonate equivalent within 40 inches, typically, does not exceed 3 percent. There are no saline horizons within 30 inches of the soil surface.

Component: Dowling (4%)

Generated brief soil descriptions are created for major components. The Dowling soil is a minor component.

Component: Commerce (3%)

Generated brief soil descriptions are created for major components. The Commerce soil is a minor component.

Component: Tunica (3%)

Generated brief soil descriptions are created for major components. The Tunica soil is a minor component.

Map Unit: TnU—Tunica clay, undulating

Component: Tunica (90%)

The Tunica component makes up 90 percent of the map unit. Slopes are 0 to 3 percent. This component is on backswamps, river valleys. The parent material consists of clayey alluvium over loamy alluvium. Depth to a root restrictive layer is greater than 60 inches. The natural drainage class is poorly drained. Water movement in the most restrictive layer is low. Available water to a depth of 60 inches (or restricted depth) is high. Shrink-swell potential is moderate. This soil is not flooded. It is not ponded. A seasonal zone of water saturation is at 12 inches during January, February, March, April. Organic matter content in the surface horizon is about 2 percent. Nonirrigated land capability classification is 3w. This soil does not meet hydric criteria.

Component: Sharkey (10%)

Generated brief soil descriptions are created for major components. The Sharkey soil is a minor component.

Map Unit: W—Water

Component: Water (100%)

Generated brief soil descriptions are created for major soil components. The Water is a miscellaneous area.

Soil Physical Properties

This folder contains a collection of tabular reports that present soil physical properties. The reports (tables) include all selected map units and components for each map unit. Soil physical properties are measured or inferred from direct observations in the field or laboratory. Examples of soil physical properties include percent clay, organic matter, saturated hydraulic conductivity, available water capacity, and bulk density.

Engineering Properties

This table gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Hydrologic soil group is a group of soils having similar runoff potential under similar storm and cover conditions. The criteria for determining Hydrologic soil group is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba). Listing HSGs by soil map unit component and not by soil series is a new concept for the engineers. Past engineering references contained lists of HSGs by soil series. Soil series are continually being defined and redefined, and the list of soil series names changes so frequently as to make the task of maintaining a single national list virtually impossible. Therefore, the criteria is now used to calculate the HSG using the component soil properties and no such national series lists will be maintained. All such references are obsolete and their use should be discontinued. Soil properties that influence runoff potential are those that influence the minimum rate of infiltration for a bare soil after prolonged wetting and when not frozen. These properties are depth to a seasonal high water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Changes in soil properties caused by land management or climate changes also cause the hydrologic soil group to change. The influence of ground cover is treated independently. There are four hydrologic soil groups, A, B, C, and D, and three dual groups, A/D, B/D, and C/D. In the dual groups, the first letter is for drained areas and the second letter is for undrained areas.

The four hydrologic soil groups are described in the following paragraphs:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly."

Classification of the soils is determined according to the Unified soil classification system (ASTM, 2005) and the system adopted by the American Association of State Highway and Transportation Officials (AASHTO, 2004).

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit,

and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

References:

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Absence of an entry indicates that the data were not estimated. The asterisk '*' denotes the representative texture; other possible textures follow the dash. The criteria for determining the hydrologic soil group for individual soil components is found in the National Engineering Handbook, Chapter 7 issued May 2007(http://directives.sc.egov.usda.gov/OpenNonWebContent.aspx?content=17757.wba).

Engineering Properties–Poinsett County, Arkansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
DbU—Dubbs silt loam, undulating														
Dubbs	90	B	0-7	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	100	60-90	20-35	3-10
			7-11	Silt loam	CL, CL-ML, ML	A-4	0	0	100	100	100	60-90	20-35	3-10
			11-37	Silty clay loam, clay loam, silt loam	CL	A-6, A-7	0	0	100	100	100	85-100	35-50	15-25
			37-82	Loamy fine sand, silt loam, fine sandy loam	CL, CL-ML, ML	A-4, A-6	0	0	100	100	85-95	55-90	20-35	3-14
Sc—Sharkey clay, 0 to 1 percent slopes, protected														
Sharkey	90	D	0-5	Clay	CH	A-7-5, A-7-6	0	0	100	100	89-100	76-93	54-88	29-51
			5-49	Clay	CH	A-7-5	0	0	100	100	100	95-100	56-85	30-50
			49-79	Silty clay loam, silt loam, clay	CH, CL	A-6, A-7-6	0	0	100	100	100	95-100	32-85	11-50

Engineering Properties–Poinsett County, Arkansas														
Map unit symbol and soil name	Pct. of map unit	Hydrologic group	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number—				Liquid limit	Plasticity index
					Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
			In				*Pct*	*Pct*					*Pct*	
TnU—Tunica clay, undulating														
Tunica	90	D	0-6	Clay	CH	A-7, A-7-6	0	0	99-100	98-100	88-100	74-95	56-91	33-61
			6-24	Clay, silty clay	CH	A-7, A-7-6	0	0	99-100	98-100	88-100	74-95	56-91	33-61
			24-59	Fine sandy loam, silt loam	CL, SC	A-4, A-6	0	0	98-100	95-100	67-100	38-90	26-43	9-23
			59-80	Loamy fine sand, sand	SC, SC-SM, SW-SC	A-4, A-6, A-2-4	0	0	100	95-100	48-85	5-45	21-31	5-13

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

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United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

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From: Marsha Fair [arroz@eritter.net]
Sent: Tuesday, April 21, 2015 11:27 AM
To: pamfair@att.net
Subject: Fw: Soils information requested
Attachments: 20150420_15483103822_10_Soil_Report_MFair.pdf

From: Culver, Chris - NRCS, Harrisburg, AR
Sent: Tuesday, April 21, 2015 7:44 AM
To: arroz@eritter.net
Subject: Soils information requested

Marsha,

Attached is a soils report developed from the online Websoil Survey from NRCS (http://websoilsurvey.sc.egov.usda.gov) I ran the report using your farm as the area of interest and developed reports for:

Soil Map Unit Descriptions (Soils Descriptions)
Soil Suitabilities/Limitations
Building Development Limitations
Land Classifications
Land Management
Engineering Properties
Physical Properties of the Soils

The report is lengthy, but hopefully it'll provide you the information that you are looking for to determine the characteristics of the soils on your farm.

Chris Culver
District Conservationist
PH: 870-578-2444 ext 3
chris.culver@ar.usda.gov

logo2usda

From: MacDonald, John
To: [redacted]
Subject: FW: Chisholm Trail in Oklahoma
Date: Wednesday, September 30, 2015 11:27:21 AM

John D. MacDonald | Senior Project Manager
Direct **+1 (303) 291-6264** | Business **+1 (303) 291-6260** | Mobile **+1 (303) 305-9673** |
John.MacDonald@tetratech.com

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From: Summerson, Jane [mailto:Jane.Summerson01@nnsa.doe.gov]
Sent: Wednesday, September 30, 2015 11:25 AM
To: MacDonald, John
Cc: Jason Thomas
Subject: FW: Chisholm Trail in Oklahoma

A late comment.

From: Mark Fuksa [mailto:mark.fuksa@gmail.com]
Sent: Wednesday, September 30, 2015 11:22 AM
To: Summerson, Jane
Subject: RE: Chisholm Trail in Oklahoma

Ms. Summerson,

I wanted to provide you with an update on the subject of my correspondence to you from earlier this year. In that correspondence I expressed my objection to Clean Line Energy Partners' (CLEP) Plains & Easter Clean Line power transmission project as it would directly impact property owned by my family. At the time, I was (and am still) working with the Oklahoma Historical Society (OHS) to obtain historical recognition of my family's land.

The OHS determined that the property has two different historically significant characteristics; [1] the most clearly visible remaining ruts and tracks of the historic Chisholm Trail through Oklahoma's Cherokee Strip (*The Fuksa Portion of the Chisholm Trail*), and [2] the adjacent dust bowl era farmyard, buildings, and structures (*The John and Mary Fuksa Family Farm*). Subsequently, the OHS chose to review each of these portions separately.

In July, 2015 the OHS held a review and nomination meeting in Oklahoma City where they approved the nomination of *The Fuksa Portion of the Chisholm Trail* for consideration by the National Park Service to be of national historic significance. The National Park Service reviewed the OHS nomination and determined the property was indeed of national historical significance and placed the property on the National Registry of Historical Places (NRHP) in September, 2015.

The OHS has an October 15, 2015 meeting scheduled where they will similarly review the historical significance of *The John and Mary Fuksa Family Farm*, property that is adjacent to the NRHP Chisholm Trail. From correspondence I've had with members of the OHS, it appears highly likely that the farm complex will be recognized as historically significant as well, and will be passed on to the National Park Service as a nomination for the NRHP .

The proposed applicant route for CLEP's power transmission line includes both of the above noted properties. Construction of this power line along this portion of their proposed easement will permanently have a devastating effect on these historic properties. Their current historic nature will be forever lost to future generations. The portion of the CLEP's proposed easement that traverses these two properties is referred to as "Region 2 APR Link 3." CLEP has identified an alternative route to Region 2 APR Link. Their alternative route is referred to as Region 2 HVDC Alternative Route(s), "AR 2 B." Alternative route "AR 2 B" bypasses and avoids the above properties by several miles, thereby preserving a part of our nation's history.

I request and urge you to include the information contained within this email for inclusion of the review process of CLEP's final Environmental Impact Study of their proposed easement route.

In addition to *The Fuksa Portion of the Chisholm Trail* being listed on the National Registry of Historic Places:

- The property is also now listed on Oklahoma's State Registry of Historic Places.
- The property was also mentioned in a July 18, 2015 newspaper article "Historic property decisions are more than a matter of good taste", by Richard Mize - published by the Oklahoma City newspaper, The Oklahoman.
- The September 25, 2015 issue of the Oklahoma Historical Society's OHS EXTRA! reported the new Oklahoma National Registry listings and featured *The Fuksa Portion of the Chisholm Trail* as one of its newest entries.
- The property is also now specifically mentioned in historic documentation on file and maintained by the OHS, "Chisholm Trail."
- I have been informed that the property will be featured in an upcoming news story to be published by The Record Journal, a daily business and legal newspaper based in Oklahoma City.
- *The John and Mary Fuksa Family Farm* complex includes buildings, structures, and artifacts that qualify for OHS recognition as "Historic Structures."
- The entire property comprised of *The Fuksa Portion of the Chisholm Trail* and *The John and Mary Fuksa Family Farm* have been continually owned by the same family since 1916. In 2016, the entire property will qualify for recognition as an "Oklahoma Centennial Farm", a designation recognized by the Oklahoma Historical Society and reserved for those farms that have operated under the same family ownership for a minimum of 100 years. The

application for this recognition has already commenced.

Please join me in convincing CLEP to utilize their alternative route, “AR 2 B”, to avoid any negative impact to this well documented historic property.

…and, please provide me with a confirmation that you’ve received this information and how it will be included for consideration.

Respectfully,

Mark Fuksa

From: Summerson, Jane [mailto:Jane.Summerson01@nnsa.doe.gov]
Sent: Friday, February 20, 2015 7:13 AM
To: 'mark.fuksa@gmail.com' <mark.fuksa@gmail.com>
Subject: Re: Chisholm Trail in Oklahoma

Thamk you for your comment. I will enter it into the record.

From: Mark Fuksa [mailto:mark.fuksa@gmail.com]
Sent: Thursday, February 19, 2015 04:00 PM
To: Summerson, Jane
Cc: 'Lynda Ozan' <lozan@okhistory.org>; 'Nancy Enabnit' <nancy@enidtitlelaw.com>
Subject: FW: Chisholm Trail in Oklahoma

Ms. Summerson,

I want to take this opportunity to share with you some information I have forwarded to Clean Line Energy Partners (CLEP) regarding their proposed Plains & Eastern Clean Line power transmission line project. I object to the project’s proposed route as I represent the owning entity and am a recorded future heir to some of the impacted property along CLEP’s proposed route through central Oklahoma.

I have been working with and in communication with representatives from the Oklahoma Historical Society (OHS) for several years to obtain an historic designation and recognition of the property noted in Ms. Ozan’s email below. In addition to State recognition of the historical significance of this property, I am working with Ms. Ozan to have the property recognized on the national level due remaining and visible remnants of the historic Chisholm Trail running through our and adjacent properties.

On March 2, 2015, I am facilitating an on-site tour of the impacted properties with Ms. Ozan and other representatives of the OHS for the purposes of demonstrating and reinforcing the historical significance of the area, and to formally initiate the process of having the property listed on the National Registry of Historic Places.

Attached to this email is a copy of my objection letter to CLEP and documented evidence of the existence and local recognition of the historical nature of the area due to the presence of the Chisholm Trail.

I ask that you support our preservation efforts and help me persuade CLEP to relocate their proposed power transmission line to different area where its construction will not forever damage historic artifacts and our 19th century heritage.

I am happy to answer any questions you may have, please do not hesitate to contact me via email or regular mail.

A confirmation of receipt of this email will be greatly appreciated.

Best regards,
Mark A. Fuksa
Mark.fuksa@gmail.com

9286 Mountain Brush Peak
Highlands Ranch, CO 80130

From: Lynda Ozan [mailto:lozan@okhistory.org]
Sent: Monday, February 9, 2015 9:22 AM
To: Mark Fuksa
Subject: FW: Chisholm Trail in Oklahoma

FYI

From: Lynda Ozan
Sent: Monday, February 09, 2015 10:20 AM
To: 'Jane.Summerson01@nnsa.doe.gov'
Subject: Chisholm Trail in Oklahoma

Jane:

The Chisholm and Great Western Feasibility Study has been released in draft form.
http://www.okhistory.org/general/trailstudy.php

As you are aware, the OK/SHPO has raised this trail as one of many issues in Oklahoma in relation with the Plains and Eastern Clean Line Transmission Line Project. We recently evaluated a historic farm complex at 1228 E 0580 Road (aka Marshall Road), Bison, Oklahoma for NRHP eligibility and determined that it is eligible under Criteria C for the collection of farm buildings but also under Criteria A for agriculture and transportation. A portion of the Chisholm Trail crosses the property and this segment still includes the ruts from the wagon trails that assisted the cattle drives.

I felt that it was important to bring both the draft study and this property to your attention as I know

that you are still evaluating the prospects for this Transmission Line. Please let me know if you have any questions.

Lynda S. Ozan
Architectural Historian/NR Program Coordinator
State Historic Preservation Office
Oklahoma Historical Society
Oklahoma History Center
800 Nazih Zuhdi Drive
Oklahoma City, OK 73105
405-522-4478

The mission of the Oklahoma Historical Society is to collect, preserve, and share the history and culture of the state of Oklahoma and its people.

From: Mary Hillberg
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Saturday, July 11, 2015 10:10:41 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Mary Hillberg
155 Suzanne
Merritt Island, FL 32952

From: Dorothy Holtzman
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 11:34:20 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Dorothy Holtzman
1199A Shetland Dr.
Lakewood, NJ 08701

From: Frank Knapp
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 12:18:53 PM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Frank Knapp
1717 Gervais Street
Columbia, SC 29201

From: Brant Kotch
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 1:26:44 PM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

Finally, the Department of Energy estimates Clean Line wind power will reduce carbon dioxide (CO2) emissions by up to 14,000,000 tons per year. That's about as much carbon dioxide released by 1.9 million homes' electricity use for one year, or about four coal-fired power plants. CO2 is a primary greenhouse gas, as well as contributor to ocean acidification.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Brant Kotch
12302 Cobblestone Dr.
Houston, TX 77024

From: Dave Kraft
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 10:59:56 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Dave Kraft
3411 W. Diversey #16
Chicago, IL 60647

From: Barbara Laxon
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 6:02:56 PM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

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Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Barbara Laxon
1778 sw 85 ave
Miramar, FL 33025

HILLARY LORING
Field Ecologist
P.O. Box 313
Washington, Texas 77880
785-393-3984
hillaryloring@yahoo.com

6 June 2015

To Whom It May Concern:

In 2000, I completed a botanical and ecological survey of the Schoeppel Ranch as part of "An inventory of the Central Mixed-Grass Prairie Ecoregion in Kansas, Oklahoma, and Nebraska." The purpose of that study was to document large unfragmented landscape features in those three states in the Great Plains. A healthy ecosystem depends on large areas without development, without breaks in the matrix of the community type. A High Voltage Transmission Line as proposed by Plains & Eastern Clean Line would result in a corridor of weedy, non-native, and potentially noxious species that could then invade and degrade the high quality ecosystem currently existing on and around the Schoeppel Ranch.

Grasslands are the most endangered and least protected ecosystems in the United States and the world. Large ranches that are well managed, such as the Schoeppel Ranch, are landscape features that provide communication, movement, and genetic flow of native wildlife and vegetation.

I hope you will reconsider the route of the High Voltage Transmission Line

Sincerely,

Hillary Loring
Botanist, Field Ecologist

Loring, H., K. Kindscher, M. Bullerman. 2000. An inventory of the Central Mixed-Grass Prarie Ecoregion in Kansas, Oklahoma, and Nebraska. Kansas Biological Survey, Lawrence, KS Report No. 97:132 pp.

Hillary Loring

Have Flora, Will Travel

Resume

Field Ecologist, Plant Taxonomist & Itinerant Botanist

Contact Information
Phone: 785-393-3984
Address: P.O. Box 313 Washington, Texas 77880

Specialty: Plant Community Ecology and Field Botany

Background:

- M.S. 1991, Sul Ross State University (http://www.sulross.edu/)
- B.A. 1971, Rice University (http://www.rice.edu/)

Current research interests: My research interests are focused on plant communities and species composition of the Midwest prairies and the Chihuahuan Desert, ethnobotany, conservation of natural ecosystems, and prairie restoration.

Recent Projects:

- Identification and collection of traditional medicinal plants for chemical analysis for the Native Medicinal Plant Research Program (http://nativeplants.ku.edu/)
- Inventory of Natural Areas in Linn and Anderson Counties, Kansas (http://www.ksnhi.ku.edu/research/current.htm#co_invent)
- Gila River Biodiversity Study, New Mexico (http://www.ksnhi.ku.edu/research/current.htm#ftleav)
- Ft. Leavenworth Military Reservation (http://www.ksnhi.ku.edu/research/current.htm#ftleav)
- A Natural Features Inventory of the Smoky Hill Air National Guard Range (http://www.kbs.ku.edu/people/staff_www/kindscher/Kindscher%20publicaitons/Smoky_Hill_Final_Report%202007.pdf)
- Conservation Planning for Echinacea Species (http://www.ksnhi.ku.edu/research/current.htm#echinacea)

- Survey of Natural Area Sites in Cherokee County, Kansas
- Study of *Echinacea angustifolia* regrowth after harvesting in Kansas and Montana
- Survey of unfragmented landscapes of the Flint Hills Tallgrass Prairie Ecoregion
- Survey of unfragmented landscapes of the Central Mixedgrass and Shortgrass Prairie Ecoregions.
- Carbon sequestration study and survey of native tallgrass hay meadows in Woodson County, Kansas
- Survey of montane meadows in Yellowstone and Grand Teton National Parks

Restoration and Monitoring Projects:

- Clinton Lake Dam Wetland, Lawrence, Kansas – 156 acres
- Santa Fe Wetlands Mitigation Site, Lawrence, Kansas – 18 acres
- Ken Baum Tallgrass Restoration, Johnson County, Kansas – 70 acres
- Leon Waterflood Brine Scar Remediation http://www.all-llc.com/ALL-services/remediation.htm (http://www.all-llc.com/ALL-services/remediation.htm)
- The Nature Conservancy Cheyenne Bottoms Wetlands Preserve (http://nature.org/wherewework/northamerica/states/kansas/preserves/art64.html)

Taxonomic Work

- Curator of Elizabeth Winston Mize Herbarium a private Texas herbarium
- Survey and Collection of Winston Ranch, Uvalde County, Texas
- Survey and Collection of Peaceable Kingdom Farm, Washington County, Texas

Publications:

Jog S. K., K. Kindscher, E. Questad, B. Foster, and **H. Loring.** Floristic Quality as an Indicator of Native Species Diversity within Managed Grasslands. Natural Areas Journal, April 2006. Natural Areas Journal (http://www.bioone.org/doi/abs/10.3375/0885-8608%282006%2926%5B149%3AFQAAIO%5D2.0.CO%3B2)

Freeman, C.C., W.H. Busby, J. Delisle, W.D. Kettle, K. Kindscher, **H. Loring**, C.A. Morse, and V.B. Salisbury. 2003. A natural areas inventory of the Ft. Leavenworth Military Reservation, Leavenworth County, Kansas. II. Open-file Report No. 117. Kansas Biological Survey, Lawrence, KS. 199 pp.

Barnes, C.C., M.K. Smalley, K.P. Manfredi, K. Kindscher, **H. Loring**, and D.M. Sheeley. 2003. Characterization of an anti-tuberculosis resin glycoside from the prairie medicinal plant *Ipomoea leptophylla*. Journal of Natural Products 66:1457-1462.

Thurmond, J. Peter, C. C. Freeman, K. Kindscher, **H. Loring**, C. A. Morse, and B. W. Hoagland, 2002. Preliminary Report of an Ethnobotanical Survey along the Ogallala Ecotone on the Dempsey Divide in Roger Mills County, Oklahoma. Oklahoma Archeology; Journal of the Oklahoma Anthropological Society. 50:10-27. (http://www.ou.edu/cas/archsur/oas/journalpdf/vol50no2b.pdf)Journal of the Oklahoma Anthropological Society (http://www.ou.edu/cas/archsur/oas/journalpdf/vol50no2b.pdf)

Loring, H., Kelly Kindscher and Mike Bullerman. December 2000. An Inventory of the Central Mixed-Grass Prairie Ecoregion in Kansas, Oklahoma, and Nebraska. Rpt. No. 97. Kansas Biol. Surv., Lawrence KS.

Loring, H., Kelly Kindscher, Todd Aschenbach, and Alexandra Fraser. 1999. A Survey of Large Ranches and Prairie Remnants in the Flint Hills and Central Tallgrass Prairie Ecoregion of Kansas. Rpt. No. 88. Kansas Biol. Surv., Lawrence, KS. (In press)

Sternburg, Janet E., John Hays, Sharon Sanborn, Loraine McFarland, **H. Loring**, and Bernard Sietman. 1998. Fauna, Flora, and Sensitive Habitat on Fort Leonard Wood, MO. Special Report , 01 Jul 98, U.S. Army, Corps of Engineers, CERL , Champaign, IL , Report Number 98/95, ADANumber 352250. http://www.cecer.army.mil/td/tips/pub/details.cfm?PUBID=2022&AREA=10 (http://www.cecer.army.mil/td/tips/pub/details.cfm?PUBID=2022&AREA=10)

Loring, H. and Deborah Rowan. 1994. An inventory of selected prairies in Barton, Bates, St. Clair, and Vernon counties. Missouri Department of Conservation and Land Reclamation Commission. 108pp.

Loring, H. 1994. Out of Africa, miracle marama beans put down roots in Texas. Useful Wild Plants, no. 7, pg.12.

Loring, H. 1993. Strength in reserve, Mexico protects milpilla. Useful Wild Plants, no.4, pg.6.

Loring, H. and R.A. Hilsenbeck. 1989. Micropropagation biotechnology of native Texas *Vitis* species. Proceedings of the Texas Grape Growers Association, April 20-22, 1989.

Web Publications

Hillary Loring. Vegetation of the Big Bend Region (http://www.visitbigbend.com/site09/en/learn/about-the-area/297-aboutplants.html)

Published Illustrations:

Powell, A. M. 1994. Grasses of the Trans-Pecos and adjacent areas. University of Texas Press, Austin. 377 pp. (Technical drawings of 3 grass species.)

Prior Work Experience:

1992 Northern Spotted Owl and small mammal surveys, US Forest Service

1994-1996 Tallgrass prairie surveys and restoration monitoring, Missouri Department of Conservation

1993-1994 Research and recovery of Kemp's Ridley Sea Turtles, Padre Island National Seashore

Create a free website or blog at WordPress.com. | The Ocean Mist Theme.

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Follow "Hillary Loring"

Plant species list for Schoeppel Ranch

Achillea millefolium	western yarrow
Agropyron smithii	western wheatgrass
Allium canadense	lavender wild onion
Ambrosia psilostachya	western ragweed
Andropogon saccharoides	silver bluestem
Aristida purpurea	caespitose threeawn
Artemisia filifolia	sand sagebrush
Asclepias asperula	spider milkweed
Asclepias latifolia	broadleaf milkweed
Asclepias speciosa	showy milkweed
Asclepias stenophylla	narrowleaf milkweed
Asclepias viridiflora	green-flowered milkweed
Asclepias viridis	green milkweed
Aster ericoides	heath aster
Aster oblongifolius	aromatic aster
Astragalus mollissimus	woolly milkvetch
Baptisia australis	blue false indigo
Bouteloua curtipendula	side-oats grama
Caesalpinia jamesii	James's rush-pea
Callirhoe involucrata	purple poppy mallow
Calylophus serrulatus	plains yellow evening primrose
Castilleja purpurea	citrin paintbrush
Chrysopsis stenophylla	narrowleaf goldenaster
Cirsium undulatum	wavyleaf thistle
Conyza canadensis	Canada horseweed
Coryphantha vivipara	pincushion coryphantha
Cucurbita foetidissima	buffalo gourd
Cyperus setigerus	umbrella sedge
Cyperus strigosus	false nutsedge
Dalea enneandra	nineanther dalea
Desmodium paniculatum	panicled tickclover
Eleocharis sp.	spikerush
Erigeron annuus	annual fleabane
Erigeron strigosus	daisy fleabane
Eriogonum longifolium	longleaf eriogonum
Euphorbia marginata	snow-on-the-mountain
Evolvulus nuttallianus	Nuttall's evolvulus
Gaura coccinea	scarlet gaura
Gutierrezia sarothrae	broom snakeweed
Haplopappus spinulosus	smooth ironplant goldenweed
Hedyotis nigricans	narrowleaf bluets
Helianthus annuus	common sunflower
Hordeum jubatum	foxtail barley
Hymenopappus tenuifolius	woolly-white
Juncus torreyi	Torrey's rush
Juniperus virginiana	eastern red cedar, juniper
Krameria lanceolata	ratany
Liatris punctata	dotted gayfeather
Linum lewisii	blue flax
Linum rigidum	compact stiffstem flax
Lippia lanceolata	lanceleaf frogfruit
Lomatium foeniculaceum	carrotleaf lomatium
Lotus unifoliolatus	prairie trefoil
Mentzelia nuda	blazing star, stickleaf
Monarda punctata	spotted beebalm
Muhlenbergia asperifolia	scratchgrass
Opuntia macrorhiza	bigroot prickly pear
Oxalis dillenii	green wood sorrel
Oxytropis lambertii	Lambert's locoweed
Panicum obtusum	vine-mesquite
Panicum virgatum	switchgrass
Penstemon cobaea	cobaea beardtongue
Phacelia robusta	gyp phacelia
Physalis sp.	hillside groundcherry
Populus deltoides	plains cottonwood
Prosopis glandulosa	mesquite
Prunus angustifolia	chickasaw plum
Psilostrophe villosa	wooly paperflower
Psoralea cuspidata	tall breadroot scurfpea
Psoralea tenuiflora	many-flowered scurfpea
Rhus aromatica	western aromatic sumac
Rumex altissimus	pale dock
Salvia azurea	blue sage
Sapindus saponaria	soapberry
Schizachyrium scoparium	little bluestem
Schrankia nuttallii	sensitive briar
Senecio plattensis	plains groundsel
Solanum dimidiatum	western horse nettle
Solanum elaeagnifolium	silverleaf nightshade
Solidago canadensis	rough Canada goldenrod
Sorghastrum nutans	Indiangrass
Sporobolus asper	rough dropseed
Stenosiphon linifolius	stenosiphon
Symphoricarpos orbiculatus	buckbrush
Thelesperma megapotamicum	Missouri River greenthread
Toxicodendron radicans	common poison ivy
Tridens albescens	white tridens
Tridens pilosus	hairy tridens
Typha domingensis	southern cattail
Ulmus rubra	slippery elm
Vernonia baldwinii	inland ironweed
Yucca glauca	small soapweed

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Kansas Maps and Gaps

Newletter of the Kansas Gap Analysis Project

Volume 1, Number 1 -- Winter 1997

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GAP Analysis Program Mission Statement

The mission of the Gap Analysis Program (GAP) is to provide regional assessment of the conservation status of native vertebrate species and natural land cover types and to facilitate the application of this information to land management activities. This is accomplished through the following five objectives:

1. map the land cover of the United States,
2. map predicted distributions of vertebrate species for the U.S.,
3. document the representation of vertebrate species and land cover types in areas managed for the long-term maintenance of biodiversity,
4. provide this information to the public and those entities charged with land use research, policy, planning, and management, and
5. build institutional cooperation in the application of this information to state and regional management activities.

GAP is conducted as state-level projects and is coordinated by the Biological Resources Division (BRD) of the United States Geological Survey (USGS). It is a cooperative effort among regional, state, and federal agencies, and private groups as well as the three BRD divisions of Research, Monitoring, and Information Services.

Top

KS-GAP History

Gap analysis in Kansas formally began on 1 May 1995 when the National Biological Survey (NBS) awarded a contract to Kansas State University. This contract provided the seed to fund the Gap Analysis Program (GAP) project in Kansas (KS-GAP). However, the beginnings of KS- GAP preceded the contract by several years. In the fall of 1993, Dr. Chris L. Lauver was asked by Dr. Jerry DeNoyelles (acting co-director of the Kansas Biological Survey, KBS) to serve as the contact person for gap analysis

in Kansas. Subsequently, Lauver of KBS represented Kansas at a GAP meeting in November 1993 and made a report on the general statewide land use map that was available from the Kansas Applied Remote Sensing Program (KARS) at the University of Kansas and on other available databases in the state of Kansas. Lauver also initiated discussions with Dr. Mike Scott of the national GAP office concerning the funding for gap analysis in Kansas.

When Dr. Philip S. Gipson was hired as the Leader of the Kansas Cooperative Fish and Wildlife Research Unit (KS CFWRU) in the Division of Biology at Kansas State University, Lauver continued discussions of a potential GAP project in Kansas with him. Following the hiring of Dr. Jack F. Cully, Jr. as an Assistant Leader in KS CFWRU, Gipson turned the responsibility of leading and coordinating the potential GAP project in Kansas over to Cully. Subsequently, Cully, Lauver, and Dr. Kevin P. Price of KARS had multiple meetings and discussions that examined available resources for gap analysis; this effort culminated in a proposal to the national GAP office to initiate the funding of KS-GAP.

Available resources for KS-GAP included the land use map, directed by Jerry Whistler (Research Associate at KARS) that identified urban areas, water, forest, crop lands, and grasslands, created by KARS in 1991. Another resource was a statewide soils map which was being created by the Department of Geography at Kansas State University at about the same time. This detailed map was contracted by the Soil Conservation Service (now the NRCS). Both maps provided experience in large-scale mapping and Geographic Information System (GIS) development. These early experiences were important factors in deciding how to proceed with KS-GAP.

An important goal of the national GAP is to develop a collaborative partnership approach within each state. In Kansas, an effort was made to involve investigators from several programs. The collaboration among faculties and students from multiple universities will benefit KS-GAP and the involved investigators. This philosophy was the basis for the dispersed organization of KS- GAP.

Cully is responsible for the administration of KS-GAP and Dr. Glennis A. Kaufman in the Division of Biology at Kansas State University is responsible for coordinating KS-GAP. Price and Dr. Edward A. Martinko of KBS and KARS, are responsibility for developing the land cover map from remotely sensed satellite data. Price and Martinko are assisted in the development of the land cover map by Dr. Stephen Egbert in KARS and Lauver in KBS. Graduate students assisting with the land cover mapping include Clayton Blodgett, Aimee Stewart, Ryan Boyce, and Miguel Ortega. Whistler of KARS continues to serve as a valuable consultant in some image processing and classification decisions. Lauver in collaboration with Price, Egbert, and Martinko has the responsibility of checking the accuracy of the land cover map. Dr. H. L. (Sy) Seyler and Dr. John A. Harrington, Jr. in the Department of Geography at Kansas State University are responsible for developing the overall GIS as well as developing the stewardship layer. Graduate students assisting with this effort are Rob Vreeland, Jennifer Radcliff, and Ray Bivens. Geography also will incorporate the other layers, land cover and vertebrate species distributions, into the GIS. Cully and Kaufman have responsibility for mapping vertebrate distributions in consultation with biologists from other state universities and colleges.The following is a chronology of events in KS-GAP:

1993

- 9-10 November--Dr. Chris Lauver attends the Second Annual Southwest Region Gap Analysis meeting at Albuquerque, NM.

1994

- 13-15 April--Dr. Mike Scott, Director of the national Gap Analysis Program (GAP), visits Kansas State University and the University of Kansas to discuss establishing the Kansas Gap Analysis Project (KS-GAP).
- 18-21 July--Dr. Chris Lauver and Dr. Jack Cully, Jr. attend the Fourth Annual National Gap Analysis. Workshop in Silverdale, WA.
- 4 August--Kansas Steering Committee for the coordination of the National Biological Service (NBS) in Kansas identifies KS-GAP as its number 1 priority for NBS in Kansas.
- 22 December--Funds authorized by NBS for KS-GAP.

1995

- 1 May--Contract award made to begin KS-GAP with Dr. Jack Cully, Jr. serving as Principal Investigator (PI) and Dr. Chris Lauver and Dr. Kevin Price as co-PIs.
- 23-24 May--Dr. Jack Cully, Jr., Dr. Chris Lauver, Dr. Kevin Price, Dr. Stephen Egbert, Dr. John Harrington, Jr., and Clayton Blodgett attend coordination meeting in Lincoln, NE for Nebraska, Kansas, and South Dakota to identify areas for cooperation. Suggested land cover classification, developed by The Nature Conservancy, was distributed for use by each state.
- 1 June--Department of Geography at Kansas State University hires first graduate student, Robert Vreeland, to begin work on the stewardship layer.
- 8-9 August-- Dr. Chris Lauver and Clayton Blodgett attend the Fifth Annual GAP Meeting in Fayetteville, AR.

- 1 December--Clayton Blodgett hired as Coordinator for the land cover layer. Aimee Steward is hired as a Graduate Research Assistant to work on the land cover layer.
- 18 December--Dr. Jack Cully, Jr. hires Dr. Glennis Kaufman as State Coordinator for KS-GAP.

1996

- 1 February--Dr. Jack Cully, Jr. and Dr. Glennis Kaufman report on KS-GAP activities in Topeka at a meeting of the Kansas Steering Committee for the Coordination of the NBS in Kansas.
- 28 February--Dr. Glennis Kaufman, Dr. Kevin Price, and Dr. Jack Cully, Jr. meet with Dr. Steve Williams, Secretary of Kansas Department of Wildlife and Parks (KDWP), and Mr. Steve Adams, Natural Resources Coordinator, to discuss partnership with KDWP.
- 9-10 April--Dr. Chris Lauver attends the Land Cover Accuracy Assessment Workshop in Denver, CO. The workshop was sponsored by the national GAP.
- 1 May--Contract Award made from NBS to continue funding of KS-GAP for 3 additional years with Dr. Jack Cully, Jr. serving as PI and Dr. Edward Martinko and Dr. Kevin Price as co-PIs.
- Hillary Loring is hired as a Graduate Research Assistant to conduct field research to collect plant data for training computer in supervised classification and ground verification.
- 16 May--Dr. Glennis Kaufman, Dr. Kevin Price, Dr. Sy Seyler, and Dr. Jack Cully, Jr. meet with agency representatives from Kansas Departments of Agriculture and Health and Environment, State Conservation Commission, and Kansas Water Office to discuss integrating KS-GAP with other state GIS efforts and to form partnerships.
- 21 May--Dr. Glennis Kaufman, Dr. Kevin Price, and Dr. Jack Cully, Jr. meet with KDWP Regional Supervisors at Norton, KS to introduce background and goals of KS-GAP and to discuss how gap analysis may be used as a management tool by the KDWP staff.
- 15-19 July--Dr. Glennis Kaufman and Dr. Jack Cully, Jr. attend the Sixth Annual National GAP Meeting in Key Largo, FL.
- 11 August--Following the graduation of Robert Vreeland, Department of Geography at Kansas State University hires two graduate students, Jennifer Radcliff and Ray Bivens, to continue work on the stewardship layer.
- 15 August--Dr. Stephen Egbert assumes duties as Coordinator for the KARS/KBS portion of KS- GAP. Miguel Ortega and Ryan Boyce are hired as Graduate Research Assistants to work on land cover layer.
- 16-18 October--Clayton Blodgett travels to West Virginia for training on the use of aerial videography equipment to ground -truth land cover maps.
- 6-7 November--Dr. Patrick Crist, Western States Coordinator for the national GAP, visits with personnel in the KS-GAP.
- 12 November---Grant Award made from KDWP to help KS-GAP for 1 year with Dr. Jack Cully, Jr. and Dr. Glennis Kaufman serving as co-PIs at Kansas State University and Dr. Edward Martinko and Dr. Kevin Price as co-PIs at the University of Kansas.

1997

- 16 January--Division of Biology at Kansas State University hires a graduate student, Gregory Hoch, to begin work on the vertebrate layer.
- 30 January--KS-GAP has displays of work in progress for the Kansas GIS Policy Board annual show in the rotunda of the State Capitol in Topeka.
- 3 February--Dr. Stephen Egbert travels to Lincoln, NE to discuss methodologies and ground verification with Dr. Marlen Eve, State Coordinator for NE-GAP.

Top

KDWP Supports KS-GAP

One of the goals of the national Gap Analysis Program (GAP) is to create partnerships with state agencies. In order to initiate a partnership between KS-GAP and the Kansas Department of Wildlife and Parks (KDWP), Jack Cully, Glennis Kaufman, and Kevin Price traveled to Topeka on 28 February 1996. They gave a presentation to Dr. Steve Williams, Secretary of KDWP, and his natural resource coordinator, Steve Adams. This presentation described what the GAP is, how the land cover map for Kansas would be constructed, and how the information from the KS- GAP project might be used to help manage the wildlife resources of Kansas.

At Dr. William's request, a similar presentation was given to the regional supervisors of KDWP. Jack Cully, Glennis Kaufman, and Kevin Price traveled to Norton on 21 May 1996. They presented an overview of KS-GAP which initiated questions and a discussion about possible products that could be produced for the agency.

Following these meetings, a one-year proposal was prepared and submitted to KDWP in June 1996. The proposal was funded in November 1996 and supports data collection for land cover and vertebrates. Currently, a proposal for a second year is pending.

In addition to financial support, KDWP has been a key player in helping KS-GAP form partnerships with other agencies. On 16 May 1996, KDWP hosted a meeting in Topeka for personnel from other state agencies. The purpose of the meeting was to inform other agencies about GAP and the state project. Jack Cully, Glennis Kaufman, Kevin Price, and Sy Seyler gave multimedia presentations with information about GAP for both the United States and Kansas. The state agencies represented were Department of Agriculture and its Division of Water Resources, Kansas Department of Health and Environment, Kansas Water Office, and the State Conservation Commission. Partnerships between some of these agencies and KS-GAP have been formed as a result of this meeting.

Top

Activities Related to KS-GAP

- John Harrington, Jr. attended the GAP-oriented sessions at the Mid-America GIS Conference at Kansas City, MO on 30 April 1996.
- Chris Lauver gave a presentation, Mapping Land Cover for the Kansas Gap Analysis Project, at the 19th Applied Geography Conference at Kansas City, MO on 17 October 1996. His co-authors were Kevin Price, Clayton Blodgett, and Aimee Stewart.
- Greg Hoch gave a presentation, Use of satellite remote sensing to detect historic and current land use on Ft. Riley Army Reservation, Kansas, at the 23rd Annual Student Research Forum in the Division of Biology at Kansas State University on 22 February 1997. His co-author was Jack Cully.

Top

Aerial Videography

KARS is investigating the potential use of data from aerial videography as a source for accuracy assessment of the land cover map for the KS-GAP. In October 1996, Clayton Blodgett, a Ph.D. student in the KARS Program at the University of Kansas, traveled to West Virginia University to receive training in aerial videography from Charles Yuill of the Division of Resource Management. The training included both the collection and processing of data and experience with the videography equipment.

To date, no videography data have been collected in Kansas. The videography equipment should be available to KS-GAP in spring 1997. At that time, we plan to conduct a small pilot study in southwest Kansas. This pilot study will allow us to assess the usefulness of aerial videography in grasslands that have similar plant species composition and little vertical structure. If the data prove to be useful to ground-truth land cover in southwest Kansas, the majority of the aerial videography data for Kansas will be collected during summer 1997. Based on estimates provided by the state of Tennessee, about 48 hours of flight time will be needed to cover Kansas.

Top

KS-GAP has Displays at Annual Kansas GIS Day

State legislators and officials of the Kansas Water Authority were among the visitors that attended the annual Kansas GIS Policy Board show in the rotunda of the state capitol building in Topeka on 30 January 1997. Posters were displayed for two pilot projects that are part of KS- GAP.

Clayton Blodgett and Aimee Stewart of the KARS Program displayed four large-format color posters illustrating the land cover mapping process. These four panels included the 1991 Kansas Land Cover Map used to mask urban and water features in satellite imagery; three LANDSAT Thematic Mapper satellite images from spring, summer, and late summer 1992 from southwest Kansas; a map showing crop/grassland areas in southwest Kansas created by using unsupervised classification (this was overlaid with 300 field sites); and the preliminary map of land cover at the Alliance level for counties in southwest Kansas.

Sy Seyler and Nancy Leathers, a graduate research assistant in GISSAL, displayed four maps of the Pomona Lake area illustrating the process used in creating the stewardship layer. Data for land cover, ownership, soils, and hydrology were used in an overlay analysis to produce new maps that demonstrated the relative amounts of different land cover and soil types that occur within public land at Pomona Lake.

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Fort Riley Land Cover Mapping

Greg Hoch, a M.S. student in Biology at the Kansas Cooperative Fish and Wildlife Research Unit, is mapping the land cover for the Fort Riley Army Reservation in the northern Flint Hills near Manhattan. Ft. Riley's vegetation is primarily tallgrass prairie dominated by warm season grasses.

A variety of land management practices along with military training activities on Ft. Riley present a unique opportunity to examine the utility of remotely-sensed data to distinguish differences among land cover and usage. Some management practices used on Ft. Riley include prescribed burning in spring and haying in the summer. Training activities, which occur throughout the year, can result in wildfires being ignited in any month of the year. Some isolated areas receive little to no impact from military activity and remain relatively pristine. Traces of past use also can be seen in abandoned agricultural fields and brome hay meadows (go-back lands). The ages and variety of management practices create a complex landscape which overlays a diverse and dynamic natural landscape.

Preliminary data suggest that disturbance on Ft. Riley may obliterate many of the differences seen between warm and cool season grasses in multi-date imagery in grasslands. Greg's accuracy assessment showed that multi-date imagery was useful to discriminate between disturbed and undisturbed sites. The LANDSAT imagery used on Ft. Riley was from April, July, and September, 1993, whereas data used to ground-truth the imagery for plant communities and military disturbance were collected by the Army in 1993 along Land Condition Trend Analysis (LCTA) transects placed randomly on Ft. Riley. Greg used bands 3 and 4 to identify burned areas on the April image; however, no records are kept in order for Greg to validate his finding. Band 4 in July appears to be the most useful to distinguish go-back lands from native prairie. Due to an excessive amount of rainfall in 1993, little of Ft. Riley was hayed. Areas of haying can be seen on the imagery, but not identified as a distinct cover class.

Greg's work highlights the need to use a combination of single and multiband analyses and single and multiple dates of growing-season imagery to improve accuracy when studying complex and dynamic landscapes with multiple and overlapping land uses.

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Remotely-Sensed Land Cover

Kansas Applied Remoting Sensing (KARS) Program used three dates of satellite imagery from 1992 (May, July, and September) to conduct a pilot study for mapping the land cover of Kansas. This pilot project which was centered around Garden City is nearing completion.

For the pilot study, data came from the LANDSAT thematic mapper (TM); the scene covers about 13,225 square miles (34,225 square kilometers). Data for each LANDSAT scene consist of seven bands; we extracted four channels from each rectified image which correspond to the red, near-infrared, and middle-infrared portions of the electromagnetic spectrum. These four channels were combined for the three dates to give 12 data layers. We removed urban and water features based on a 1991 digital land cover map from KARS before further processing was done. We then stratified the composite by physiographic provinces; this scene contained four provinces, High Plains, Arkansas River Lowlands, Smoky Hills, and Red Hills. Stratification of the physiographic provinces reduced spectral variance which increased our ability to distinguish the vegetative Alliances of interest.

Each image within a physiographic province was submitted to an unsupervised (clustering) classification algorithm which yielded 100 classes. We used National High Altitude Photography color infrared photographs to re-code each of the 100 classes from the unsupervised classification into one of three classes (crop land, natural vegetation, or "confused"). The areas categorized as "confused" were subjected to another unsupervised classification which yielded 100 new classes to examine. These classes were inserted into either crop land or natural vegetation classes. These procedures resulted in a binary map that contained areas of crops and natural vegetation.

One date of imagery from the High Plains contained clouds, so a cloud class was included for this area. Because clouds affected only one date of imagery, we used the other dates (July and September) and reclassified the area under the clouds. The same procedures were used to generate the 100 classes which then were placed in crop land and natural vegetation classes.

The binary map of crop land and natural vegetation was compared to earlier aerial black and white photographs from 1988 that were digitized and used for accuracy assessment for the Land Cover Mapping Project in 1991. Images of crop lands in the 1988 data set were adjusted for lands placed into the Conservation Reserve Program after 1988. These crop lands appeared as natural vegetation in 1992, so needed to be re-coded as such. The binary map was >90% accurate for crop land and natural vegetation classes.

We divided the binary map into 15 hectare units and plotted it as overlays for use with 1:24,000 scale topographic maps. These maps and overlays guided the collection of data to ground-truth the vegetation at the Alliance level.

Vegetation data collected at the Alliance level during summer, 1996 were digitized from field maps. The digitized data were divided into two subsets for use in the final supervised classification process. The first subset was used to "train" the classification rules employed to classify the image set. The remaining subset was used to "test" the accuracy of classification. This procedure is called a supervised classification because the user has prior knowledge about the phenomena that are being mapped.

Data to complete KS-GAP will use TM data from May, July, and September, 1992. Currently, we are subjecting the first scene of natural vegetation to the supervised classification methods. Two additional scenes in southwest Kansas (east and west of the pilot-study area) and one in northeast Kansas have been acquired, pre-processing procedures completed, and classification of vegetation begun. Also, two additional scenes each with three dates have been acquired for northwest Kansas. Pre-processing procedures (e.g., rectifying the images) will begin soon.

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Vertebrate Layer

Data collection for vertebrates will start in spring 1997. Glennis Kaufman will collect data for the mammal layer, whereas Greg Hoch will begin with threatened and endangered (T & E) species in Kansas. We are starting with mammals because of the expertise of individuals involved in KS-GAP and T & E species because of the needs of Kansas Department of Wildlife and Parks. Mammals will be followed by birds in fall 1997, and reptiles and amphibians in 1998.

Our first overlays of mammals and T & E species with the land cover layer in GIS (Geographic Information Systems) will be done for southwest Kansas. Our overlays within GIS necessarily follow the sequence in which the land cover map is completed.

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Stewardship Layer

Graduate research assistants, Rob Vreeland, Jennifer Radcliff, and Ray Bivens, in the Geographic Information Systems and Spatial Analysis Lab (GISSAL) in Geography at Kansas State University are working on the stewardship layer of KS-GAP. The stewardship layer is related to ownership and management attributes of public lands and private lands of conservation organizations. The Kansas Biological Survey in Lawrence provided maps of protected areas in Kansas to GISSAL. These data on locations were scanned into an electronic environment. With the use of ARCINFO software, the graduate students converted the scanned polygon boundaries into a GIS layer complete with topology. Currently, the students are working with the database to add attributes such as the name of the site, owner, and manager, and management status (level of protection for biodiversity) for each polygon within the protected area. They also are contacting appropriate federal, state, and local agencies and non-governmental organizations (e.g., The Nature Conservancy) to update the information.

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Western States Coordinator for the National GAP Office, Patrick Crist, Visits KS-GAP

Patrick Crist, the Western States Coordinator for the national Gap Analysis Program, arrived at Manhattan in late evening on Tuesday, 5 November 1996. The purpose of Patrick's visit was to gain information about the research being done in the KS-GAP project and to meet the personnel involved.

Patrick had a breakfast meeting with Jack Cully on Wednesday morning before traveling to Lawrence with Glennis Kaufman to spend the day visiting the Kansas Applied Remote Sensing (KARS) Program. While in Lawrence, Patrick and Glennis spoke with

Ed Martinko, Kevin Price, Steve Egbert, Chris Lauver, Clayton Blodgett, Aimee Stewart, Ryan Boyce, and Miguel Ortega about the research being done on the land cover layer for KS-GAP and other related and allied projects. Individuals within the group illustrated the different processes required to overlay multi- date imagery, produce colored maps on a work station, and create the land cover map for the pilot project in southwest Kansas.

Upon his return to Manhattan, Patrick had dinner with three members of the Division of Biology at Kansas State University. These individuals were Dr. John Briggs, a Research Associate Professor and one of the Principal Investigators on the National Science Foundation's Long-Term Ecological Research (LTER) project on the Konza Prairie, and two graduate students, Donna Reick and Greg Hoch, whose research projects are centered on remote sensing and landscape level questions.

On Thursday morning, Patrick, Jack, and Glennis discussed administrative issues, modeling of vertebrate distributions, and educational outreach to the state of Kansas. In the afternoon, Jack accompanied Patrick to the Department of Geography to visit the Geographic Information Systems and Spatial Analysis Lab (GISSAL). Patrick and Jack spoke with John Harrington, Sy Seyler, Jennifer Radcliff, and Ray Bivens. Later, they toured the facilities that are available to KS-GAP for GIS support and for creating the stewardship layer.application of remote sensing techniques to tallgrass prairie environments.

In late afternoon, Patrick returned to Biology and John Briggs provided a tour of the computer and remote sensing facilities that are used by individuals working on the Konza Prairie LTER project. John also gave Patrick a tour of the Konza Prairie, a 3,487-hectare tallgrass prairie which is devoted to research on the effects of fire and grazing by large herbivores (bison) on native tallgrass prairie. Research on Konza Prairie, one of the original LTER sites funded in 1981, is focused on population, community, and ecosystem patterns and processes. Because of a rich database, information from Konza Prairie offers opportunities for assessing the application of remote sensing techniques to tallgrass prairie environments.

Dr. Christopher Guy, the assistant leader for fisheries in the Kansas Cooperative Fish and Wildlife Research Unit, was Patrick's host for dinner on Thursday evening. Patrick returned to the National Office in Moscow, ID on Friday morning.

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Standards for GAP Anaylsis

The national Gap Analysis Program (GAP) has developed minimum standards which all state GAP projects must meet or exceed. A national minumum standard is required to provide seamless maps of land cover and vertebrate distributions for the United States.

All state projects must have four basic data layers. These four layers are land cover, vertebrate species distributions, land ownership, and land management.

All land cover maps are created by analysis of satellite images from a thematic mapper. Primary land cover categories include naturally vegetated or barren areas, aquatic areas, agricultural areas, and built environments. For naturally vegetated or barren land cover, the vegetation is mapped to the Alliance level (from the UNESCO/TNC classification scheme). The Alliance level consists of the two dominant species of vegetation within a minimum mapping unit (MMU). The MMU for GAP is 100 hectares. State projects may use smaller MMU to meet the requirements of their state cooperators. Each state project will incorporate digital data from the National Wetlands Inventory where it is available.

The vertebrate species were selected as an index to biological diversity. Each state will coordinate with its neighboring states to develop the relational databases for vertebrate habitats. Names used for all vertebrate species will come from the Checklist of Vertebrates of the United States, the U.S. Territories, and Canada.

The three major categories for land ownership maps are publicly owned lands, lands owned by private organizations which are charged to manage the lands for long-term maintenance of native biological diversity, and private land. Private land owned by citizens is simply labeled as private.

Land management is defined by four status categories. Status 1 refers to an area that has an active management plan in place to maintain it in natural conditions. Examples of status 1 areas are National Parks and Wilderness Areas. Status 2 refers to an area which is managed for its natural values, but which may receive uses that degrade the quality of the natural communities. An example of a status 2 area is a state park. Status 3 refers to an area which prevents permanent conversion of the land, but allows extractive uses. An example of a status 3 area is a non-reserved national forest. Status 4 refers to an area that is managed in ways which preclude the maintenance of native communities of plants and animals. An example of a Status 4 area is Department of Defense land.

Metadata are required for each layer. These data include a lineage of all software and data used to create each layer. At the completion of the state project, each state is required to forward the metadata and state products to the national Gap Analysis Program

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Partnerships: A Key Component

A key component of gap analysis is local management and development of local partnerships. The Gap Analysis Program (GAP) is a national mapping program with nationwide requirements for classifying land cover based primarily on vegetation, mapping land cover units at specific scales, identifying species by a specific naming convention, and maintaining metadata (information on the sources of data used to map) for each layer. GAP recognizes that each state has unique requirements to make its project useful to state management agencies. GAP also recognizes that allowing individual states to develop their own mapping techniques will lead to innovation and more powerful and efficient methods.

The number one goal of GAP, both at the national and state level, is to enhance the conservation of biodiversity. To do that, each state project is encouraged to develop strong partnerships with state and federal land-managing agencies. Forming partnerships with managers early in a GAP project ensures that a state will address issues important to the partner agencies. The identification of sand sage prairie as an important habitat in western Kansas for the Kansas Department of Wildlife and Parks is a good example of how this partnership works.

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Funds to Come From Kansas GIS Policy Board

Following the meeting hosted by Kansas Department of Wildlife and Parks, KS-GAP was asked to apply for a grant from the Kansas GIS Policy Board. Subsequently, we learned that KARS was approved for a project entitled, Kansas Land Cover GIS Database Update. These funds are provided by the State Water Plan which is administered by the Kansas Water Office. Funds are expected to begin in July 1997 and be renewed for two additional years.

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Ground-Truthing

Hillary Loring, a research assistant at the Kansas Biological Survey, conducted extensive field surveys of nearly 300 sites in 11 counties under the guidance of Chris Lauver during May through August 1996. These surveys provided current data on natural vegetation in southwest Kansas. The initial objective of Hillary's work was to locate at least 10 sites of each type of natural vegetation in southwest Kansas that had a minimum area of 15 hectares. Hillary contacted several county offices of the USDA-Natural Resources Conservation Service and received valuable advice from their personnel for locating appropriate sites. Fewer than 10 sites were found of most wetland types because of their rarity in southwest Kansas.

The second objective was to describe the natural vegetation at each site. Hillary recorded the dominant plant species and condition or quality of over 280 sites with 16 different types of vegetation, and marked the boundaries of each site on USGS topographic maps. Most sites were upland mixed or shortgrass prairie, whereas some sites were floodplain woodlands and other wetland types.

The third objective was to gather information on Conservation Reserve Program sites, disturbed sites dominated by annual plants, and sites dominated by non-native species (e.g., salt cedar). The dominant plant species of these sites were recorded to assemble an accurate database of current land cover.

These data will be used for two purposes, to establish training rules for a supervised classification of remotely- sensed data and to assess the accuracy of this classification with data withheld from the training procedure.

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Remote Sensing Support

Remote sensing support for KS-GAP is provided by the Kansas Applied Remote Sensing (KARS) Program which is part of the Kansas Biological Survey (KBS) at the University of Kansas in Lawrence. KARS is directed by Dr. Edward A. Martinko; Dr. Kevin P. Price serves as the Associate Director. The KARS program works closely with the personnel in the Department of Geography at the University of Kansas. The KARS laboratories employ state-of-the-art hardware to support image processing and GIS research and applications. Equipment includes workstations, color printers and plotters, a variety of input and storage devices, and CD-ROM writer that can be used by KS-GAP. KARS also uses industry-standard ERDAS Imagine and ARCINFO software for image processing and GIS analysis. KARS employees produced the statewide digital land cover map of Kansas under the direction of laboratory manager, Jerry Whistler, in 1991-1993. The land cover map produced an Anderson Level I map of the entire state and is being used as input for the KS-GAP land cover layer.

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What's New in the Future?

We plan to develop a web site for the KS-GAP project. This site will include the goals of KS-GAP, current activities, and publications. This site also will provide links to other sites on the World Wide Web that are related to GAP. Eventually, we would like to have an interactive forum which will allow interested persons to ask questions about KS-GAP. More information will follow as the web site and interactive forum become a reality.

We also plan to develop an outreach to citizens of Kansas to participate in the KS-GAP project. The GAP project in the state of Washington (WA-GAP) has a program called NatureMapping. This program encourages senior citizens, students in elementary and secondary schools, community organizations, and local and state governments to participate in collecting information on the sightings of vertebrates. We plan to model our program after the NatureMapping program. More information will be distributed as this program develops.

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GIS Support

GIS support for KS-GAP is provided by the Geographic Information Systems and Spatial Analysis Lab (GISSAL) in the Department of Geography at Kansas State University. GISSAL is directed by Dr. H. L. (Sy) Seyler; Dr. John Harrington, Jr. serves as the Associate Director. GISSAL has a variety of equipment including PC and workstation computers, digitizers, a large-format scanner, color plotters, and a variety of printers and data storage devices that can be used by KS-GAP. GISSAL also is capable of electronic file transfer. A past project done in GISSAL that will be useful to KS-GAP is a seamless, digital data layer of the soils of the state of Kansas. Most of the GISSAL projects utilize ARCINFO on either a PC or a workstation computing environment, but most other leading GIS software packages are supported.

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KARS Receives Grant from EPA

In October, the Kansas Applied Remote Sensing Program was awarded funds from the Environmental Protection Agency (EPA) Region 7 Office, in Kansas City, KS to conduct a project entitled, Development of a Land Cover Map at the Vegetation Alliance Level for the State of Kansas. The two proposed objectives of this project were to create a digital vegetation map of Kansas using the modified-UNESCO Alliance level classification for natural vegetation (modified by the Nature Conservancy in cooperation with state Natural Heritage programs) and to use vegetation classes that are compatible across state boundaries for those states under EPA Region 7 jurisdiction. These states include Nebraska, Iowa, and Missouri.

The objectives of the EPA project are complementary to KS-GAP. Funding from EPA for this project is expected to continue for at least two years.

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The KS-GAP Team

Kansas State University, Division of Biology, Kansas Cooperative Fish and Wildlife Research Unit, Geographic Information Systems and Spatial Analysis Lab

Jack Cully, Jr. serves as the Principal Investigator (PI) on the KS-GAP project and is the Assistant Unit Leader of Wildlife for the KS CFWRU and an Assistant Professor in the Division of Biology. Glennis Kaufman serves as the State Coordinator for KS-GAP and is a Research Assistant Professor in the Division of Biology and a Senior Scientist on the Konza Prairie Long-Term Ecological Research (LTER) project. H. L. (Sy) Seyler is the Director of the Geographic Information Systems and Spatial Analysis Lab (GISSAL) and is an Associate Professor in the Department of Geography. John Harrington, Jr. is the Associate Director of GISSAL and a Professor in the Department of Geography. Greg Hoch is a graduate research assistant in KS CFWRU at the Division of Biology. Jennifer Radcliff and Ray Bivens are graduate research assistants in GISSAL and the Department of Geography.

University of Kansas, Kansas Biological Survey, Kansas Applied Remote Sensing Program

Ed Martinko is a co-PI on the KS-GAP project, Director of the KBS and the KARS Program, and an Associate Professor in the Department of Systematics and Ecology. Kevin Price is a co-PI on the KS-GAP project, Associate Director of the KARS Program, and an Associate Professor in the Department of Geography. Steve Egbert is a Research Associate in the KARS Program. Chris Lauver is an Associate Scientist in the KBS. Clayton Blodgett, Aimee Stewart, Ryan Boyce, and Miguel Ortega are graduate research assistants in KARS and the Department of Geography.

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March 20, 2000

Biological Survey

Understanding our environment

Overview

Fall wildflowers at the Rockefeller Prairie.

The Kansas Biological Survey houses the following programs. Survey scientists undertake a wide variety of research projects both within and in addition to these programs.

Reservoir Assessment Program — This initiative provides critical information concerning the status and conditions of Kansas reservoirs. The program's activities focus on expanding its reservoir information database to provide state and local officials with the facts needed to make informed decisions about the safety, supply and reliability of our state's valuable water resources.

Central Plains Center for BioAssessment — The Center for Bioassessment is a nonregulatory, nonmanagement aquatic research organization within the Survey. It works closely with state, tribal, federal and academic scientists, and other public entities in U.S. EPA Region 7 (Iowa, Kansas, Missouri and Nebraska) to collaborate on and research issues of aquatic ecology and water quality.

Kansas Applied Remote Sensing (KARS) — KARS conducts

research on applications of remote sensing technology to a broad array of environmental and agricultural issues. Its interactive online maps, such as the Natural Resource Planner and the Green Report, provide environmental and infrastructural information of great interest to the public and vital to land-use planners. The program works to facilitate technology transfer of a variety products and services derived from remote sensing technologies to commercial, governmental and other end users.

Kansas Natural Heritage Inventory — The heritage program is among more than 80 members of the NatureServe network, which comprises natural heritage programs and conservation data centers throughout the Western Hemisphere. This network was initiated by The Nature Conservancy in 1974 and transferred to NatureServe in 1994. The mission of the Natural Heritage Inventory is to collect, manage and disseminate information about the biological diversity of the state, emphasizing the plants, animals and natural communities that are sensitive, threatened or endangered. Data is made available to a wide variety of users to provide early notice of potential natural resource conflicts, to guide public and private land use decisions, and to develop conservation priorities.

KU Ecosystems Research Group — This consortium of researchers seeks to understand how terrestrial and aquatic ecosystems around the world function. The group comprises faculty, postdoctoral researchers and students who explore Earth's vegetation, soil, water and climate, using a diversity of approaches, particularly in the context of climate change and land use.

Monarch Watch (affiliated with the Kansas Biological Survey) — Since 1992, Monarch Watch has tracked the annual migration of the Monarch butterfly through North America, going to the heart of the issue of wildlife habitat conservation. To collect cross-continental data, the program engages citizen scientists, including schoolchildren, through its outreach efforts. It provides online information on the biology and conservation of the Monarch and maintains an active email discussion list and online community forum. Monarch Watch involves more than 2,000 schools, nature centers and other organizations in the U.S. and Canada in its work. An estimated 100,000 people participate in Monarch-tagging activities each year in the fall.

Native Medicinal Plant Research Program — This collaboration between the Kansas Biological Survey and the KU Department of Medicinal Chemistry began in 2009 as a broad-based search for

medicinal compounds in plants native to the U.S. Great Plains. Since then, more than 300 collections of plants have been tested using state-of-the-art high-throughput screening at KU. Among the program's discoveries are powerful cancer-fighting compounds in a native Kansas species, *Physalis longifolia*, or wild tomatillo. The program's Native Medicinal Plant Research Garden, north of Lawrence, is part of the KU Field Station.

Contact Kansas Biological Survey

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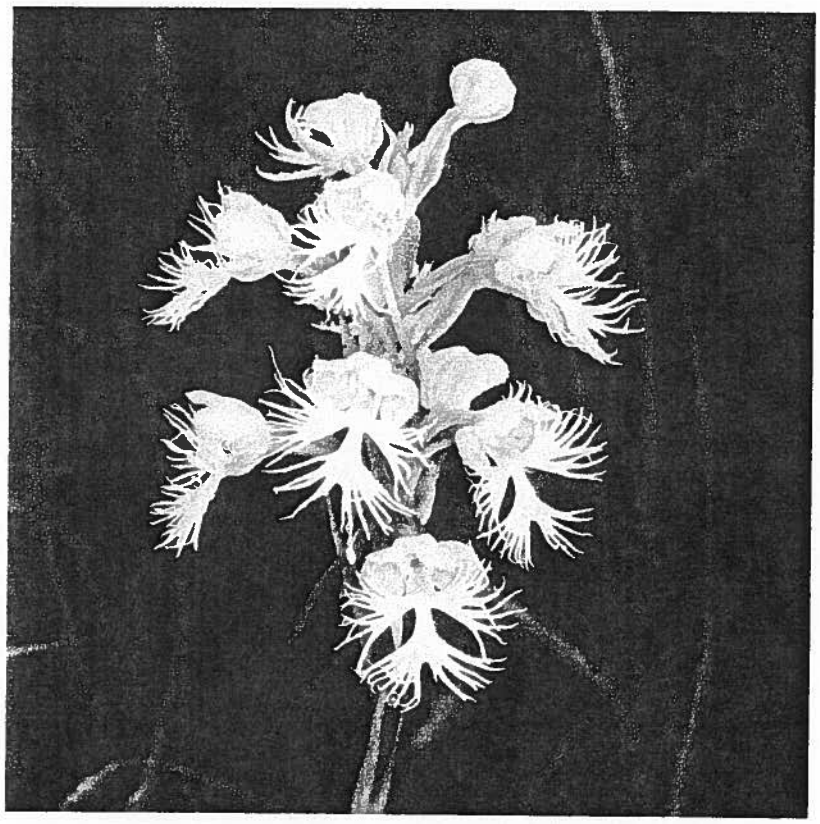
Biological
Survey
Understanding our environment

Kansas Natural Heritage Inventory



Western prairie fringed orchid (Platanthera praeclara).

The Kansas Natural Heritage Inventory, initiated in 1986, is a member of the NatureServe Network[1], a group of more than 80 independent natural heritage programs and conservation data centers throughout the Western Hemisphere. Most natural heritage programs are state or provincial government agencies; others, such as the Kansas Natural Heritage program, are housed at universities.

The first natural heritage inventory program was established by The Nature Conservancy in 1974, and over the following 20 years, it worked with partners to build a network of biological inventories covering most of the Western Hemisphere. In 1994, it transferred

this role to NatureServe, which was established at that time as the Association for Biodiversity Information.

The natural heritage programs serve as the leading source of information on the precise locations and conditions of at-risk species and threatened ecosystems. Each maintains an sophisticated database, following consistent standards for collecting and managing data so this information may be shared across the NatureServe network — providing seamless coverage of multi-jurisdictional data sets. This information serves as a valuable conservation tool for planners, landowners, natural area managers and others.

The Kansas Natural Heritage Inventory conducts directed surveys for rare species and their habitats, habitat assessments and surveys for a variety of natural community types. Specimen vouchers collected for our work are deposited at KU's Natural History Museum and Biodiversity Research Center.

We are involved in restoration and remediation projects and in the development of site-specific management recommendations. Our staff members have expertise in the areas of field botany, plant ecology, wildlife ecology, zoology and GIS. Many of our projects provide research opportunities for graduate and undergraduate students. We collaborate with other scientists from the Kansas Biological Survey and KU, as well as with a variety of state and federal agencies, conservation organizations, private corporations and individuals.

For more information, contact Jennifer Delisle, information manager for the Kansas Natural Heritage Inventory, 785-864-1538 or jdelisle@ku.edu[2].

Links on this page:

1. http://www.natureserve.org/visitLocal/index.jsp
2. jdelisle@ku.edu

Biological
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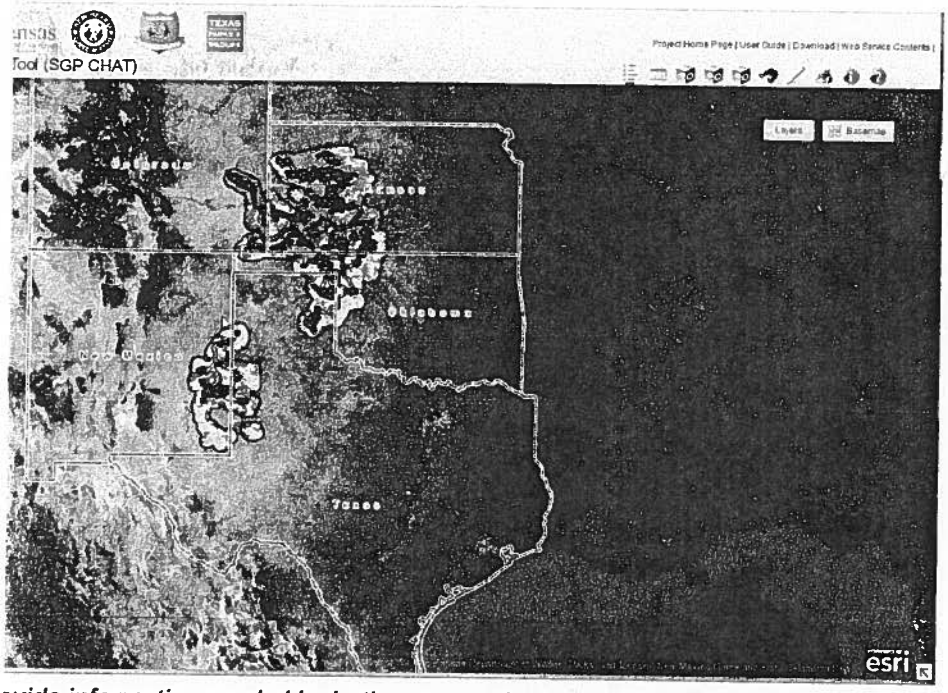
GIS mapping applications



ovide information needed by both conservationists and industry.

For maps providing information on Kansas land cover, Kansas species ranges and known locations, and the influence of the biofuel industry:

http://kars.ku.edu/research/[1]

For interactive web maps covering a wide range of topics including species habitats, flood risk, water resources, crop yields and more:

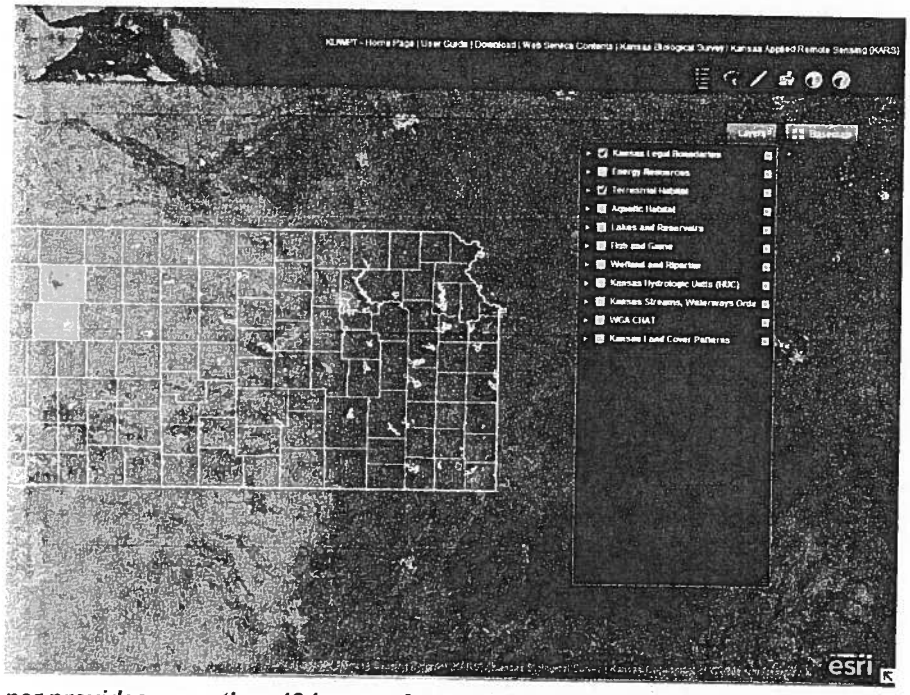
http://kars.ku.edu/geodata/maps/[2]

Links on this page:

1. http://kars.ku.edu/research/
2. http://kars.ku.edu/geodata/maps/

Biological
Survey
Understanding our environment

Kansas Applied Remote Sensing



ner provides more than 40 layers of natural resource and infrastructure data.

KARS was established in 1972 by the National Aeronautics and Space Administration (NASA) and the State of Kansas to conduct applied research on techniques that enable public agencies and private firms to better utilize data from satellite and airborne remote sensing systems. KARS undertakes projects with federal, state and local agencies, as well as private industry. These projects are designed to identify and enhance ways in which remote sensing technologies and related geographic information systems (GIS) can aid in decision-making, policy formulation and planning in a variety of applications. KARS projects have involved land use, land cover inventory, monitoring land use change, rangeland and forest land characterization, wildlife habitat evaluation, mapping of irrigated lands, surface mined lands inventory, soil conservation needs assessment, wetlands inventory and urban area analysis.

Program staff include specialists with backgrounds in geography, ecology, biology, environmental studies and natural resource management. This diversity reflects the interdisciplinary approach

used to apply remote sensing and GIS technologies. The program's expertise in both landscape-level and close-range remote sensing is nationally recognized. In addition, KARS has more than 30 years of experience developing databases and natural resource models for implementation in GIS environments. KARS staff also have extensive experience in providing national and international workshops, short courses and training sessions on remote sensing and GIS technologies. Since its inception, KARS has been influential in fostering the introduction and growth of remote sensing and GIS technologies within the state and across the nation.

The program currently maintains its own website: http://kars.ku.edu/[1]

Links on this page:

1. http://kars.ku.edu/

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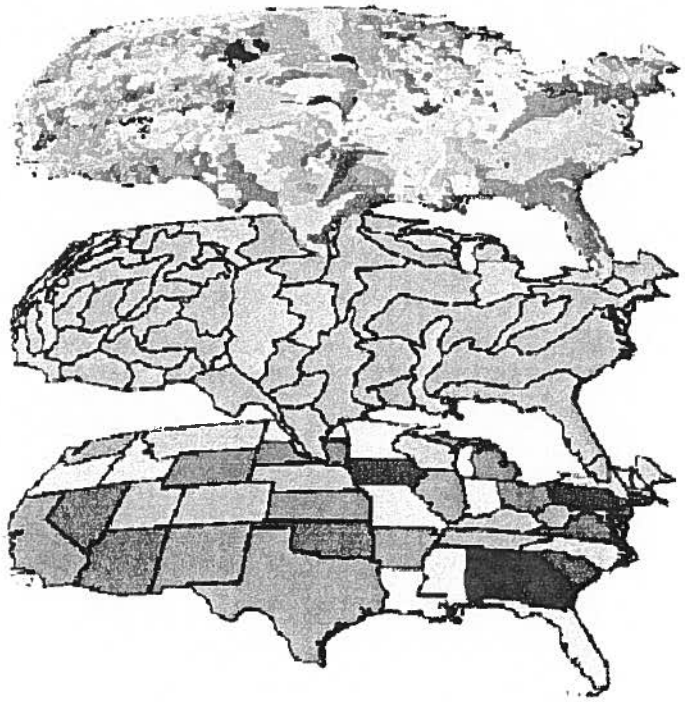
OKLAHOMA GAP ANALYSIS PROJECT

A GEOGRAPHIC APPROACH TO PLANNING FOR BIOLOGICAL DIVERSITY

JUNE 2001 FINAL REPORT



Oklahoma Cooperative Fish and Wildlife Research Unit
Oklahoma State University

William L. Fisher and Mark S. Gregory

United States Geological Survey, Biological Resources Division

INTRODUCTION

How This Report is Organized

This report is a summation of a scientific project. While we endeavor to make it understandable for as general an audience as practicable, it will reflect the complexity of the project it describes. A glossary of terms is provided to aid the reader in understanding the report, and for those seeking a detailed understanding of the subjects, the cited literature should be helpful. The organization of this report follows the general chronology of project development, beginning with the production of the individual data layers and concluding with analysis of the data. It diverges from standard scientific reporting by embedding results and discussion sections within individual chapters. This was done to allow the individual data products to stand on their own as testable hypotheses and provide data users with a concise and complete report for each data and analysis product.

We begin with an overview of the Gap Analysis mission, concept, and limitations. We then present a synopsis of how the current biodiversity condition of Oklahoma came to be, followed by land cover mapping, animal distribution prediction, species richness, and land stewardship mapping and categorization. Data development leads to the Analysis section, which reports on the status of the elements of biodiversity (natural community alliances and terrestrial vertebrate species) for Oklahoma. Finally, we describe the management implications of the analysis results and provide information on how to acquire and use the data.

The Gap Analysis Program Mission

The mission of the Gap Analysis Program is to prevent conservation crises by providing conservation assessments of native vertebrate species and their habitats and to facilitate the application of this information to land management activities.

This is accomplished through the following five objectives:
1) Map actual land cover as closely as possible to the Alliance level (FGDC 1997).
2) Map the predicted distribution of those terrestrial vertebrates that spend any important part of their life history in the project area and for which adequate distributional habitats, associations, and mapped habitat variables are available. Map other taxa as cooperative opportunities allow.
3) Document the representation of natural land cover types and animal species in areas managed for the long-term maintenance of biodiversity.
4) Make all GAP Project information available to the public and those charged with land use research, policy, planning, and management.
5) Build institutional cooperation in the application of this information to state and regional management activities.

To meet these objectives, it is necessary that GAP be operated at the state level but maintain consistency with national standards. Within the state, participation by a wide variety of cooperators is necessary and desirable to ensure understanding and acceptance of the data and

forge relationships that will lead to cooperative conservation planning.

The Gap Analysis Concept

The Gap Analysis Program (GAP) brings together the problem-solving capabilities of federal, state, and private scientists to tackle the difficult issues of land cover mapping, vertebrate habitat characterization and assessment, and biodiversity conservation at the state, regional, and national levels. The program seeks to facilitate cooperative development and use of information. Throughout this report we use the terms "GAP" to describe the national program, "GAP Project" to refer to an individual state or regional project, and "gap analysis" to refer to the gap analysis process or methodology.

Much of the following discussion was taken verbatim from Scott et al. (1993), Davis et al. (1995), and Edwards et al. (1995). The gap analysis process provides an overview of the distribution and conservation status of several components of biodiversity. It uses the distribution of actual vegetation and terrestrial vertebrates and, when available, invertebrate taxa. Digital map overlays in a GIS are used to identify individual species, species-rich areas, and vegetation types that are unrepresented or under represented in existing management areas. It functions as a preliminary step to the more detailed studies needed to establish actual boundaries for potential biodiversity management areas. These data and results are then made available to institutions as well as individual land owners and managers so that they may become more effective stewards through more complete knowledge of the management status of these elements of biodiversity. GAP, by focusing on higher levels of biological organization, is likely to be both less expensive and more likely to succeed than conservation programs focused on single species or populations (Scott et al. 1993).

Biodiversity inventories can be visualized as "filters" designed to capture elements of biodiversity at various levels of organization. The filter concept has been applied by The Nature Conservancy, which has established Natural Heritage Programs in all 50 states, most of which are now operated by state government agencies. The Nature Conservancy employs a fine filter of rare species inventory and protection and a coarse filter of community inventory and protection (Jenkins 1985, Noss 1987). It is postulated that 85-90% of species can be protected by the coarse filter, without having to inventory or plan reserves for those species individually. A fine filter is then applied to the remaining 15-10% of species to ensure their protection. Gap analysis is a coarse filter method because it can be used to quickly and cheaply assess the other 85-90% of species.

The intuitively appealing idea of conserving most biodiversity by maintaining examples of all natural community types has never been applied, although numerous approaches to the spatial identification of biodiversity have been described (Kirkpatrick 1983, Margules et al. 1988, Pressey and Nicholls 1989, Nicholls and Margules 1993). Furthermore, the spatial scale at which organisms use the environment differs tremendously among species and depends on body size, food habits, mobility, and other factors. Hence, no coarse filter will be a complete assessment of biodiversity protection status and needs. However, species that fall through the

pores of the coarse filter, such as narrow endemics and wide-ranging mammals, can be captured by the safety net of the fine filter. Community-level (coarse-filter) protection is a complement to, not a substitute for, protection of individual rare species.

Gap analysis is essentially an expanded coarse-filter approach (Noss 1987) to biodiversity protection. The vegetation types mapped in GAP serve directly as a coarse filter, the goal being to assure adequate representation of all types in biodiversity management areas. Landscapes with great vegetation diversity often are those with high edaphic variety or topographic relief. When elevational diversity is very great, a nearly complete spectrum of vegetation types known from a biological region may occur within a relatively small area. Such areas provide habitat for many species, including those that depend on multiple habitat types to meet life history needs (Diamond 1986, Noss 1987). By using landscape-sized samples (Forman and Godron 1986) as an expanded coarse filter, gap analysis searches for and identifies biological regions where unprotected or under represented vegetation types and vertebrate species occur.

A second filter uses combined species distribution information to identify a set of areas in which all, or nearly all, mapped species are represented. There is a major difference between identifying the richest areas in a region (many of which are likely to be neighbors and share essentially the same list of species) and identifying areas in which all species are represented. The latter task is most efficiently accomplished by selecting areas whose species lists are most different or complementary. Areas with different environments also tend to have the most different species lists for a variety of taxa. As a result, a set of areas with complementary sets of species for one higher taxon (e.g. mammals) often will also do a good job representing most species of other higher taxa (e.g. trees, butterflies). Species with large home ranges, such as large carnivores, or species with very local distributions may require individual attention. Additional data layers can be used for a more holistic conservation evaluation. These include indicators of stress or risk (e.g. human population growth, road density, rate of habitat fragmentation, distribution of pollutants) and the locations of habitat corridors between wildlands that allow for natural movements of wide-ranging animals and the migration of species in response to climate change. These more detailed analyses were not part of this project but are areas of research that GAP as a national program is pursuing.

General Limitations

Limitations must be recognized so that additional studies can be implemented to supplement GAP. The following are general project limitations; specific limitations for the data are described in the sections that describe them:

1. GAP data are derived from remote sensing and modeling to make general assessments about conservation status. Any decisions based on the data must be supported by ground-truthing and more detailed analyses.

2. GAP is not a substitute for threatened and endangered species listing and recovery efforts. A primary argument in favor of gap analysis is that it is proactive: it seeks to recognize and

manage sites of high biodiversity value for the long-term maintenance of populations of native species and natural ecosystems before individual species and plant communities become critically rare. Thus, it should help to reduce the rate at which species require listing as threatened or endangered. Those species that are already greatly imperiled, however, still require individual efforts to assure their recovery.

3. GAP data products and assessments represent a snapshot in time generally representing the date of the satellite imagery. Updates are planned on a 5-10 year cycle, but users of the data must be aware of the static nature of the products.

4. GAP is not a substitute for a thorough national biological inventory. As a response to rapid habitat loss, gap analysis provides a quick assessment of the distribution of vegetation and associated species before they are lost and provides focus and direction for local, regional, and national efforts to maintain biodiversity. The process of improving knowledge in systematics, taxonomy, and species distributions is lengthy and expensive. That process must be continued and expedited to provide the detailed information needed for a comprehensive assessment of our nation's biodiversity. Vegetation and species distribution maps developed for GAP can be used to make such surveys more cost-effective by stratifying sampling areas according to expected variation in biological attributes.

The Study Area – A Brief Description of Oklahoma

The project study area includes the entire state of Oklahoma (Map 1). Oklahoma has a geologically diverse landscape. In the past, portions of Oklahoma have several times sunk below and risen above sea level. As a result, large areas of the state were covered by shallow seas, and thick layers of marine shale, limestone, and sandstone were deposited. At the same time in adjacent areas, shales and sandstones were laid down as alluvial and deltaic deposits near the ancient seas. Uplift resulted in gentle arching of broad areas, and folding and faulting in southern Oklahoma during the Pennsylvanian Period led to the formation of three principal mountain belts, the Ouachita, Arbuckle, and Wichita Mountains. Nearly 99% of Oklahoma's outcropping rocks are of sedimentary origin, and the remainder are: igneous rocks in the Wichita Mountains; igneous and metamorphic rocks in part of the Arbuckle Mountains; and an area of mildly metamorphosed rocks in the Ouachita Mountains. Oklahoma has a land area of 69,919 square miles (181,089 square kilometers). Oklahoma's topography slopes down from west to east. The highest elevation, 4,973 ft (1516 m), in the state is Black Mesa in Cimarron County in the Oklahoma Panhandle, and the lowest elevation, 287 ft (88 m), is in the southeastern corner of the State, where the Little River flows into Arkansas. Rainfall and temperatures vary significantly between the eastern and western borders of the state. Average annual precipitation ranges from over 50 inches (127 cm) in southeastern Oklahoma to 18 inches (46 cm) in the Panhandle, whereas average annual temperatures range from 65 °F (18 °C) in the southeast to 55 °F (13 °C) in the Panhandle. Oklahoma is composed of 77 counties. The name "Oklahoma" comes from the Choctaw words "okla" meaning people and "humma" meaning red, so the state's name literally means "red people."

THE OKLAHOMA GAP ANALYSIS PROJECT

FINAL REPORT

30 June 2001

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Research Performed Under:
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Research Work Order No. 14

EXECUTIVE SUMMARY

The Oklahoma Gap Analysis project (OK-GAP) was initiated in 1993 as a cooperative effort between the US Geological Survey, Biological Resources Division, and other federal, state, and private natural resource interests in Oklahoma. The objectives of the project were to: (1) prepare a map of the current distribution of land cover types, (2) estimate terrestrial vertebrate species distributions relative to land cover types, (3) classify land stewardship by categories of conservation status, and (4) identify and analyze gaps in the conservation of biological diversity from representative areas. The OK-GAP is an initial step toward a more detailed and comprehensive effort at long-term planning for biodiversity conservation in Oklahoma.

The land cover map developed by OK-GAP identifies 46 land cover types based on interpretation of Thematic Mapper (TM) imagery and field reconnaissance. The minimum mapping units (MMU) for the map are 0.81 hectares for all land cover types. Twenty-three scenes of TM data for 1991-1993 obtained from the Multi-Resolution Land Characteristics Consortium (MRLC) were used to create the map. We used airborne videography from 17 flight lines flown over Oklahoma to aid in classifying the TM scenes. Field reconnaissance was conducted to verify video classification of land cover types and verify UTM coordinates of the flight lines. We conducted an accuracy assessment of the land cover map using data from three independent sources: field reconnaissance, an existing database, and a previous land cover map of Oklahoma. Forest and other land cover types had the highest overall accuracy (78% and 85%, respectively), shrublands and herbaceous lands were intermediate (53% and 56%, respectively), and woodlands had the lowest accuracy (22%). Woodlands were most often misclassified as forests or other land cover types, and shrublands were typically misclassified as herbaceous types. These misclassifications most likely were the result of structural differences (i.e., vegetation height and crown density) between the land cover types, the small MMU of the map, and the simple random sampling design we used.

Distributions of 411 terrestrial vertebrate species were mapped. Using habitat (land cover type) associations, we predicted the potential distributions of 382 species, including 75 mammals, 178 birds, 81 reptiles, and 48 amphibians. In addition, we mapped the distributions of 29 imperiled species (state and federal threatened or endangered species and species of special concern). Range limits of each species were delineated on maps from scientific literature sources and reviewed by experts. The range maps were eventually converted to a presence/absence grid map consisting of 337 hexagons (635 sq km) to cover Oklahoma. Wildlife habitat relation models were developed for each of the 410 species based on their associations with individual land cover types. Accuracy of the predicted distributions was assessed for 20 species of birds; we did not assess the accuracy of any other group. Mean accuracy for the 20 species was 71% and ranged from 45-92%.

The stewardship map of Oklahoma was developed from original maps of 379 public and private managed land units. We identified 14 land stewards, including eight federal agencies, five state and city agencies, and one private organization. All stewardship land areas were categorized based on management for biodiversity maintenance on a scale of 1 through 4, with 1 being the

highest, most comprehensive level of management for conservation and 4 being the lowest. Ninety-three percent of the total land area of Oklahoma is comprised of private, unrestricted status 4 lands. Of the remaining 7% of total land area, 28% was classified as status 1 and 2 stewardship lands, 21% as status 3 lands, and the remainder was either status 4 lands or water.

Gap analysis was conducted on all land cover types and predicted animal distributions with representation on status 1 and 2 stewardship lands. Nine land cover types had less that 1% representation, 32 types had between 1% and 10% representation, and two types had between 11% and 20% representation on status 1 and 2 lands. Of these, shinnery oak shrubland in west-central Oklahoma, gypsum grasslands in western Oklahoma, and dwarf white oak forests in southeastern Oklahoma were among the vegetation alliances in need of further study and possible protection. Habitats for 19 mammals, 14 birds, 8 reptiles, and 10 amphibians merit increased conservation and management attention in Oklahoma. These 51 species are designated as federal and state Threatened or Endangered or Candidate or Special Concern species and, except for the small-footed myotis (mammal) and red-cockaded woodpecker (bird), have less than 20% of their predicted distribution on status 1 and 2 lands. Six areas of the state support either high numbers of species or unique vegetation alliances. It is obvious from this analysis that biodiversity conservation efforts in Oklahoma will have to focus on educating and working with private land owners.

An Oklahoma biodiversity plan was published in 1996 under the direction of the Oklahoma Department of Wildlife Conservation. The purpose of the plan was to provide information about Oklahoma's biodiversity and make recommendations on how biodiversity conservation could be included in a variety of economic and other activities. Information generated from the OK-GAP specifically addresses one of the biological recommendations of the plan: continued research to address information needs for biodiversity conservation. We hope that future researchers and managers will build upon the information developed by the OK-GAP to help make biodiversity conservation a reality in Oklahoma.

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CONCLUSIONS AND MANAGEMENT IMPLICATIONS

Management Implications

The purpose of GAP is to identify elements of biodiversity (i.e., land cover types and vertebrate species) in need of protection before they become rare. The approach gap analysis uses is to associate a management status with a land area as an indication of the management activities that have the potential for conserving biological diversity. As such, the status designation for an area provides a simplified indication of the suitability of the area for protecting a vegetation type or vertebrate species. This indication, however, does not factor in requirements such as a species' home range size in relation to the size of the managed area, isolation from other managed areas, or the disturbance regime needed to maintain a population. Nor does it account for the response of different species to the same management practice. Nevertheless, gap analysis provides a first-level assessment of the protection a land area provides for vegetation communities and terrestrial vertebrate species.

Although the greatest vertebrate species richness occurs in the eastern half of Oklahoma, at least six areas in the state support either high numbers of unique vegetation types and vertebrate species. The Ozark Plateau in northeastern Oklahoma and the Ouachita Mountains in southeastern Oklahoma both have over 310 species of vertebrates and have the highest floristic and vegetational diversity in the state (Hoagland 2000). The Arbuckle Mountains in south-central Oklahoma and Wichita Mountains in southwestern Oklahoma are ancient mountain ranges that were identified as Great Plains landscapes of biological significance by Aldrich et al. (1997). They support a diversity of natural vegetation types (e.g., Ashe Juniper/little bluestem woodland in the Arbuckle Mountains and plateau live oak/little bluestem woodland in the Wichita Mountains [Aldrich et al. 1997]) and species (around 290 vertebrate species in the Wichita Mountains and about 310 vertebrate species in the Arbuckle Mountains). The Great Salt Plains and the mesas and buttes of the Gypsum Hills in northwestern Oklahoma contain unique vegetation types (e.g., gypsum grasslands), over 280 species of vertebrates, and habitat for the largest interior least tern nesting population in Oklahoma or Kansas (Aldrich et al. 1997). The Black Mesa at the tip of the Oklahoma Panhandle also has a diversity of vegetation types, including one-seed juniper woodlands and sandsage prairie, over 255 vertebrates species, and several species of concern, including the lesser prairie chicken and the bald eagle. In each of the six areas, there are a few status 1, 2 or 3 areas that afford protection to some the elements listed above.

In Oklahoma, less than 2% of the land area was identified as providing protection (status 1 and 2) for biodiversity. Most of these lands were not originally established to protect biodiversity, rather they were purchased and are managed for more utilitarian purposes such as wildlife and waterfowl management, tourism, and recreation. However, two large lands areas, Tallgrass Prairie Preserve in north-central Oklahoma and McCurtain County Wilderness Area in southeastern Oklahoma, make up 6% of status 1 and 2 lands and are managed specifically for biodiversity conservation. What is obvious is that 93% of Oklahoma is privately owned and not managed for biodiversity. Clearly, status 1 and 2 lands in Oklahoma are not sufficient to sustain

species richness and natural ecosystems over the long term.

State-wide Biodiversity Planning

Biodiversity planning was formally initiated in Oklahoma in 1993 when the Oklahoma Department of Wildlife Conservation assembled a biodiversity council and biodiversity task force to develop a biodiversity plan for the state. The Council was composed of directorate-level individuals from various federal and state governmental agencies and private organizations that were either responsible for biodiversity management or whose activities impacted biodiversity. The Task Force was composed of seven committees (biology, conservation and recreation, education, forestry and agriculture, land resources, mineral resources and water resources) composed of recognized leaders within their profession or organization that created the biodiversity plan. The Plan, *Oklahoma's Biodiversity Plan: A Shared Vision for Conserving Our Natural Heritage*, was published in 1996 (Murray 1996). The purpose of the Plan was to provide information about Oklahoma's biodiversity and make recommendations on how biodiversity conservation could be included in a variety of economic and other activities.

The report listed five biological recommendations that were needed to maintain Oklahoma's biological diversity:

1. Integrate biodiversity conservation with activities at all societal and economic levels,
2. Identify and protect natural areas that are especially sensitive to disturbance,
3. Improve biodiversity management on public lands,
4. Continue research to address information needs for biodiversity conservation, and
5. Provide scientific oversight to biodiversity conservation efforts.

Additional goals and recommendations were made regarding educational efforts to increase biodiversity management efforts. Unfortunately, there has not been a concerted effort to implement the recommendations of the Plan since its completion.

The OK-GAP specifically addresses recommendation 4. Geographic information system databases and spatial datasets provide spatially explicit information that can be used interactively by governmental agencies and private entities for understanding the distribution of vegetation types and terrestrial vertebrates in Oklahoma. Such information can form the basis for continued research on species' distributions and habitats to aid agencies and individuals in conservation efforts.

The OK-GAP information needs to be a dynamic, not static, information base for biodiversity conservation in Oklahoma. Continual updating and revision of the data are necessary not only to improve mapping predictions but also to evaluate changes in distribution patterns over time. We identified several landscape-level patterns on vegetation and terrestrial vertebrate species distribution in Oklahoma. We also acknowledged the limitations of our analyses. We hope that future researchers and managers will build upon the information developed for OK-GAP to help make biodiversity conservation a reality in Oklahoma.

LAND STEWARDSHIP

Introduction

To fulfill the analytical mission of GAP, it is necessary to compare the mapped distribution of elements of biodiversity with their representation in different categories of land ownership and management. As will be explained in the Analysis section, these comparisons do not measure viability but are a start to assessing the likelihood of future threat to a biotic element through habitat conversion—the primary cause of biodiversity decline. We use the term "stewardship" in place of "ownership" in recognition that legal ownership does not necessarily equate to the entity charged with management of the resource, and that the mix of ownership and managing entities is a complex and rapidly changing condition not suitably mapped by GAP. At the same time, it is necessary to distinguish between stewardship and management status in that a single category of land stewardship such as a national forest may contain several degrees of management for biodiversity.

The purpose of comparing biotic distribution with stewardship is to provide a method by which land stewards can assess their relative amount of responsibility for the management of a species or plant community, and identify other stewards sharing that responsibility. This information can reveal opportunities for cooperative management of that resource, which directly supports the primary mission of GAP to provide objective, scientific information to decision makers and managers to make informed decisions regarding biodiversity. It also is not unlikely that a steward that has previously borne the major responsibility for managing a species may, through such analyses, identify a more equitable distribution of that responsibility. We emphasize, however, that GAP only identifies private land as a homogenous category and does not differentiate individual tracts or owners, unless the information was provided voluntarily to recognize a long-term commitment to biodiversity maintenance.

After comparison to stewardship, it is also necessary to compare biotic occurrence to categories of management status. The purpose of this comparison is to identify the need for change in management status for the distribution of individual elements or areas containing high degrees of diversity. Such changes can be accomplished in many ways that do not affect the stewardship status. While it will eventually be desirable to identify specific management practices for each tract, and whether they are beneficial or harmful to each element, GAP currently uses a scale of 1 to 4 to denote relative degree of maintenance of biodiversity for each tract. A status of "1" denotes the highest, most permanent level of maintenance, and "4" represents the lowest level of biodiversity management, or unknown status. This is a highly subjective area, and we recognize a variety of limitations in our approach, although we maintain certain principles in assigning the status level. Our first principle is that land ownership is not the primary determinant in assigning status. The second principle is that while data are imperfect, and all land is subject to changes in ownership and management, we can use the intent of a land steward as evidenced by legal and institutional factors to assign status. In other words, if a land steward institutes a program backed by legal and institutional arrangements that are intended for permanent biodiversity maintenance, we use that as the guide for assigning status.

The characteristics used to determine status are as follows:

- Permanence of protection from conversion of natural land cover to unnatural (human-induced barren, exotic-dominated, arrested succession).
- Relative amount of the tract managed for natural cover.
- Inclusiveness of the management, i.e., single feature or species versus all biota.
- Type of management and degree that it is mandated through legal and institutional arrangements.

The four status categories can generally be defined as follows (after Scott et al. 1993, Edwards et al. 1995, Crist et al. 1995):

Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management.

Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.

Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.

Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

Mapping Standards

A base map consisting of the Oklahoma state boundary and county lines was digitized from paper USGS 1:250,000 topographic sheets (in UTM projection). Following patching, this coverage was imported into ARC/INFO (ESRI 1997) and projected into Albers Equal Area Conic projection. The projected base map had the same projection parameters as the land cover map:

Projection: Albers Equal Area Conic
Units: meters
Spheroid: GRS1980
Datum: NAD83

1st parallel: 29.5 degrees
2nd parallel: 45.5 degrees
Central meridian: -96.0 degrees
Projection origin latitude: 23.0 degrees
False easting: 0.0 meters
False northing: 0.0 meters

Methods

Stewardship Mapping

We digitized 379 public and private managed land units, including all 44 counties with state school lands parcels. This represented nearly all (about 95%) of the public and private managed areas, open space and wild lands in Oklahoma that we were able to locate maps.

Original source maps for many tracts varied greatly in detail, scale and format (Appendix 3). Thus, tract boundaries were plotted by hand from the source maps onto 7.5 USGS topographic maps (1:24,000). Digitizing was performed with GRASS 4.1 (USA-CERL) software in the UTM coordinate system by UTM zone. The data set subsequently was imported into ARC/INFO, attributes reassigned, and the polygons were projected to Albers Equal Area Conic projection with parameters matching the land cover and vertebrate distribution data sets. Water bodies for reservoirs or stream reaches within the tracts were not digitized from the topographic maps. Instead, water body polygons were created from TIGER/line 1992 data, and the stewardship layer was updated with this information.

Managed area tract boundaries were initially lumped into 16 agency ownership map files that were subsequently patched together in the final layer. Land owners were consulted in an attempt to resolve contradicting claims (e.g., state school lands, US Army Corp of Engineers lands). The final stewardship layer included boundary maps of all publicly-owned lands and all other managed lands for which we received written permission to publish. We also solicited letters from the US Fish and Wildlife Service and The Nature Conservancy for permission to release ownership information.

Sites mainly known for sensitive bat species or sensitive cave habitats were excluded from stewardship coverage. Several managed areas now closed to the public also were omitted from this data set at the request of their owners.

Management Status Categorization

Stewardship status for each polygon using the four GAP categories listed above was initially assigned by researchers at the Oklahoma Natural Heritage Inventory and subsequently modified by researchers at Oklahoma State University. Several plots of the land stewardship layer were produced for review and comment on the status assignments.

Results

Private lands comprise 93.5% of Oklahoma (Table 6). Federal lands and state lands each make up about 3% of the total land area. The greatest concentrations of federal lands are in the southeastern portion (USFS) and around the reservoirs (USACE) of the state (Map 3). State school lands comprise the single greatest area (1.7%) of state lands followed by lands owned and managed by the ODWC (0.7%). Approximately 1% of Oklahoma's surface consists of water. Status 1 through 3 lands are located primarily in the eastern one-third of Oklahoma (Map 4). Status 4 lands, which comprise the vast majority of Oklahoma, occur throughout the state (Map 4).

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The Oklahoma Gap Analysis project (OK-GAP) was initiated in 1993 as a cooperative effort between the US Geological Survey, Biological Resources Division, and other federal, state, and private natural resource interests in Oklahoma. The objectives of the project were to: (1) prepare a map of the current distribution of land cover types, (2) estimate terrestrial vertebrate species distributions relative to land cover types, (3) classify land stewardship by categories of conservation status, and (4) identify and analyze gaps in the conservation of biological diversity from representative areas. The OK-GAP is an initial step toward a more detailed and comprehensive effort at long-term planning for biodiversity conservation in Oklahoma.

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Distributions of 411 terrestrial vertebrate species were mapped. Using habitat (land cover type) associations, we predicted the potential distributions of 382 species, including 75 mammals, 178 birds, 81 reptiles, and 48 amphibians. In addition, we mapped the distributions of 29 imperiled species (state and federal threatened or endangered species and species of special concern). Range limits of each species were delineated on maps from scientific literature sources and reviewed by experts. The range maps were eventually converted to a presence/absence grid map consisting of 337 hexagons (635 sq km) to cover Oklahoma. Wildlife habitat relation models were developed for each of the 410 species based on their associations with individual land cover types. Accuracy of the predicted distributions was assessed for 20 species of birds; we did not assess the accuracy of any other group. Mean accuracy for the 20 species was 71% and ranged from 45-92%.

The stewardship map of Oklahoma was developed from original maps of 379 public and private managed land units. We identified 14 land stewards, including eight federal agencies, five state and city agencies, and one private organization. All stewardship land areas were categorized based on management for biodiversity maintenance on a scale of 1 through 4, with 1 being the

highest, most comprehensive level of management for conservation and 4 being the lowest. Ninety-three percent of the total land area of Oklahoma is comprised of private, unrestricted status 4 lands. Of the remaining 7% of total land area, 28% was classified as status 1 and 2 stewardship lands, 21% as status 3 lands, and the remainder was either status 4 lands or water.

Gap analysis was conducted on all land cover types and predicted animal distributions with representation on status 1 and 2 stewardship lands. Nine land cover types had less that 1% representation, 32 types had between 1% and 10% representation, and two types had between 11% and 20% representation on status 1 and 2 lands. Of these, shinnery oak shrubland in west-central Oklahoma, gypsum grasslands in western Oklahoma, and dwarf white oak forests in southeastern Oklahoma were among the vegetation alliances in need of further study and possible protection. Habitats for 19 mammals, 14 birds, 8 reptiles, and 10 amphibians merit increased conservation and management attention in Oklahoma. These 51 species are designated as federal and state Threatened or Endangered or Candidate or Special Concern species and, except for the small-footed myotis (mammal) and red-cockaded woodpecker (bird), have less than 20% of their predicted distribution on status 1 and 2 lands. Six areas of the state support either high numbers of species or unique vegetation alliances. It is obvious from this analysis that biodiversity conservation efforts in Oklahoma will have to focus on educating and working with private land owners.

An Oklahoma biodiversity plan was published in 1996 under the direction of the Oklahoma Department of Wildlife Conservation. The purpose of the plan was to provide information about Oklahoma's biodiversity and make recommendations on how biodiversity conservation could be included in a variety of economic and other activities. Information generated from the OK-GAP specifically addresses one of the biological recommendations of the plan: continued research to address information needs for biodiversity conservation. We hope that future researchers and managers will build upon the information developed by the OK-GAP to help make biodiversity conservation a reality in Oklahoma.

From: Carolyn Massey
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 5:56:58 PM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Carolyn Massey
632 1/2 north 6th
quincy, IL 62301

From:	Toni Mccarty
To:	CES.InfoPlainSandEasternEIS
Subject:	Plains & Cleanline proposed route
Date:	Monday, July 13, 2015 3:21:12 PM
Attachments:	Scan0005.pdf Scan0003.pdf

Cynthia A. Schoeppel

Re: Plains & Eastern Clean Line
NE/4 or Sec. 18-T20N-R12W, Indian Meridan
Major County, Oklahoma

To whom it may concern:

My ranch in western Oklahoma has been sustainably managed for 17 years. There have been no herbicides or pesticides have been used during that time. Natural beef has been produced, i.e. no fed antibiotics, no fed animal byproducts, rotational grazing of native pastures. Water sources do not contain any added minerals pr algaecides.

We now have an abundance of migratory birds and numerous other species that have reappeared, including the Texas Horned Toad.

The property was referred by the local Soil Conservation Service to be surveyed for the Kansas Heritage Project which contributed to the GAPAnalysis, partially funded by the EPA.

My ranch is one of only three agriculture operations in Major County that are managed sustainably and one of those is primarily a farm.

As I have continued these sustainable and natural managment practices, I respectfully request that you choose an alternate route for this power line

Thank you,

Cynthia A. Schoeppel.
cinfin@earthlink.net

Cynthia A. Schoeppel

July 9, 2015

Re: Plains & Eastern Clean Line project
NE/4 of Sec. 18-T20N-R12W, Indian Meridian
Major County, Oklahoma

To whom it may concern:

This property was part of the Kansas GAP Analysis project. The Major County Soil Conservation office referred an ethnobiologist to conduct a field study of the property. Hillary Loring (see letter and resume) from the University of Kansas and a botanist for the Kansas Biologist Survey performed an extensive field survey and groundtruthing study on the ranch. Partial funding for the GAP Analysis project was from EPA grants.

This information also contributed to the KARS project, a satellite program providing multiple layers of environmental data for ecological studies and goals.

According to the Oklahoma GAP Analysis project stewardship standards, the stewardship level is 1, with only approximately 1% of Oklahoma lands being managed at this positive ecological level (see documentation enclosed). The land is managed sustainably, using no herbicides, pesticides, synthetic fertilizers or algaecides; rotational grazing of native grasses is used for forage management.

Although we incurred significant expense in the transition to sustainable ranching, we can truly see the benefits. There is an abundance of native plants and the reappearance of many migratory birds; there is also the reappearance of insects like dung beetles and amphibians like the Texas Horned Lizard..

We respectively ask for you to choose an alternate route so that we may continue our stewardship practices.

Thank you,

Cynthia A. Schoeppel

Cc:

Dr. Jane Summerson, NEPA Document Manager

Nature Conservency National Office

Plains and Eastern Clean Line, Denver CO Office

Nature Conservency Oklahoma Field Office

Oklahoma Field Office, US EPA

Oklahoma Department of Environmental Quality, Enid, OK Office

Oklahoma Department of Wildlife Conservation, Woodward, OK Office

Mark S. Gregory Ph D, Area Extension Agronomy Specialist, SW District, Duncan, OK

Bruce Hoagland PhD, Oklahoma Natural Heritage Survey, Norman OK

R. Clayton Eubanks, Oklahoma Office of the Attorney General, OKC, OK

Jeffrey Hickman, State Representative District 58, OKC, OK

From:	Steve MacDonald
To:	CES.InfoPlainSandEasternEIS
Subject:	Section 1222 Comment Period ending July 13, 2015
Date:	Friday, July 03, 2015 12:13:06 PM

The Honorable Ernest Moniz, Secretary of Energy,

My comment has to do with the testimony documented below by Dr. Dennis Smith before the "Missouri Public Service Commission" on September 15, 2014. Below is the last question asked of him.

Case No. EA-2014-0207

REBUTTAL TESTIMONY OF DENNIS SMITH, DO ON BEHALF OF MISSOURI LANDOWNERS ALLIANCE

September 15, 2014

Q. "Based on your review of the literature, are you able to state with certainty that EMFs, Static Electric Fields and Static Magnetic Fields do or do not have serious harmful effects on humans?"

A. "The practice of medicine is based on evidence. I can say with certainty that there is enough evidence of harmful effects from EMFs, Static Electric Fields and Static Magnetic fields that the universal premise of medicine, “First Do No Harm”, forces me to oppose this line. Human experimentation is prohibited in medicine without complete disclosure and acceptance of the risk by the subjects of the study. This is an experiment that I do not consent to participate in, and granting eminent domain would be condemning people to participate without consent."

His answer to this question is all the DoE needs to know when contemplating partnering with Clean Line Energy Partners. Research has not been satisfactory concerning health risks of DC current. Health risks could be enormous and may be the basis for lawsuits way into the future or used as legal arguments against Clean Line constructing HVDC power lines across miles and miles of private property especially those landowners who currently have members of their families that are using medical devices or in failing health or at a higher risk of illness due to immune systems aliments.

Dr. Smith states in his response: " “First Do No Harm”, forces me to oppose this line. Human experimentation is prohibited in medicine without complete disclosure and acceptance of the risk by the subjects of the study. This is an experiment that I do not consent to participate in, and granting eminent domain would be condemning people to participate without consent."

Are you willing to force fellow Americans, through your power under Section 1222 to put lives at risk by "condemning people to participate without consent?"

Respectfully Yours,

Steve MacDonald
104714 S 4660 Rd
Sallisaw, Ok 74955

From: Steve MacDonald
To: CES.InfoPlainSandEasternEIS
Subject: Section 1222 comments
Date: Friday, July 03, 2015 9:05:17 PM

What about the history of the Cherokee's in Sequoyah County? Plains and Eastern will destroy the heritage that thousands of Native Americans died for on their "Trail of Tears". Even today there are excavations of historic sites located in the path where CLEP bulldozers will, if you let them, destroy sacred grave sites of all those that died being forced to relocate to Eastern Oklahoma. And for what? For profit. Will you allow this private LLC to affect so much of history that has yet to be discovered here in Sequoyah County? Will you partner with them? If you do, you will have a lot of explaining to do to the thousands of Native Americans not only in Sequoyah County but those across the Eastern United States.

From:	Steve MacDonald
To:	CES.InfoPlainSandEasternEIS
Subject:	Section 1222 more distorations
Date:	Saturday, July 04, 2015 8:49:11 AM

From their own EIS Study. Clean Line distorts jobs, jobs, jobs.

See

EIS-0486-DEIS-VolumeIV-AppendicesB_H-2014_0.pdf

Appendix C page 418: 16 months (month 4 thru month 20) of construction where there are more than 200 construction jobs.

Page 419: Local = Within 200 miles of Project Limits. (Where jobs come from)

Using Section 1222 to seize property under the assumption of local jobs being created is just another lie from Clean Line Energy Partners.

From: Steve MacDonald
To: CES.InfoPlainSandEasternEIS
Subject: Secretary Moniz and Section 1222
Date: Tuesday, July 07, 2015 1:19:54 PM

The Honorable Ernest Moniz,

I ask you, Mr. Moniz, are you an honorable man?

Will you weigh the comments before you and come to the right conclusion? These HVDC projects proposed by Clean Line Energy Partners, billionaires in Texas, are not wanted by any means of evaluation. Property values will be destroyed only to enrich Clean Line and their investors. Sacred Native American lands will be desecrated here in Sequoyah County. The jobs are not permanent. Look at their EIS study. Lies and distortions. The taxes CLEP says local government entities will not be realized. Section 1222 will seize property giving it to SWPA which will pay NO taxes.

This scheme, Section 1222, and the 2005 Energy Policy Act was born in the office which Jimmy Glotfelty held will at the Department of Energy. And where is he now? He was a founding partner with Clean Line in 2010. Thousands of property owners for their own reasons are opposed to this project. I'm opposed because it splits my property in half. What value will it retain then? NONE. Landowners with smaller acreage and owners with adjoining property are the ones who will really be harmed by these projects. The smaller the acreage and the closer to these line there are, the less their property will be worth.

I ask again. Are you an Honorable man?

Sincerely,

Steve MacDonald
104714 S 4660 Rd
Sallisaw, OK 74955

From: Wallace McMullen
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 9:19:34 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Wallace McMullen
170 Vernon Ave.
Louisville, KY 40206

From: julie m
To: CES.InfoPlainSandEasternEIS
Subject: Part 2 Application Process, Clean Line Energy
Date: Tuesday, April 28, 2015 7:42:16 AM

Sirs,

Within the notice of the above public application process, it is stated that the comments from the Draft EIS will be shared with this phase of the project. Which comments will you be sharing? Once again, I am very concerned with the fact that a potential participant in this project has editorial rights over the opposition.

Thank you,

Julie Morton

From: John Organ
To: CES.InfoPlainSandEasternEIS
Subject: Re: update
Date: Monday, July 20, 2015 12:55:14 PM

I am still confused. Comment ended on April 20 when will a final decision be made?

From: CES.InfoPlainSandEasternEIS
Sent: Monday, July 20, 2015 10:17 AM
To: John Organ
Subject: RE: update

Dear John,
Thank you for your interest in the Plains & Eastern EIS Project. The comment period for the Draft Environmental Impact Statement (EIS) for the Plains & Eastern Clean Line Transmission Project (DOE/EIS–0486; Draft EIS) ended on April 20, 2015. Comments received after this date will be considered to the extent practicable.

DOE is now considering the comments received and preparing a Final EIS, which will include a Comment Response Document. The availability of the Final EIS will be announced in the Federal Register by the U.S. Environmental Protection Agency, and the Final EIS will be posted on this website and the DOE NEPA Website.

This Plains & Eastern Environmental Impact Statement (EIS) website will serve as the online location for all EIS announcements and documents throughout the *National Environmental Policy Act* (NEPA) process. EIS-related announcements and news releases from DOE also will be made through the email list.

To subscribe to the email list please enter your email address in the box on the upper right corner of the website: www.plainsaneasternterneis.com. You can sign up for our EIS distribution list to be notified when the Final EIS is available on the website and to request a copy of the Draft EIS (approximately 3,700 pages) and Final EIS.

Thank you.

From: John Organ [mailto:jtorgan@hotmail.com]
Sent: Thursday, July 16, 2015 7:48 AM
To: CES.InfoPlainSandEasternEIS
Subject: update

as a land owner I am asking what is the latest update on the clean power line?

John Organ
13219 S R 105 North
Hector, AR 72843

From: marc pacheco
To: Jane.Summerson01@nnsa.doe.gov; CES.CommentsPlainSandEasternEIS
Subject: HVDC
Date: Sunday, July 12, 2015 9:28:17 PM
Attachments: Alternate Construction Method.doc

July 12, 2015

Dr. Jane Summerson, NEPA Document Manager, Plains & Eastern EIS
216 16th Street, Suite 1500
Denver, CO 80202

We (Marc & Victoria Pacheco) are writing this comment to inform you of the impact that Plains and Eastern HVDC Overhead Transmission Line running transverse on our property for a mile, will have on our lives and our future generations lives. The following is the reality of the situation with proof in the form of an attachment for your inspection. The negatives of this private and foreign-owned endeavor that the Federal Government looks "to partner with," far outweigh any possible positive result. Limiting landowners to 3 minutes of speaking was not nearly enough time to present the complete narratives of something so destructive to the land and livelihood of these hard working people. So, please give us the answers we are all looking for, and deny this greedy transmission line company the takeover of our American properties. We will be awaiting your promised response to this comment. (Please read the attachment).

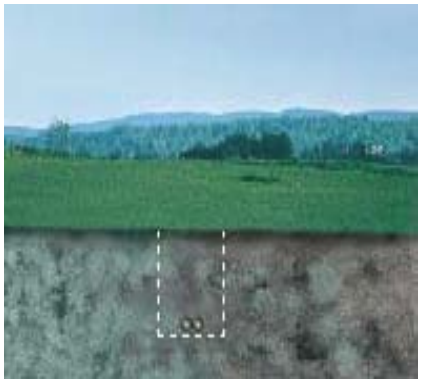
Marc and Victoria Pacheco
256 Cliff Road
Russellville, AR 72802
479-567-5157
marcpacheco5@hotmail.com

July 12, 2015

Dr. Jane Summerson, NEPA Document Manager, Plains & Eastern EIS

1 **Alternate Construction Method and Route** for the Plains and Eastern HVDC Overhead Transmission Line System from Oklahoma to Tennessee: Install Underground High Voltage Direct Current Cable System and the State-of-the-Art Converter Stations in existing corridors instead of the Outdated Overhead Transmission Line and Converter Stations on Private Property.

Out-Dated Overhead lines (left); **Buried HVDC cables (right)**

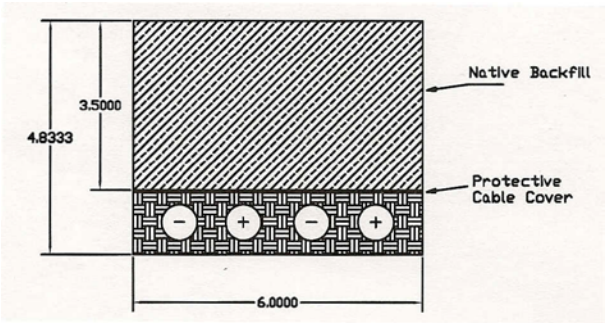


2 **Negative Impact on Property Values:** The proposed route of Plains & Eastern Clean Line Energy Partners outdated overhead HVDC transmission lines project will affect numerous property owners in the State of Arkansas. Clean Line insists on using yesterday's technology for today instead of what is State-of-the-Art today for the future of energy transmission. The overhead HVDC transmission lines will have an enormous negative impact on property values. Property values will be significantly decreased and people may not be fully indemnified under the process of eminent domain. This is a property rights issues and eminent domain should not be invoked.

3 **Environmental Impacts:** Plains & Eastern Clean Line Energy Partners calls this Green Energy, but when they clear cut down our trees, which will claim over 12,000 acres in Arkansas and Oklahoma, which will never be returned, they will have destroyed innumerable trees which take CO^2 Carbon Dioxide and convert it into O^2 Oxygen. Water quality will be affected by the loss of all these trees. Water quality will decrease and erosion will increase due to shallow top soil in most of the route, especially in the western part of Arkansas and eastern Oklahoma. The overhead HVDC lines require 200 feet of right-of-way that is equivalent to two interstate 40's and 150 to 200 feet high transmission towers.

4 **Alternative: Buried HVDC Cables within Existing Transportation Corridors:** Our country should be independent from foreign energy and produce renewable resources by solar, geothermal and wind power, but we can accomplish this without the destruction and devaluation of our property that we have worked for. The alternative is a 6 feet wide, 4 foot - 10 inch deep buried trench for the HVDC cables within the existing transportation corridors, **without the use of private property**.

Trench Layout for HVDC Cable



Underground HVDC Cables

7 **Stronger, Smarter, Greener Electricity Network: Underground 600 kilovolt High-Voltage Direct Current (HVDC):** ABB is just one of the companies that produce 2,600 Megawatts, 525 kilovolt (kV) with a capacity of 600 kilovolt high-voltage direct current (HVDC) underground and subsea extruded cable system to make renewable energy installations more efficient and cost-effective. The transmission system lays the foundation for stronger, smarter and greener electricity networks if used in the proper way and installed in existing corridors where Plains and Eastern does not take private land.

8 **Buried HVDC Cables within Existing Corridors:** With two pairs of 2,600 Megawatt cable underground or subsea can generate the power produced by several large nuclear power plants, or more than 1000 large wind power plants. The cables can also be used underground along existing corridors: railroad right of ways, highway right-of-ways such as Interstate I-40 or State Routes, the existing Overhead Transmission Lines that come out of Nuclear One that cross Arkansas from north of Van Buren to West Memphis. Or the cables could be submerged along the Arkansas River from Van Buren to Conway then buried along I-40 to Memphis.

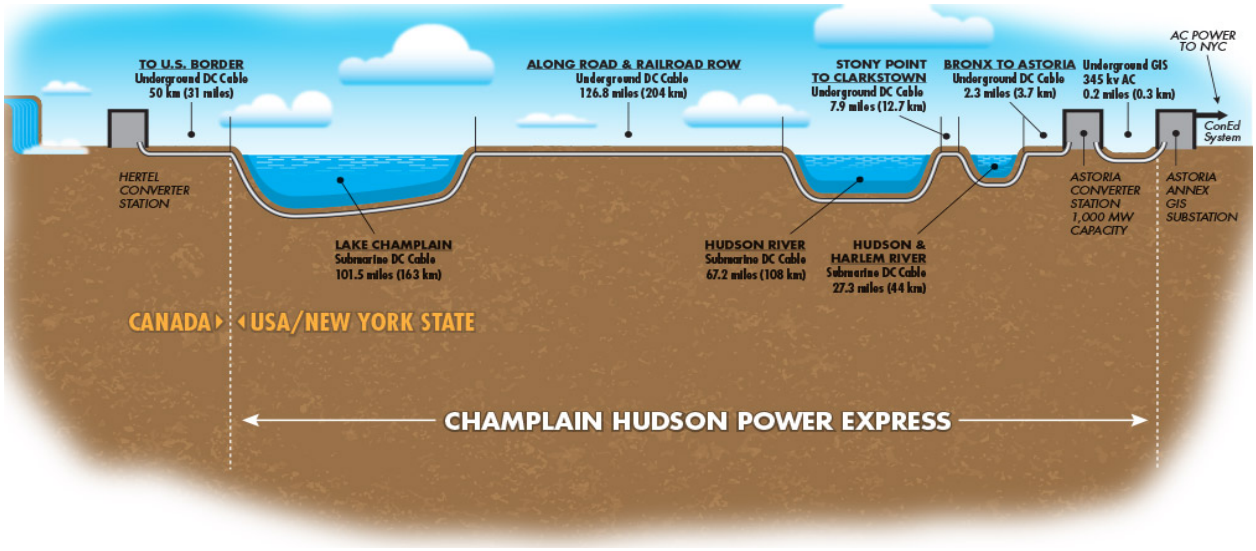
9 **HVDC Underground Cable Technology is Superior: Reaches Distances of 935 Miles:** The cables reach distances of 1,500 kilometers or 935 miles, while keeping transmission losses under 5 percent. Clean Line says that their line across Oklahoma and Arkansas is approximately 700 miles (well within the underground cables range). Underground cable experts from around the world from ABB, Europacable and Siemens say how the HVDC underground technology has

advanced in recent years and how the costs have dramatically come down for their products and installation.

10 **Underground HVDC Systems in the United States WITHOUT the use of Private Property:** There are numerous examples of underground HVDC systems all over the world. The following are examples of underground HVDC systems in the United States without the use of private property. We have the technology to install the HVDC system underground. It benefits our country, the environmentalist, Plains & Eastern and the property owners. Just because we live in the mid-South does not mean that we should accept outdated and unacceptable overhead cables. It's time this country is technologically competitive with our much smaller allied countries.

11 **The Champlain Hudson Power Express:** 333 mile-long HVDC transmission line from the U.S. - Canadian border to New York City. The HVDC transmission system consists of two 6 inch diameter cables laid under water and underground. The route starts at the U.S. - Canadian border, travels south through Lake Champlain and along railroad and highway right of ways, and then enters the Hudson River south of Albany. The HVDC cables alternate between being buried within Lake Champlain, railroad/highway right-of-ways, and the Hudson River and **not on private property**.

The Champlain Hudson Power Express



12 **The Northeast Energy Link:** project is a 230-mile high voltage direct current (HVDC) underground transmission line, delivering renewable energy from northern and eastern Maine and eastern Canada into southern New England. The Northeast Link project focuses on a buried

HVDC transmission line route utilizing existing transportation corridors **without the use of private property** in eastern Maine, New Hampshire, and Massachusetts.

13 **Significant Environmental Benefits with Underground HVDC Lines without the use of private property**.

- Reduced tree clearing, scarring of the existing land and visual impacts
- Safer because buried lines don't fall over in hurricanes, tornadoes, high wind or ice storms
- Eliminate costly power outages to hundreds of thousands of customers every day resulting from damage to above-ground electricity infrastructure
- Are safer because helicopters, airplanes, hot air ballrooms can't crash into them and can't electrocute people or animals.
- Do not lower impacted and adjacent property values
- Buried cable right-of-ways can be used for hiking trails and bike pathways
- Have lower maintenance costs
- Do not kill millions of birds annually through collision
- Do not start wildfires nor are they affected by fire
- Are not affected by solar storms
- Eliminate the negative health impacts corona effect and electromagnetic fields (EMF's) to Zero

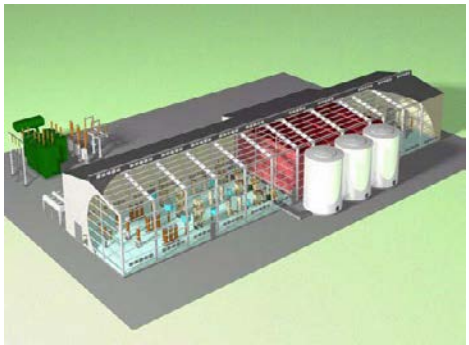
14 **Time we start Burying more HVDC Transmission Lines:** We bury sewer lines, water lines, telephone lines, electricity distribution lines, TV cable, natural gas lines, oil pipelines, gas pipelines, and other petroleum product pipelines. It's time we started burying more high voltage direct current transmission lines because overhead lines are outdated and towers are unsightly and have so many other negative impacts.

15 **State-of-the-Art Technology for Converter Stations:** The converter stations use state-of-the-art semiconductor technology to deliver highly flexible, reliable and maintainable electrical power transmission. Virtually all components with the exception of transformers and heat exchangers are enclosed in a building that can be designed to blend into the surrounding architectural environment. ABB, Europacable and Siemens Converter Stations use only 3 acres of land instead of the out-dated Plains and Eastern Clean Line converter station requiring 40 to 60 acres.

Converter Station

Out Dated Technology

State of the Art Technology



17 **Revenue for School Districts?** Plains and Eastern promised the Atkins School District that they would receive the revenue from their project according to the meeting held on Tuesday February 17, at the Lake Point Conference Center. On Thursday at the University of Arkansas Community College at Morrilton, Plains and Eastern also promised the Wonderview School District in Hattieville that it would receive the revenue from this project. The Courier wrote that Plains and Eastern was constructing a converter station in the Hector School District and it would benefit greatly from the project. Go onto the US Dept. of Energy/Plains and Eastern EIS interactive maps web site: http://plainsandeasterneis.com/interactive-map.html and they have a large circle drawn and it encompasses all three school districts on their map. They are telling all three (3) school districts that they are the ones who are going to benefit from the converter station in their districts. We know that there is only going to be one converter station, therefore Plains and Eastern is not telling the truth to two out of three of these districts (or maybe all of them, since in their original plans they said they didn't need a converter station in the State of Arkansas).

18 **Boozman, Cotton Introduce Bill Giving States Power to Reject Federal Electric Transmission Projects**

WASHINGTON –U.S. Senators John Boozman and Tom Cotton introduced legislation to restore the right of states to approve or disapprove of electric transmission projects before the federal government exercises its power to take private property.

The *Assuring Private Property Rights Over Vast Access to Lands (APPROVAL) Act* would require that the U.S. Department of Energy (DOE) receive the approval of both the governor and the public service commission of an affected state, before exercising the federal power of eminent domain to acquire property for Section 1222 transmission projects

"When a road, pipeline or power line is built the use of eminent domain is sadly unavoidable in some cases," Boozman said. "However, this difficult decision should **not** be in the hands of

Washington bureaucrats. If a project is not good for Arkansas, our governor or public service commission should have the power to say '**no**.'"

19 The Right Decision: HVDC Underground within Existing Corridors

If the Arkansas Valley Alliance for Economic Development submits a public comment on behalf of Plains and Eastern to the Department of Energy, they should recommend approval only with the alternate of installing the HVDC Transmission Line Underground and using the State-of-the-Art Technology for Converter Stations within existing corridors and **not on private property**.

Crawford, Franklin, Johnson, Pope, Conway, Van Buren and Cleburne Quorum Courts unanimously approved a resolution which states justices of the peace are opposed to Plains & Eastern Clean Line going across their Counties.

The *Nord-Süd HGÜ-Korridore* (North-South HVDC Corridors) within Germany connects and balances wind farms in the north with large photovoltaic generation and load centers in the south by installing the 525 kV insulated HVDC cable which has a transmission capacity of up to 2,600 megawatts (MW). Modern HVDC converters will be used there, similar to the recently commissioned **Skagerrak 4 project,** where ABB installed a 525 kilovolt (kV) state of the art converter station.

ABB pioneered HVDC transmission technology 60 years ago and installed more than 120,000 megawatts and accounting for about half of the global installed base.

Marc and Victoria Pacheco
256 Cliff Road
Russellville, Arkansas, 72802
479 567-5157
marcpacheco5@hotmail.com

From: Remy Pangle
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 7:33:48 AM

To Whom It May Concern:

The proposed Plains and Eastern Clean Line transmission project would greatly expand wind energy access to the Southeast. The project could positively impact land and natural resource use.

While the Plains and Eastern Clean Line project will use land, this project may actually help reduce natural resource usage overall. As noted in the EIS, the project would likely displace other forms of energy usage, like coal or natural gas powered generation.

Compared to other threats to land use, the Clean Line project uses a relatively small amount of land. According to the Farmland Information Center, nearly 2.5 million acres of rural land was lost to development nationwide from 2007-2010. That's a loss of about 0.2% out of the nearly 1.4 billion acres of rural land. According to the National Resources Inventory by the U.S. Department of Agriculture, the United States loses about an acre of agricultural land every minute. Additionally, every year, about 7-11 million acres of cropland fails or is abandoned. That's about 3-5% of all cropland. Specifically in Arkansas, Oklahoma, Tennessee and Texas, about 122,000 acres of agricultural land are lost annually across the four states due to development.

Given that Clean Line's one-time-use of 5,916 acres is a very small portion of rural land development, many of the acres used can ultimately be returned to production, the project footprint is smaller than other forms of existing power generation, and that the clean wind power produced can offset the negative effects that other energy resources have on natural resources and public health, it's clear the Plains and Eastern Clean Line project is a net benefit to land and natural resource conservation.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Remy Pangle
1593 Hockman Rd
Strasburg, VA 22657

From: Stanley Pannaman
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Saturday, July 11, 2015 12:34:16 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Stanley Pannaman
7301 NW. 75th Court
Tamarac, FL 33321

From: Deborah Payne
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 7:42:39 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

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Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Deborah Payne
510 Center Street
Berea, KY 40403

From: Brandon Pottinger
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Saturday, May 02, 2015 5:29:10 PM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

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Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Brandon Pottinger
16672 SW 83rd Ln
Miami, FL 33193

From: Marcus Rozbitsky
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 9:12:38 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

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Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Marcus Rozbitsky
724 Lesseps Street
New Orleans, LA 70117

From:	Robert L. Sandusky
To:	jane.summerson01@nnsa.doe.gov
Cc:	CES.CommentsPlainSandEasternEIS
Subject:	Plains & Eastern EIS commentary
Date:	Tuesday, June 30, 2015 2:31:18 PM
Attachments:	Commentary on EIS.docx

Please include the attached concerns & evaluations in the commentary on the proposed project, Plains & Eastern Clean Line EIS.

Also, please acknowledge receipt of this document to <dusky@jps.net>.

Regards,
Robert L. Sandusky

June 30,2013

To whom it may concern,

I am the manager of farm property in Cimarron County, owned by Sandusky Ventures LLC. I have some concerns regarding the Environmental Impact Statement (EIS) recently published by Plains & Eastern regarding their Clean Line High Voltage Direct Current (HVDC) Project proposal to the US Department of Energy.

In reading the summary of the EIS, it became apparent to me that Cimarron County will be adversely impacted by the project as it is now planned. The County (except for the extreme Eastern portion) is being disregarded by the proposal and in the reporting of the EIS.

For Cimarron County, an essential element of the project is the Alternate Current Collection System (ACCS) that extends beyond the HVDC converter terminal located southeast of Guymon. The intent of the ACCS is to provide connectivity for wind turbines as they are developed. In the words of the EIS: "The location of the AC Collector System routes will be driven by future wind energy development." The problem is, no turbine fields will be developed unless there is a High Voltage AC carrier line nearby because developing that infrastructure will not be economical for the developers. What this does is to leave more than half the area of Cimarron County without grid access to the HVDC Clean Line.

The project plan according to the EIS is to locate the AC collection system, "… within a 40-mile radius centered on the Oklahoma Converter Station Siting Area including Cimarron, Beaver, Texas, Ochiltree, Hansford and Sherman counties." Limiting that radius to 40 miles is not only arbitrary but it excludes everything west of Keyes in Cimarron County. Why not extend those gridlines to serve the rest of the county? What determined the radius limit to be only 40 miles? The current plan is a huge detriment for wind energy development in Cimarron County and punitive to the citizens who support and hope to see wind energy generation from their land.

Cimarron County has plenty of legitimate wind development potential beyond Keyes. The county has a higher Annual Average Wind Speed than Texas County which will be getting ample coverage with the AC Collector System. Texas County has a ranking of 76th out of 77 counties. That is considerably below Cimarron's ranking of 65, according to www.USA.com "Oklahoma Average Wind Speed County Ranking." I addition to that, the Oklahoma Climatological Survey, www.OCS/OU.edu ranks Cimarron County as slightly better environment for wind than Texas County. Yet the EIS makes no statement as to why most of Cimarron County is being left out of reach of the HVDC clean line by the project as proposed!

There is no doubt that the western part of Cimarron County is under economic stress. Drought and other conditions plague the area leaving small agriculture enterprises struggling for survival. Extension of the ACCS grid to enable access to our lands is the only fair, equitable way the project should be allowed to go forward. The economic benefits to the whole area should not be denied.

Sincerely,

Robert Sandusky, Manager Sandusky Ventures LLC

99 Toyon Dr. Fairfax, CA 94930 (415) 459-0546 dusky@jps.net

Attachments: Supporting documents from DOE/EIS-0486

The following attachments from the EIS are intended to substantiate the concerns expresses in the Commentary to the EIS:

The AC collection system is located within Region 1 and within a 40-mile radius centered on the Oklahoma Converter Station Siting Area including Cimarron, Beaver, Texas, Ochiltree, Hansford, and Sherman counties. To facilitate efficient interconnection of wind generated electricity, it is expected that the Applicant would construct four to six AC collection transmission lines of up to 345kV from the Oklahoma converter station to points in the Oklahoma and Texas Panhandle regions. The location of the AC collection system routes will be driven by future wind energy development. The AC collection system is shown on Figures S-1 and S-2a.

CEQ regulations at 40 CFR 1502.14(e) require an agency to identify its preferred alternative, if one exists, in the Draft EIS. At this point in the NEPA process, DOE does not have a preferred alternative. DOE has not identified a preference for whether to participate with Clean Line in some manner as prescribed by Section 1222 of the EPAct. As part of its deliberations, DOE will consider all of the alternatives analyzed in the Draft EIS and take into consideration the comparison of potential impacts for each resource area coupled with input received during the public comment period on the Draft EIS. DOE will identify its preference for whether to participate with Clean Line in the Project and its preferred alternatives for each of the Project elements (including route alternatives) in the Final EIS.

Wind Energy Generation ROI: Twelve Wind Development Zones (WDZs) were identified by the Applicant within approximately 40-miles of the Oklahoma Converter Station Siting Area and within parts of the Oklahoma Panhandle and Texas Panhandle. These WDZs exhibit adequate wind resource and are areas within which future development of wind energy facilities could occur. Wind energy generation would likely occur within WDZs. The ROI for the 12 WDZs is approximately 1,385,000 acres in Oklahoma (Beaver, Cimarron, and Texas counties) and Texas (Hansford, Ochiltree, and Sherman counties).

Construction of the Project would generate sales, use, and lodging tax revenues during the construction period, with an estimated 90 percent of total construction costs expected to be for materials subject to sales and use tax. Local spending by construction workers would also generate sales and lodging tax revenues. Operation of Project facilities would generate ad valorem or property tax revenues in the counties where they would be located. Operation-related expenditures would generate sales and use tax revenues

AC Collection System: Thirteen 2-mile-wide corridors in Oklahoma (Beaver, Cimarron, and Texas counties) and Texas (Hansford, Ochiltree, and Sherman counties) within which the Applicant anticipates that the AC Collection System could be sited. (See EIS Figure S-1: Project Overview)

Cynthia A. Schoeppel

July 9, 2015

Re: Plains & Eastern Clean Line project
NE/4 of Sec. 18-T20N-R12W, Indian Meridian
Major County, Oklahoma

To whom it may concern:

This property was part of the Kansas GAP Analysis project. The Major County Soil Conservation office referred an ethnobiologist to conduct a field study of the property. Hillary Loring (see letter and resume) from the University of Kansas and a botanist for the Kansas Biologist Survey performed an extensive field survey and groundtruthing study on the ranch. Partial funding for the GAP Analysis project was from EPA grants.

This information also contributed to the KARS project, a satellite program providing multiple layers of environmental data for ecological studies and goals.

According to the Oklahoma GAP Analysis project stewardship standards, the stewardship level is 1, with only approximately 1% of Oklahoma lands being managed at this positive ecological level (see documentation enclosed). The land is managed sustainably, using no herbicides, pesticides, synthetic fertilizers or algaecides; rotational grazing of native grasses is used for forage management.

Although we incurred significant expense in the transition to sustainable ranching, we can truly see the benefits. There is an abundance of native plants and the reappearance of many migratory birds; there is also the reappearance of insects like dung beetles and amphibians like the Texas Horned Lizard..

We respectively ask for you to choose an alternate route so that we may continue our stewardship practices.

Thank you,

Cynthia A. Schoeppel

Cc:

Dr. Jane Summerson, NEPA Document Manager

Nature Conservency National Office

Plains and Eastern Clean Line, Denver CO Office

Nature Conservency Oklahoma Field Office

Oklahoma Field Office, US EPA

Oklahoma Department of Environmental Quality, Enid, OK Office

Oklahoma Department of Wildlife Conservation, Woodward, OK Office

Mark S. Gregory Ph D, Area Extension Agronomy Specialist, SW District, Duncan, OK

Bruce Hoagland PhD, Oklahoma Natural Heritage Survey, Norman OK

R. Clayton Eubanks, Oklahoma Office of the Attorney General, OKC, OK

Jeffrey Hickman, State Representative District 58, OKC, OK

CENTER for BIOLOGICAL DIVERSITY

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For Immediate Release, December 18, 2014

Contact: Collette Adkins Giese, Center for Biological Diversity, (651) 955-3821
Dr. Steve Sheffield, (443) 831-1956

Endangered Species Protection Sought for Oklahoma's Disappearing Horned Lizards

Protection Petition Spurred by Concerns of 15-year-old Boy in Moore, Okla.

OKLAHOMA CITY— The Center for Biological Diversity, concerned scientists and a 15-year-old lizard enthusiast filed a formal petition today seeking state endangered species protection in Oklahoma for the Texas horned lizard. Despite their name, these formidable-looking lizards with numerous horns on their heads were once common throughout Oklahoma, but have now nearly disappeared due to habitat destruction, pesticides and introduced fire ants.

"Time's running out for these lizards," said Collette Adkins Giese, a Center biologist and lawyer focused on protecting reptiles and amphibians. "The state of Oklahoma needs to recognize the dire situation these rare creatures are in before it's too late."

Today's petition documents that the Texas horned lizard has undergone massive declines in Oklahoma and continues to be threatened by loss of habitat and many other factors. Fifteen-year-old Kade Wilson contacted the Center for help in protecting the lizards after learning that a shopping center would be built in a field near his home, where he enjoyed finding the lizards, also known as "horny toads." The lizard is already listed as a "threatened species" in Texas. In both states it is illegal to kill the lizards or collect them for pets.

"I'm a fifteen-year-old and I might not be a scientist or a biologist but I know that the horny toad is just trying to share the Earth with us, and we're taking it away from them," said Wilson, who joined the petition. "Horny toads look like modern dinosaurs, and that's why they're interesting to me. If we don't protect them, the horny toads too will be gone."

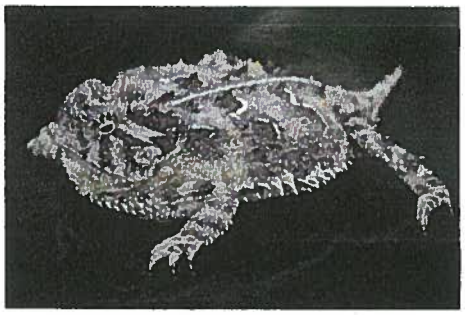

Photo by Robert Burton, USFWS. This photo is available for media use.

Experts agree that the Texas horned lizard is suffering substantial declines not just in Oklahoma, but across its range in the Midwest and Southwest. Because the lizard eats harvester ants and not much else, pesticides that kill its ant prey also harm the lizard. Other threats include invasive red fire ants (that outcompete the native harvesters), drought from climate change, and illegal collection for the pet trade. The loss of these lizards is alarming because reptiles play important roles as predators and prey in their ecosystems and are valuable indicators of environmental health.

"It's so sad that horned lizards are declining. These beautiful creatures are iconic members of desert and prairie communities of the western United States," said Dr. Geoffrey Carpenter, a herpetologist and co-author of today's petition. "We need to protect the lizard and its habitat while we still can."

The Texas horned lizard has prominent horns on its head and spines scattered over its backs and sides. To avoid being eaten by predators, the normally flat-bodied lizard can puff up and appear very fat, causing its body scales to protrude so the lizard cannot be easily swallowed. The lizard also ejects blood from its eyes when threatened; in courtship males rapidly bob their heads, and females nod their heads in response.

Although reptiles have been around for hundreds of millions of years and survived all past mass extinction events, now, due largely to human impacts, they're dying off at up to 10,000 times the historic extinction rate. About 20 percent of reptiles in the world are endangered or vulnerable to extinction.

The Center was joined in its petition for the Texas horned lizard by Dr. Steve Sheffield, a zoologist who received his Ph.D. from Oklahoma State University, and Dr. Geoffrey Carpenter, a herpetologist affiliated with the University of Oklahoma Biological Station.

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 800,000 members and online activists dedicated to the protection of endangered species and wild places.

Alaska . Arizona . California . Florida . Minnesota . Nevada . New Mexico . New York . Oregon . Vermont . Washington, DC

P.O. Box 710 . Tucson, AZ 85702-0710 *tel:* (520) 623.5252 *fax:* (520) 623.9797 *www.BiologicalDiversity.org*

Go back

HILLARY LORING
Field Ecologist
P.O. Box 313
Washington, Texas 77880
785-393-3984
hillaryloring@yahoo.com

6 June 2015

To Whom It May Concern:

In 2000, I completed a botanical and ecological survey of the Schoeppel Ranch as part of "An inventory of the Central Mixed-Grass Prairie Ecoregion in Kansas, Oklahoma, and Nebraska." The purpose of that study was to document large unfragmented landscape features in those three states in the Great Plains. A healthy ecosystem depends on large areas without development, without breaks in the matrix of the community type. A High Voltage Transmission Line as proposed by Plains & Eastern Clean Line would result in a corridor of weedy, non-native, and potentially noxious species that could then invade and degrade the high quality ecosystem currently existing on and around the Schoeppel Ranch.

Grasslands are the most endangered and least protected ecosystems in the United States and the world. Large ranches that are well managed, such as the Schoeppel Ranch, are landscape features that provide communication, movement, and genetic flow of native wildlife and vegetation.

I hope you will reconsider the route of the High Voltage Transmission Line

Sincerely,

Hillary Loring
Botanist, Field Ecologist

Loring, H., K. Kindscher, M. Bullerman. 2000. An inventory of the Central Mixed-Grass Prarie Ecoregion in Kansas, Oklahoma, and Nebraska. Kansas Biological Survey, Lawrence, KS Report No. 97:132 pp.

Hillary Loring

Have Flora, Will Travel

Resume

Field Ecologist, Plant Taxonomist & Itinerant Botanist

Contact Information
Phone: 785-393-3984
Address: P.O. Box 313 Washington, Texas 77880

Specialty: Plant Community Ecology and Field Botany

Background:

- M.S. 1991, Sul Ross State University (http://www.sulross.edu/)
- B.A. 1971, Rice University (http://www.rice.edu/)

Current research interests: My research interests are focused on plant communities and species composition of the Midwest prairies and the Chihuahuan Desert, ethnobotany, conservation of natural ecosystems, and prairie restoration.

Recent Projects:

- Identification and collection of traditional medicinal plants for chemical analysis for the Native Medicinal Plant Research Program (http://nativeplants.ku.edu/)
- Inventory of Natural Areas in Linn and Anderson Counties, Kansas (http://www.ksnhi.ku.edu/research/current.htm#co_invent)
- Gila River Biodiversity Study, New Mexico (http://www.ksnhi.ku.edu/research/current.htm#ftleav)
- Ft. Leavenworth Military Reservation (http://www.ksnhi.ku.edu/research/current.htm#ftleav)
- A Natural Features Inventory of the Smoky Hill Air National Guard Range (http://www.kbs.ku.edu/people/staff_www/kindscher/Kindscher%20publicaitons/Smoky_Hill_Final_Report%202007.pdf)
- Conservation Planning for Echinacea Species (http://www.ksnhi.ku.edu/research/current.htm#echinacea)

- Survey of Natural Area Sites in Cherokee County, Kansas
- Study of *Echinacea angustifolia* regrowth after harvesting in Kansas and Montana
- Survey of unfragmented landscapes of the Flint Hills Tallgrass Prairie Ecoregion
- Survey of unfragmented landscapes of the Central Mixedgrass and Shortgrass Prairie Ecoregions.
- Carbon sequestration study and survey of native tallgrass hay meadows in Woodson County, Kansas
- Survey of montane meadows in Yellowstone and Grand Teton National Parks

Restoration and Monitoring Projects:

- Clinton Lake Dam Wetland, Lawrence, Kansas – 156 acres
- Santa Fe Wetlands Mitigation Site, Lawrence, Kansas – 18 acres
- Ken Baum Tallgrass Restoration, Johnson County, Kansas – 70 acres
- Leon Waterflood Brine Scar Remediation http://www.all-llc.com/ALL-services/remediation.htm (http://www.all-llc.com/ALL-services/remediation.htm)
- The Nature Conservancy Cheyenne Bottoms Wetlands Preserve (http://nature.org/wherewework/northamerica/states/kansas/preserves/art64.html)

Taxonomic Work

- Curator of Elizabeth Winston Mize Herbarium a private Texas herbarium
- Survey and Collection of Winston Ranch, Uvalde County, Texas
- Survey and Collection of Peaceable Kingdom Farm, Washington County, Texas

Publications:

Jog S. K., K. Kindscher, E. Questad, B. Foster, and **H. Loring.** Floristic Quality as an Indicator of Native Species Diversity within Managed Grasslands. Natural Areas Journal, April 2006. Natural Areas Journal (http://www.bioone.org/doi/abs/10.3375/0885-8608%282006%2926%5B149%3AFQAAIO%5D2.0.CO%3B2)

Freeman, C.C., W.H. Busby, J. Delisle, W.D. Kettle, K. Kindscher, **H. Loring**, C.A. Morse, and V.B. Salisbury. 2003. A natural areas inventory of the Ft. Leavenworth Military Reservation, Leavenworth County, Kansas. II. Open-file Report No. 117. Kansas Biological Survey, Lawrence, KS. 199 pp.

Barnes, C.C., M.K. Smalley, K.P. Manfredi, K. Kindscher, **H. Loring**, and D.M. Sheeley. 2003. Characterization of an anti-tuberculosis resin glycoside from the prairie medicinal plant *Ipomoea leptophylla*. Journal of Natural Products 66:1457-1462.

Thurmond, J. Peter, C. C. Freeman, K. Kindscher, **H. Loring**, C. A. Morse, and B. W. Hoagland, 2002. Preliminary Report of an Ethnobotanical Survey along the Ogallala Ecotone on the Dempsey Divide in Roger Mills County, Oklahoma. Oklahoma Archeology; Journal of the Oklahoma Anthropological Society. 50:10-27. (http://www.ou.edu/cas/archsur/oas/journalpdf/vol50no2b.pdf)Journal of the Oklahoma Anthropological Society (http://www.ou.edu/cas/archsur/oas/journalpdf/vol50no2b.pdf)

Loring, H., Kelly Kindscher and Mike Bullerman. December 2000. An Inventory of the Central Mixed-Grass Prairie Ecoregion in Kansas, Oklahoma, and Nebraska. Rpt. No. 97. Kansas Biol. Surv., Lawrence KS.

Loring, H., Kelly Kindscher, Todd Aschenbach, and Alexandra Fraser. 1999. A Survey of Large Ranches and Prairie Remnants in the Flint Hills and Central Tallgrass Prairie Ecoregion of Kansas. Rpt. No. 88. Kansas Biol. Surv., Lawrence, KS. (In press)

Sternburg, Janet E., John Hays, Sharon Sanborn, Loraine McFarland, **H. Loring**, and Bernard Sietman. 1998. Fauna, Flora, and Sensitive Habitat on Fort Leonard Wood, MO. Special Report , 01 Jul 98, U.S. Army, Corps of Engineers, CERL , Champaign, IL , Report Number 98/95, ADANumber 352250. http://www.cecer.army.mil/td/tips/pub/details.cfm?PUBID=2022&AREA=10 (http://www.cecer.army.mil/td/tips/pub/details.cfm?PUBID=2022&AREA=10)

Loring, H. and Deborah Rowan. 1994. An inventory of selected prairies in Barton, Bates, St. Clair, and Vernon counties. Missouri Department of Conservation and Land Reclamation Commission. 108pp.

Loring, H. 1994. Out of Africa, miracle marama beans put down roots in Texas. Useful Wild Plants, no. 7, pg.12.

Loring, H. 1993. Strength in reserve, Mexico protects milpilla. Useful Wild Plants, no.4, pg.6.

Loring, H. and R.A. Hilsenbeck. 1989. Micropropagation biotechnology of native Texas *Vitis* species. Proceedings of the Texas Grape Growers Association, April 20-22, 1989.

Web Publications

Hillary Loring. Vegetation of the Big Bend Region (http://www.visitbigbend.com/site09/en/learn/about-the-area/297-aboutplants.html)

Published Illustrations:

Powell, A. M. 1994. Grasses of the Trans-Pecos and adjacent areas. University of Texas Press, Austin. 377 pp. (Technical drawings of 3 grass species.)

Prior Work Experience:

1992 Northern Spotted Owl and small mammal surveys, US Forest Service

1994-1996 Tallgrass prairie surveys and restoration monitoring, Missouri Department of Conservation

1993-1994 Research and recovery of Kemp's Ridley Sea Turtles, Padre Island National Seashore

Create a free website or blog at WordPress.com. | The Ocean Mist Theme.

Follow

Follow "Hillary Loring"

Plant species list for Schoeppel Ranch

Achillea millefolium	western yarrow
Agropyron smithii	western wheatgrass
Allium canadense	lavender wild onion
Ambrosia psilostachya	western ragweed
Andropogon saccharoides	silver bluestem
Aristida purpurea	caespitose threeawn
Artemisia filifolia	sand sagebrush
Asclepias asperula	spider milkweed
Asclepias latifolia	broadleaf milkweed
Asclepias speciosa	showy milkweed
Asclepias stenophylla	narrowleaf milkweed
Asclepias viridiflora	green-flowered milkweed
Asclepias viridis	green milkweed
Aster ericoides	heath aster
Aster oblongifolius	aromatic aster
Astragalus mollissimus	woolly milkvetch
Baptisia australis	blue false indigo
Bouteloua curtipendula	side-oats grama
Caesalpinia jamesii	James's rush-pea
Callirhoe involucrata	purple poppy mallow
Calylophus serrulatus	plains yellow evening primrose
Castilleja purpurea	citrin paintbrush
Chrysopsis stenophylla	narrowleaf goldenaster
Cirsium undulatum	wavyleaf thistle
Conyza canadensis	Canada horseweed
Coryphantha vivipara	pincushion coryphantha
Cucurbita foetidissima	buffalo gourd
Cyperus setigerus	umbrella sedge
Cyperus strigosus	false nutsedge
Dalea enneandra	nineanther dalea
Desmodium paniculatum	panicled tickclover
Eleocharis sp.	spikerush
Erigeron annuus	annual fleabane
Erigeron strigosus	daisy fleabane
Eriogonum longifolium	longleaf eriogonum
Euphorbia marginata	snow-on-the-mountain
Evolvulus nuttallianus	Nuttall's evolvulus
Gaura coccinea	scarlet gaura
Gutierrezia sarothrae	broom snakeweed
Haplopappus spinulosus	smooth ironplant goldenweed
Hedyotis nigricans	narrowleaf bluets
Helianthus annuus	common sunflower
Hordeum jubatum	foxtail barley
Hymenopappus tenuifolius	woolly-white
Juncus torreyi	Torrey's rush
Juniperus virginiana	eastern red cedar, juniper
Krameria lanceolata	ratany
Liatris punctata	dotted gayfeather
Linum lewisii	blue flax
Linum rigidum	compact stiffstem flax
Lippia lanceolata	lanceleaf frogfruit
Lomatium foeniculaceum	carrotleaf lomatium
Lotus unifoliolatus	prairie trefoil
Mentzelia nuda	blazing star, stickleaf
Monarda punctata	spotted beebalm
Muhlenbergia asperifolia	scratchgrass
Opuntia macrorhiza	bigroot prickly pear
Oxalis dillenii	green wood sorrel
Oxytropis lambertii	Lambert's locoweed
Panicum obtusum	vine-mesquite
Panicum virgatum	switchgrass
Penstemon cobaea	cobaea beardtongue
Phacelia robusta	gyp phacelia
Physalis sp.	hillside groundcherry
Populus deltoides	plains cottonwood
Prosopis glandulosa	mesquite
Prunus angustifolia	chickasaw plum
Psilostrophe villosa	wooly paperflower
Psoralea cuspidata	tall breadroot scurfpea
Psoralea tenuiflora	many-flowered scurfpea
Rhus aromatica	western aromatic sumac
Rumex altissimus	pale dock
Salvia azurea	blue sage
Sapindus saponaria	soapberry
Schizachyrium scoparium	little bluestem
Schrankia nuttallii	sensitive briar
Senecio plattensis	plains groundsel
Solanum dimidiatum	western horse nettle
Solanum elaeagnifolium	silverleaf nightshade
Solidago canadensis	rough Canada goldenrod
Sorghastrum nutans	Indiangrass
Sporobolus asper	rough dropseed
Stenosiphon linifolius	stenosiphon
Symphoricarpos orbiculatus	buckbrush
Thelesperma megapotamicum	Missouri River greenthread
Toxicodendron radicans	common poison ivy
Tridens albescens	white tridens
Tridens pilosus	hairy tridens
Typha domingensis	southern cattail
Ulmus rubra	slippery elm
Vernonia baldwinii	inland ironweed
Yucca glauca	small soapweed

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Kansas Maps and Gaps

Newletter of the Kansas Gap Analysis Project

Volume 1, Number 1 -- Winter 1997

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GAP Analysis Program Mission Statement

The mission of the Gap Analysis Program (GAP) is to provide regional assessment of the conservation status of native vertebrate species and natural land cover types and to facilitate the application of this information to land management activities. This is accomplished through the following five objectives:

1. map the land cover of the United States,
2. map predicted distributions of vertebrate species for the U.S.,
3. document the representation of vertebrate species and land cover types in areas managed for the long-term maintenance of biodiversity,
4. provide this information to the public and those entities charged with land use research, policy, planning, and management, and
5. build institutional cooperation in the application of this information to state and regional management activities.

GAP is conducted as state-level projects and is coordinated by the Biological Resources Division (BRD) of the United States Geological Survey (USGS). It is a cooperative effort among regional, state, and federal agencies, and private groups as well as the three BRD divisions of Research, Monitoring, and Information Services.

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KS-GAP History

Gap analysis in Kansas formally began on 1 May 1995 when the National Biological Survey (NBS) awarded a contract to Kansas State University. This contract provided the seed to fund the Gap Analysis Program (GAP) project in Kansas (KS-GAP). However, the beginnings of KS- GAP preceded the contract by several years. In the fall of 1993, Dr. Chris L. Lauver was asked by Dr. Jerry DeNoyelles (acting co-director of the Kansas Biological Survey, KBS) to serve as the contact person for gap analysis

in Kansas. Subsequently, Lauver of KBS represented Kansas at a GAP meeting in November 1993 and made a report on the general statewide land use map that was available from the Kansas Applied Remote Sensing Program (KARS) at the University of Kansas and on other available databases in the state of Kansas. Lauver also initiated discussions with Dr. Mike Scott of the national GAP office concerning the funding for gap analysis in Kansas.

When Dr. Philip S. Gipson was hired as the Leader of the Kansas Cooperative Fish and Wildlife Research Unit (KS CFWRU) in the Division of Biology at Kansas State University, Lauver continued discussions of a potential GAP project in Kansas with him. Following the hiring of Dr. Jack F. Cully, Jr. as an Assistant Leader in KS CFWRU, Gipson turned the responsibility of leading and coordinating the potential GAP project in Kansas over to Cully. Subsequently, Cully, Lauver, and Dr. Kevin P. Price of KARS had multiple meetings and discussions that examined available resources for gap analysis; this effort culminated in a proposal to the national GAP office to initiate the funding of KS-GAP.

Available resources for KS-GAP included the land use map, directed by Jerry Whistler (Research Associate at KARS) that identified urban areas, water, forest, crop lands, and grasslands, created by KARS in 1991. Another resource was a statewide soils map which was being created by the Department of Geography at Kansas State University at about the same time. This detailed map was contracted by the Soil Conservation Service (now the NRCS). Both maps provided experience in large-scale mapping and Geographic Information System (GIS) development. These early experiences were important factors in deciding how to proceed with KS-GAP.

An important goal of the national GAP is to develop a collaborative partnership approach within each state. In Kansas, an effort was made to involve investigators from several programs. The collaboration among faculties and students from multiple universities will benefit KS-GAP and the involved investigators. This philosophy was the basis for the dispersed organization of KS- GAP.

Cully is responsible for the administration of KS-GAP and Dr. Glennis A. Kaufman in the Division of Biology at Kansas State University is responsible for coordinating KS-GAP. Price and Dr. Edward A. Martinko of KBS and KARS, are responsibility for developing the land cover map from remotely sensed satellite data. Price and Martinko are assisted in the development of the land cover map by Dr. Stephen Egbert in KARS and Lauver in KBS. Graduate students assisting with the land cover mapping include Clayton Blodgett, Aimee Stewart, Ryan Boyce, and Miguel Ortega. Whistler of KARS continues to serve as a valuable consultant in some image processing and classification decisions. Lauver in collaboration with Price, Egbert, and Martinko has the responsibility of checking the accuracy of the land cover map. Dr. H. L. (Sy) Seyler and Dr. John A. Harrington, Jr. in the Department of Geography at Kansas State University are responsible for developing the overall GIS as well as developing the stewardship layer. Graduate students assisting with this effort are Rob Vreeland, Jennifer Radcliff, and Ray Bivens. Geography also will incorporate the other layers, land cover and vertebrate species distributions, into the GIS. Cully and Kaufman have responsibility for mapping vertebrate distributions in consultation with biologists from other state universities and colleges.The following is a chronology of events in KS-GAP:

1993

- 9-10 November--Dr. Chris Lauver attends the Second Annual Southwest Region Gap Analysis meeting at Albuquerque, NM.

1994

- 13-15 April--Dr. Mike Scott, Director of the national Gap Analysis Program (GAP), visits Kansas State University and the University of Kansas to discuss establishing the Kansas Gap Analysis Project (KS-GAP).
- 18-21 July--Dr. Chris Lauver and Dr. Jack Cully, Jr. attend the Fourth Annual National Gap Analysis. Workshop in Silverdale, WA.
- 4 August--Kansas Steering Committee for the coordination of the National Biological Service (NBS) in Kansas identifies KS-GAP as its number 1 priority for NBS in Kansas.
- 22 December--Funds authorized by NBS for KS-GAP.

1995

- 1 May--Contract award made to begin KS-GAP with Dr. Jack Cully, Jr. serving as Principal Investigator (PI) and Dr. Chris Lauver and Dr. Kevin Price as co-PIs.
- 23-24 May--Dr. Jack Cully, Jr., Dr. Chris Lauver, Dr. Kevin Price, Dr. Stephen Egbert, Dr. John Harrington, Jr., and Clayton Blodgett attend coordination meeting in Lincoln, NE for Nebraska, Kansas, and South Dakota to identify areas for cooperation. Suggested land cover classification, developed by The Nature Conservancy, was distributed for use by each state.
- 1 June--Department of Geography at Kansas State University hires first graduate student, Robert Vreeland, to begin work on the stewardship layer.
- 8-9 August-- Dr. Chris Lauver and Clayton Blodgett attend the Fifth Annual GAP Meeting in Fayetteville, AR.

- 1 December--Clayton Blodgett hired as Coordinator for the land cover layer. Aimee Steward is hired as a Graduate Research Assistant to work on the land cover layer.
- 18 December--Dr. Jack Cully, Jr. hires Dr. Glennis Kaufman as State Coordinator for KS-GAP.

1996

- 1 February--Dr. Jack Cully, Jr. and Dr. Glennis Kaufman report on KS-GAP activities in Topeka at a meeting of the Kansas Steering Committee for the Coordination of the NBS in Kansas.
- 28 February--Dr. Glennis Kaufman, Dr. Kevin Price, and Dr. Jack Cully, Jr. meet with Dr. Steve Williams, Secretary of Kansas Department of Wildlife and Parks (KDWP), and Mr. Steve Adams, Natural Resources Coordinator, to discuss partnership with KDWP.
- 9-10 April--Dr. Chris Lauver attends the Land Cover Accuracy Assessment Workshop in Denver, CO. The workshop was sponsored by the national GAP.
- 1 May--Contract Award made from NBS to continue funding of KS-GAP for 3 additional years with Dr. Jack Cully, Jr. serving as PI and Dr. Edward Martinko and Dr. Kevin Price as co-PIs.
- Hillary Loring is hired as a Graduate Research Assistant to conduct field research to collect plant data for training computer in supervised classification and ground verification.
- 16 May--Dr. Glennis Kaufman, Dr. Kevin Price, Dr. Sy Seyler, and Dr. Jack Cully, Jr. meet with agency representatives from Kansas Departments of Agriculture and Health and Environment, State Conservation Commission, and Kansas Water Office to discuss integrating KS-GAP with other state GIS efforts and to form partnerships.
- 21 May--Dr. Glennis Kaufman, Dr. Kevin Price, and Dr. Jack Cully, Jr. meet with KDWP Regional Supervisors at Norton, KS to introduce background and goals of KS-GAP and to discuss how gap analysis may be used as a management tool by the KDWP staff.
- 15-19 July--Dr. Glennis Kaufman and Dr. Jack Cully, Jr. attend the Sixth Annual National GAP Meeting in Key Largo, FL.
- 11 August--Following the graduation of Robert Vreeland, Department of Geography at Kansas State University hires two graduate students, Jennifer Radcliff and Ray Bivens, to continue work on the stewardship layer.
- 15 August--Dr. Stephen Egbert assumes duties as Coordinator for the KARS/KBS portion of KS- GAP. Miguel Ortega and Ryan Boyce are hired as Graduate Research Assistants to work on land cover layer.
- 16-18 October--Clayton Blodgett travels to West Virginia for training on the use of aerial videography equipment to ground -truth land cover maps.
- 6-7 November--Dr. Patrick Crist, Western States Coordinator for the national GAP, visits with personnel in the KS-GAP.
- 12 November---Grant Award made from KDWP to help KS-GAP for 1 year with Dr. Jack Cully, Jr. and Dr. Glennis Kaufman serving as co-PIs at Kansas State University and Dr. Edward Martinko and Dr. Kevin Price as co-PIs at the University of Kansas.

1997

- 16 January--Division of Biology at Kansas State University hires a graduate student, Gregory Hoch, to begin work on the vertebrate layer.
- 30 January--KS-GAP has displays of work in progress for the Kansas GIS Policy Board annual show in the rotunda of the State Capitol in Topeka.
- 3 February--Dr. Stephen Egbert travels to Lincoln, NE to discuss methodologies and ground verification with Dr. Marlen Eve, State Coordinator for NE-GAP.

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KDWP Supports KS-GAP

One of the goals of the national Gap Analysis Program (GAP) is to create partnerships with state agencies. In order to initiate a partnership between KS-GAP and the Kansas Department of Wildlife and Parks (KDWP), Jack Cully, Glennis Kaufman, and Kevin Price traveled to Topeka on 28 February 1996. They gave a presentation to Dr. Steve Williams, Secretary of KDWP, and his natural resource coordinator, Steve Adams. This presentation described what the GAP is, how the land cover map for Kansas would be constructed, and how the information from the KS- GAP project might be used to help manage the wildlife resources of Kansas.

At Dr. William's request, a similar presentation was given to the regional supervisors of KDWP. Jack Cully, Glennis Kaufman, and Kevin Price traveled to Norton on 21 May 1996. They presented an overview of KS-GAP which initiated questions and a discussion about possible products that could be produced for the agency.

Following these meetings, a one-year proposal was prepared and submitted to KDWP in June 1996. The proposal was funded in November 1996 and supports data collection for land cover and vertebrates. Currently, a proposal for a second year is pending.

In addition to financial support, KDWP has been a key player in helping KS-GAP form partnerships with other agencies. On 16 May 1996, KDWP hosted a meeting in Topeka for personnel from other state agencies. The purpose of the meeting was to inform other agencies about GAP and the state project. Jack Cully, Glennis Kaufman, Kevin Price, and Sy Seyler gave multimedia presentations with information about GAP for both the United States and Kansas. The state agencies represented were Department of Agriculture and its Division of Water Resources, Kansas Department of Health and Environment, Kansas Water Office, and the State Conservation Commission. Partnerships between some of these agencies and KS-GAP have been formed as a result of this meeting.

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Activities Related to KS-GAP

- John Harrington, Jr. attended the GAP-oriented sessions at the Mid-America GIS Conference at Kansas City, MO on 30 April 1996.
- Chris Lauver gave a presentation, Mapping Land Cover for the Kansas Gap Analysis Project, at the 19th Applied Geography Conference at Kansas City, MO on 17 October 1996. His co-authors were Kevin Price, Clayton Blodgett, and Aimee Stewart.
- Greg Hoch gave a presentation, Use of satellite remote sensing to detect historic and current land use on Ft. Riley Army Reservation, Kansas, at the 23rd Annual Student Research Forum in the Division of Biology at Kansas State University on 22 February 1997. His co-author was Jack Cully.

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Aerial Videography

KARS is investigating the potential use of data from aerial videography as a source for accuracy assessment of the land cover map for the KS-GAP. In October 1996, Clayton Blodgett, a Ph.D. student in the KARS Program at the University of Kansas, traveled to West Virginia University to receive training in aerial videography from Charles Yuill of the Division of Resource Management. The training included both the collection and processing of data and experience with the videography equipment.

To date, no videography data have been collected in Kansas. The videography equipment should be available to KS-GAP in spring 1997. At that time, we plan to conduct a small pilot study in southwest Kansas. This pilot study will allow us to assess the usefulness of aerial videography in grasslands that have similar plant species composition and little vertical structure. If the data prove to be useful to ground-truth land cover in southwest Kansas, the majority of the aerial videography data for Kansas will be collected during summer 1997. Based on estimates provided by the state of Tennessee, about 48 hours of flight time will be needed to cover Kansas.

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KS-GAP has Displays at Annual Kansas GIS Day

State legislators and officials of the Kansas Water Authority were among the visitors that attended the annual Kansas GIS Policy Board show in the rotunda of the state capitol building in Topeka on 30 January 1997. Posters were displayed for two pilot projects that are part of KS- GAP.

Clayton Blodgett and Aimee Stewart of the KARS Program displayed four large-format color posters illustrating the land cover mapping process. These four panels included the 1991 Kansas Land Cover Map used to mask urban and water features in satellite imagery; three LANDSAT Thematic Mapper satellite images from spring, summer, and late summer 1992 from southwest Kansas; a map showing crop/grassland areas in southwest Kansas created by using unsupervised classification (this was overlaid with 300 field sites); and the preliminary map of land cover at the Alliance level for counties in southwest Kansas.

Sy Seyler and Nancy Leathers, a graduate research assistant in GISSAL, displayed four maps of the Pomona Lake area illustrating the process used in creating the stewardship layer. Data for land cover, ownership, soils, and hydrology were used in an overlay analysis to produce new maps that demonstrated the relative amounts of different land cover and soil types that occur within public land at Pomona Lake.

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Fort Riley Land Cover Mapping

Greg Hoch, a M.S. student in Biology at the Kansas Cooperative Fish and Wildlife Research Unit, is mapping the land cover for the Fort Riley Army Reservation in the northern Flint Hills near Manhattan. Ft. Riley's vegetation is primarily tallgrass prairie dominated by warm season grasses.

A variety of land management practices along with military training activities on Ft. Riley present a unique opportunity to examine the utility of remotely-sensed data to distinguish differences among land cover and usage. Some management practices used on Ft. Riley include prescribed burning in spring and haying in the summer. Training activities, which occur throughout the year, can result in wildfires being ignited in any month of the year. Some isolated areas receive little to no impact from military activity and remain relatively pristine. Traces of past use also can be seen in abandoned agricultural fields and brome hay meadows (go-back lands). The ages and variety of management practices create a complex landscape which overlays a diverse and dynamic natural landscape.

Preliminary data suggest that disturbance on Ft. Riley may obliterate many of the differences seen between warm and cool season grasses in multi-date imagery in grasslands. Greg's accuracy assessment showed that multi-date imagery was useful to discriminate between disturbed and undisturbed sites. The LANDSAT imagery used on Ft. Riley was from April, July, and September, 1993, whereas data used to ground-truth the imagery for plant communities and military disturbance were collected by the Army in 1993 along Land Condition Trend Analysis (LCTA) transects placed randomly on Ft. Riley. Greg used bands 3 and 4 to identify burned areas on the April image; however, no records are kept in order for Greg to validate his finding. Band 4 in July appears to be the most useful to distinguish go-back lands from native prairie. Due to an excessive amount of rainfall in 1993, little of Ft. Riley was hayed. Areas of haying can be seen on the imagery, but not identified as a distinct cover class.

Greg's work highlights the need to use a combination of single and multiband analyses and single and multiple dates of growing-season imagery to improve accuracy when studying complex and dynamic landscapes with multiple and overlapping land uses.

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Remotely-Sensed Land Cover

Kansas Applied Remoting Sensing (KARS) Program used three dates of satellite imagery from 1992 (May, July, and September) to conduct a pilot study for mapping the land cover of Kansas. This pilot project which was centered around Garden City is nearing completion.

For the pilot study, data came from the LANDSAT thematic mapper (TM); the scene covers about 13,225 square miles (34,225 square kilometers). Data for each LANDSAT scene consist of seven bands; we extracted four channels from each rectified image which correspond to the red, near-infrared, and middle-infrared portions of the electromagnetic spectrum. These four channels were combined for the three dates to give 12 data layers. We removed urban and water features based on a 1991 digital land cover map from KARS before further processing was done. We then stratified the composite by physiographic provinces; this scene contained four provinces, High Plains, Arkansas River Lowlands, Smoky Hills, and Red Hills. Stratification of the physiographic provinces reduced spectral variance which increased our ability to distinguish the vegetative Alliances of interest.

Each image within a physiographic province was submitted to an unsupervised (clustering) classification algorithm which yielded 100 classes. We used National High Altitude Photography color infrared photographs to re-code each of the 100 classes from the unsupervised classification into one of three classes (crop land, natural vegetation, or "confused"). The areas categorized as "confused" were subjected to another unsupervised classification which yielded 100 new classes to examine. These classes were inserted into either crop land or natural vegetation classes. These procedures resulted in a binary map that contained areas of crops and natural vegetation.

One date of imagery from the High Plains contained clouds, so a cloud class was included for this area. Because clouds affected only one date of imagery, we used the other dates (July and September) and reclassified the area under the clouds. The same procedures were used to generate the 100 classes which then were placed in crop land and natural vegetation classes.

The binary map of crop land and natural vegetation was compared to earlier aerial black and white photographs from 1988 that were digitized and used for accuracy assessment for the Land Cover Mapping Project in 1991. Images of crop lands in the 1988 data set were adjusted for lands placed into the Conservation Reserve Program after 1988. These crop lands appeared as natural vegetation in 1992, so needed to be re-coded as such. The binary map was >90% accurate for crop land and natural vegetation classes.

We divided the binary map into 15 hectare units and plotted it as overlays for use with 1:24,000 scale topographic maps. These maps and overlays guided the collection of data to ground-truth the vegetation at the Alliance level.

Vegetation data collected at the Alliance level during summer, 1996 were digitized from field maps. The digitized data were divided into two subsets for use in the final supervised classification process. The first subset was used to "train" the classification rules employed to classify the image set. The remaining subset was used to "test" the accuracy of classification. This procedure is called a supervised classification because the user has prior knowledge about the phenomena that are being mapped.

Data to complete KS-GAP will use TM data from May, July, and September, 1992. Currently, we are subjecting the first scene of natural vegetation to the supervised classification methods. Two additional scenes in southwest Kansas (east and west of the pilot-study area) and one in northeast Kansas have been acquired, pre-processing procedures completed, and classification of vegetation begun. Also, two additional scenes each with three dates have been acquired for northwest Kansas. Pre-processing procedures (e.g., rectifying the images) will begin soon.

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Vertebrate Layer

Data collection for vertebrates will start in spring 1997. Glennis Kaufman will collect data for the mammal layer, whereas Greg Hoch will begin with threatened and endangered (T & E) species in Kansas. We are starting with mammals because of the expertise of individuals involved in KS-GAP and T & E species because of the needs of Kansas Department of Wildlife and Parks. Mammals will be followed by birds in fall 1997, and reptiles and amphibians in 1998.

Our first overlays of mammals and T & E species with the land cover layer in GIS (Geographic Information Systems) will be done for southwest Kansas. Our overlays within GIS necessarily follow the sequence in which the land cover map is completed.

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Stewardship Layer

Graduate research assistants, Rob Vreeland, Jennifer Radcliff, and Ray Bivens, in the Geographic Information Systems and Spatial Analysis Lab (GISSAL) in Geography at Kansas State University are working on the stewardship layer of KS-GAP. The stewardship layer is related to ownership and management attributes of public lands and private lands of conservation organizations. The Kansas Biological Survey in Lawrence provided maps of protected areas in Kansas to GISSAL. These data on locations were scanned into an electronic environment. With the use of ARCINFO software, the graduate students converted the scanned polygon boundaries into a GIS layer complete with topology. Currently, the students are working with the database to add attributes such as the name of the site, owner, and manager, and management status (level of protection for biodiversity) for each polygon within the protected area. They also are contacting appropriate federal, state, and local agencies and non-governmental organizations (e.g., The Nature Conservancy) to update the information.

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Western States Coordinator for the National GAP Office, Patrick Crist, Visits KS-GAP

Patrick Crist, the Western States Coordinator for the national Gap Analysis Program, arrived at Manhattan in late evening on Tuesday, 5 November 1996. The purpose of Patrick's visit was to gain information about the research being done in the KS-GAP project and to meet the personnel involved.

Patrick had a breakfast meeting with Jack Cully on Wednesday morning before traveling to Lawrence with Glennis Kaufman to spend the day visiting the Kansas Applied Remote Sensing (KARS) Program. While in Lawrence, Patrick and Glennis spoke with

Ed Martinko, Kevin Price, Steve Egbert, Chris Lauver, Clayton Blodgett, Aimee Stewart, Ryan Boyce, and Miguel Ortega about the research being done on the land cover layer for KS-GAP and other related and allied projects. Individuals within the group illustrated the different processes required to overlay multi- date imagery, produce colored maps on a work station, and create the land cover map for the pilot project in southwest Kansas.

Upon his return to Manhattan, Patrick had dinner with three members of the Division of Biology at Kansas State University. These individuals were Dr. John Briggs, a Research Associate Professor and one of the Principal Investigators on the National Science Foundation's Long-Term Ecological Research (LTER) project on the Konza Prairie, and two graduate students, Donna Reick and Greg Hoch, whose research projects are centered on remote sensing and landscape level questions.

On Thursday morning, Patrick, Jack, and Glennis discussed administrative issues, modeling of vertebrate distributions, and educational outreach to the state of Kansas. In the afternoon, Jack accompanied Patrick to the Department of Geography to visit the Geographic Information Systems and Spatial Analysis Lab (GISSAL). Patrick and Jack spoke with John Harrington, Sy Seyler, Jennifer Radcliff, and Ray Bivens. Later, they toured the facilities that are available to KS-GAP for GIS support and for creating the stewardship layer.application of remote sensing techniques to tallgrass prairie environments.

In late afternoon, Patrick returned to Biology and John Briggs provided a tour of the computer and remote sensing facilities that are used by individuals working on the Konza Prairie LTER project. John also gave Patrick a tour of the Konza Prairie, a 3,487-hectare tallgrass prairie which is devoted to research on the effects of fire and grazing by large herbivores (bison) on native tallgrass prairie. Research on Konza Prairie, one of the original LTER sites funded in 1981, is focused on population, community, and ecosystem patterns and processes. Because of a rich database, information from Konza Prairie offers opportunities for assessing the application of remote sensing techniques to tallgrass prairie environments.

Dr. Christopher Guy, the assistant leader for fisheries in the Kansas Cooperative Fish and Wildlife Research Unit, was Patrick's host for dinner on Thursday evening. Patrick returned to the National Office in Moscow, ID on Friday morning.

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Standards for GAP Anaylsis

The national Gap Analysis Program (GAP) has developed minimum standards which all state GAP projects must meet or exceed. A national minumum standard is required to provide seamless maps of land cover and vertebrate distributions for the United States.

All state projects must have four basic data layers. These four layers are land cover, vertebrate species distributions, land ownership, and land management.

All land cover maps are created by analysis of satellite images from a thematic mapper. Primary land cover categories include naturally vegetated or barren areas, aquatic areas, agricultural areas, and built environments. For naturally vegetated or barren land cover, the vegetation is mapped to the Alliance level (from the UNESCO/TNC classification scheme). The Alliance level consists of the two dominant species of vegetation within a minimum mapping unit (MMU). The MMU for GAP is 100 hectares. State projects may use smaller MMU to meet the requirements of their state cooperators. Each state project will incorporate digital data from the National Wetlands Inventory where it is available.

The vertebrate species were selected as an index to biological diversity. Each state will coordinate with its neighboring states to develop the relational databases for vertebrate habitats. Names used for all vertebrate species will come from the Checklist of Vertebrates of the United States, the U.S. Territories, and Canada.

The three major categories for land ownership maps are publicly owned lands, lands owned by private organizations which are charged to manage the lands for long-term maintenance of native biological diversity, and private land. Private land owned by citizens is simply labeled as private.

Land management is defined by four status categories. Status 1 refers to an area that has an active management plan in place to maintain it in natural conditions. Examples of status 1 areas are National Parks and Wilderness Areas. Status 2 refers to an area which is managed for its natural values, but which may receive uses that degrade the quality of the natural communities. An example of a status 2 area is a state park. Status 3 refers to an area which prevents permanent conversion of the land, but allows extractive uses. An example of a status 3 area is a non-reserved national forest. Status 4 refers to an area that is managed in ways which preclude the maintenance of native communities of plants and animals. An example of a Status 4 area is Department of Defense land.

Metadata are required for each layer. These data include a lineage of all software and data used to create each layer. At the completion of the state project, each state is required to forward the metadata and state products to the national Gap Analysis Program

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Partnerships: A Key Component

A key component of gap analysis is local management and development of local partnerships. The Gap Analysis Program (GAP) is a national mapping program with nationwide requirements for classifying land cover based primarily on vegetation, mapping land cover units at specific scales, identifying species by a specific naming convention, and maintaining metadata (information on the sources of data used to map) for each layer. GAP recognizes that each state has unique requirements to make its project useful to state management agencies. GAP also recognizes that allowing individual states to develop their own mapping techniques will lead to innovation and more powerful and efficient methods.

The number one goal of GAP, both at the national and state level, is to enhance the conservation of biodiversity. To do that, each state project is encouraged to develop strong partnerships with state and federal land-managing agencies. Forming partnerships with managers early in a GAP project ensures that a state will address issues important to the partner agencies. The identification of sand sage prairie as an important habitat in western Kansas for the Kansas Department of Wildlife and Parks is a good example of how this partnership works.

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Funds to Come From Kansas GIS Policy Board

Following the meeting hosted by Kansas Department of Wildlife and Parks, KS-GAP was asked to apply for a grant from the Kansas GIS Policy Board. Subsequently, we learned that KARS was approved for a project entitled, Kansas Land Cover GIS Database Update. These funds are provided by the State Water Plan which is administered by the Kansas Water Office. Funds are expected to begin in July 1997 and be renewed for two additional years.

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Ground-Truthing

Hillary Loring, a research assistant at the Kansas Biological Survey, conducted extensive field surveys of nearly 300 sites in 11 counties under the guidance of Chris Lauver during May through August 1996. These surveys provided current data on natural vegetation in southwest Kansas. The initial objective of Hillary's work was to locate at least 10 sites of each type of natural vegetation in southwest Kansas that had a minimum area of 15 hectares. Hillary contacted several county offices of the USDA-Natural Resources Conservation Service and received valuable advice from their personnel for locating appropriate sites. Fewer than 10 sites were found of most wetland types because of their rarity in southwest Kansas.

The second objective was to describe the natural vegetation at each site. Hillary recorded the dominant plant species and condition or quality of over 280 sites with 16 different types of vegetation, and marked the boundaries of each site on USGS topographic maps. Most sites were upland mixed or shortgrass prairie, whereas some sites were floodplain woodlands and other wetland types.

The third objective was to gather information on Conservation Reserve Program sites, disturbed sites dominated by annual plants, and sites dominated by non-native species (e.g., salt cedar). The dominant plant species of these sites were recorded to assemble an accurate database of current land cover.

These data will be used for two purposes, to establish training rules for a supervised classification of remotely- sensed data and to assess the accuracy of this classification with data withheld from the training procedure.

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Remote Sensing Support

Remote sensing support for KS-GAP is provided by the Kansas Applied Remote Sensing (KARS) Program which is part of the Kansas Biological Survey (KBS) at the University of Kansas in Lawrence. KARS is directed by Dr. Edward A. Martinko; Dr. Kevin P. Price serves as the Associate Director. The KARS program works closely with the personnel in the Department of Geography at the University of Kansas. The KARS laboratories employ state-of-the-art hardware to support image processing and GIS research and applications. Equipment includes workstations, color printers and plotters, a variety of input and storage devices, and CD-ROM writer that can be used by KS-GAP. KARS also uses industry-standard ERDAS Imagine and ARCINFO software for image processing and GIS analysis. KARS employees produced the statewide digital land cover map of Kansas under the direction of laboratory manager, Jerry Whistler, in 1991-1993. The land cover map produced an Anderson Level I map of the entire state and is being used as input for the KS-GAP land cover layer.

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What's New in the Future?

We plan to develop a web site for the KS-GAP project. This site will include the goals of KS-GAP, current activities, and publications. This site also will provide links to other sites on the World Wide Web that are related to GAP. Eventually, we would like to have an interactive forum which will allow interested persons to ask questions about KS-GAP. More information will follow as the web site and interactive forum become a reality.

We also plan to develop an outreach to citizens of Kansas to participate in the KS-GAP project. The GAP project in the state of Washington (WA-GAP) has a program called NatureMapping. This program encourages senior citizens, students in elementary and secondary schools, community organizations, and local and state governments to participate in collecting information on the sightings of vertebrates. We plan to model our program after the NatureMapping program. More information will be distributed as this program develops.

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GIS Support

GIS support for KS-GAP is provided by the Geographic Information Systems and Spatial Analysis Lab (GISSAL) in the Department of Geography at Kansas State University. GISSAL is directed by Dr. H. L. (Sy) Seyler; Dr. John Harrington, Jr. serves as the Associate Director. GISSAL has a variety of equipment including PC and workstation computers, digitizers, a large-format scanner, color plotters, and a variety of printers and data storage devices that can be used by KS-GAP. GISSAL also is capable of electronic file transfer. A past project done in GISSAL that will be useful to KS-GAP is a seamless, digital data layer of the soils of the state of Kansas. Most of the GISSAL projects utilize ARCINFO on either a PC or a workstation computing environment, but most other leading GIS software packages are supported.

Top

KARS Receives Grant from EPA

In October, the Kansas Applied Remote Sensing Program was awarded funds from the Environmental Protection Agency (EPA) Region 7 Office, in Kansas City, KS to conduct a project entitled, Development of a Land Cover Map at the Vegetation Alliance Level for the State of Kansas. The two proposed objectives of this project were to create a digital vegetation map of Kansas using the modified-UNESCO Alliance level classification for natural vegetation (modified by the Nature Conservancy in cooperation with state Natural Heritage programs) and to use vegetation classes that are compatible across state boundaries for those states under EPA Region 7 jurisdiction. These states include Nebraska, Iowa, and Missouri.

The objectives of the EPA project are complementary to KS-GAP. Funding from EPA for this project is expected to continue for at least two years.

Top

The KS-GAP Team

Kansas State University, Division of Biology, Kansas Cooperative Fish and Wildlife Research Unit, Geographic Information Systems and Spatial Analysis Lab

Jack Cully, Jr. serves as the Principal Investigator (PI) on the KS-GAP project and is the Assistant Unit Leader of Wildlife for the KS CFWRU and an Assistant Professor in the Division of Biology. Glennis Kaufman serves as the State Coordinator for KS-GAP and is a Research Assistant Professor in the Division of Biology and a Senior Scientist on the Konza Prairie Long-Term Ecological Research (LTER) project. H. L. (Sy) Seyler is the Director of the Geographic Information Systems and Spatial Analysis Lab (GISSAL) and is an Associate Professor in the Department of Geography. John Harrington, Jr. is the Associate Director of GISSAL and a Professor in the Department of Geography. Greg Hoch is a graduate research assistant in KS CFWRU at the Division of Biology. Jennifer Radcliff and Ray Bivens are graduate research assistants in GISSAL and the Department of Geography.

University of Kansas, Kansas Biological Survey, Kansas Applied Remote Sensing Program

Ed Martinko is a co-PI on the KS-GAP project, Director of the KBS and the KARS Program, and an Associate Professor in the Department of Systematics and Ecology. Kevin Price is a co-PI on the KS-GAP project, Associate Director of the KARS Program, and an Associate Professor in the Department of Geography. Steve Egbert is a Research Associate in the KARS Program. Chris Lauver is an Associate Scientist in the KBS. Clayton Blodgett, Aimee Stewart, Ryan Boyce, and Miguel Ortega are graduate research assistants in KARS and the Department of Geography.

If you have questions about KS-GAP, contact:

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March 20, 2000

Biological
Survey
Understanding our environment

Overview

Fall wildflowers at the Rockefeller Prairie.

The Kansas Biological Survey houses the following programs. Survey scientists undertake a wide variety of research projects both within and in addition to these programs.

Reservoir Assessment Program — This initiative provides critical information concerning the status and conditions of Kansas reservoirs. The program's activities focus on expanding its reservoir information database to provide state and local officials with the facts needed to make informed decisions about the safety, supply and reliability of our state's valuable water resources.

Central Plains Center for BioAssessment — The Center for Bioassessment is a nonregulatory, nonmanagement aquatic research organization within the Survey. It works closely with state, tribal, federal and academic scientists, and other public entities in U.S. EPA Region 7 (Iowa, Kansas, Missouri and Nebraska) to collaborate on and research issues of aquatic ecology and water quality.

Kansas Applied Remote Sensing (KARS) — KARS conducts

research on applications of remote sensing technology to a broad array of environmental and agricultural issues. Its interactive online maps, such as the Natural Resource Planner and the Green Report, provide environmental and infrastructural information of great interest to the public and vital to land-use planners. The program works to facilitate technology transfer of a variety products and services derived from remote sensing technologies to commercial, governmental and other end users.

Kansas Natural Heritage Inventory — The heritage program is among more than 80 members of the NatureServe network, which comprises natural heritage programs and conservation data centers throughout the Western Hemisphere. This network was initiated by The Nature Conservancy in 1974 and transferred to NatureServe in 1994. The mission of the Natural Heritage Inventory is to collect, manage and disseminate information about the biological diversity of the state, emphasizing the plants, animals and natural communities that are sensitive, threatened or endangered. Data is made available to a wide variety of users to provide early notice of potential natural resource conflicts, to guide public and private land use decisions, and to develop conservation priorities.

KU Ecosystems Research Group — This consortium of researchers seeks to understand how terrestrial and aquatic ecosystems around the world function. The group comprises faculty, postdoctoral researchers and students who explore Earth's vegetation, soil, water and climate, using a diversity of approaches, particularly in the context of climate change and land use.

Monarch Watch (affiliated with the Kansas Biological Survey) — Since 1992, Monarch Watch has tracked the annual migration of the Monarch butterfly through North America, going to the heart of the issue of wildlife habitat conservation. To collect cross-continental data, the program engages citizen scientists, including schoolchildren, through its outreach efforts. It provides online information on the biology and conservation of the Monarch and maintains an active email discussion list and online community forum. Monarch Watch involves more than 2,000 schools, nature centers and other organizations in the U.S. and Canada in its work. An estimated 100,000 people participate in Monarch-tagging activities each year in the fall.

Native Medicinal Plant Research Program — This collaboration between the Kansas Biological Survey and the KU Department of Medicinal Chemistry began in 2009 as a broad-based search for

medicinal compounds in plants native to the U.S. Great Plains. Since then, more than 300 collections of plants have been tested using state-of-the-art high-throughput screening at KU. Among the program's discoveries are powerful cancer-fighting compounds in a native Kansas species, *Physalis longifolia*, or wild tomatillo. The program's Native Medicinal Plant Research Garden, north of Lawrence, is part of the KU Field Station.

Contact Kansas Biological Survey

biosurvey@ku.edu
785-864-1500
Routes Park and Ride
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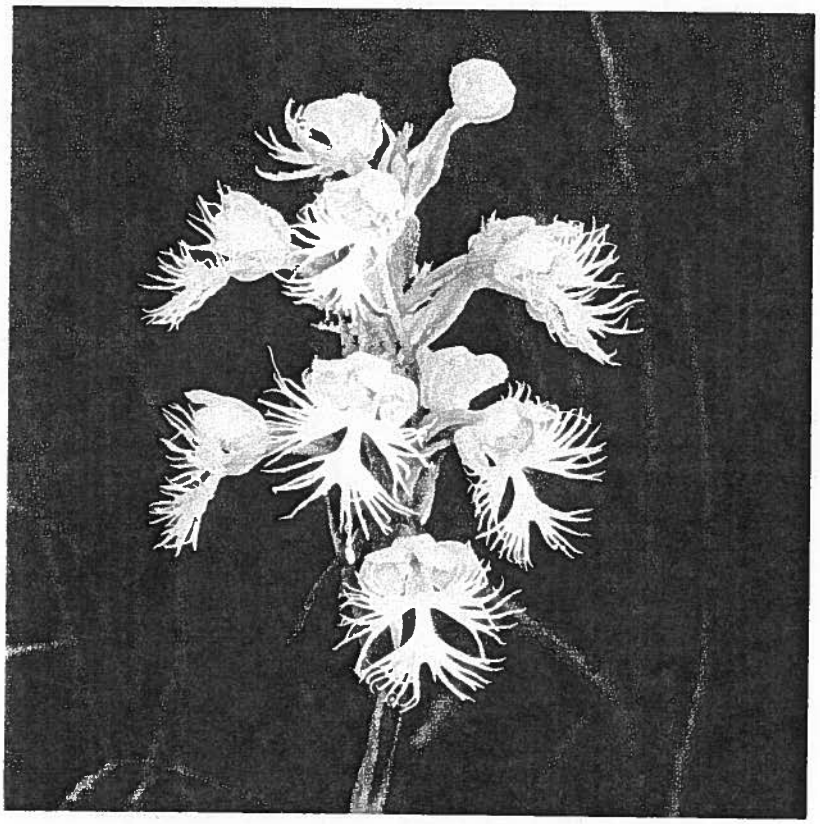
2101 Constant Ave.
Lawrence, KS 66047

Biological Survey

Understanding our environment

Kansas Natural Heritage Inventory



Western prairie fringed orchid (Platanthera praeclara).

The Kansas Natural Heritage Inventory, initiated in 1986, is a member of the NatureServe Network[1], a group of more than 80 independent natural heritage programs and conservation data centers throughout the Western Hemisphere. Most natural heritage programs are state or provincial government agencies; others, such as the Kansas Natural Heritage program, are housed at universities.

The first natural heritage inventory program was established by The Nature Conservancy in 1974, and over the following 20 years, it worked with partners to build a network of biological inventories covering most of the Western Hemisphere. In 1994, it transferred

this role to NatureServe, which was established at that time as the Association for Biodiversity Information.

The natural heritage programs serve as the leading source of information on the precise locations and conditions of at-risk species and threatened ecosystems. Each maintains an sophisticated database, following consistent standards for collecting and managing data so this information may be shared across the NatureServe network — providing seamless coverage of multi-jurisdictional data sets. This information serves as a valuable conservation tool for planners, landowners, natural area managers and others.

The Kansas Natural Heritage Inventory conducts directed surveys for rare species and their habitats, habitat assessments and surveys for a variety of natural community types. Specimen vouchers collected for our work are deposited at KU's Natural History Museum and Biodiversity Research Center.

We are involved in restoration and remediation projects and in the development of site-specific management recommendations. Our staff members have expertise in the areas of field botany, plant ecology, wildlife ecology, zoology and GIS. Many of our projects provide research opportunities for graduate and undergraduate students. We collaborate with other scientists from the Kansas Biological Survey and KU, as well as with a variety of state and federal agencies, conservation organizations, private corporations and individuals.

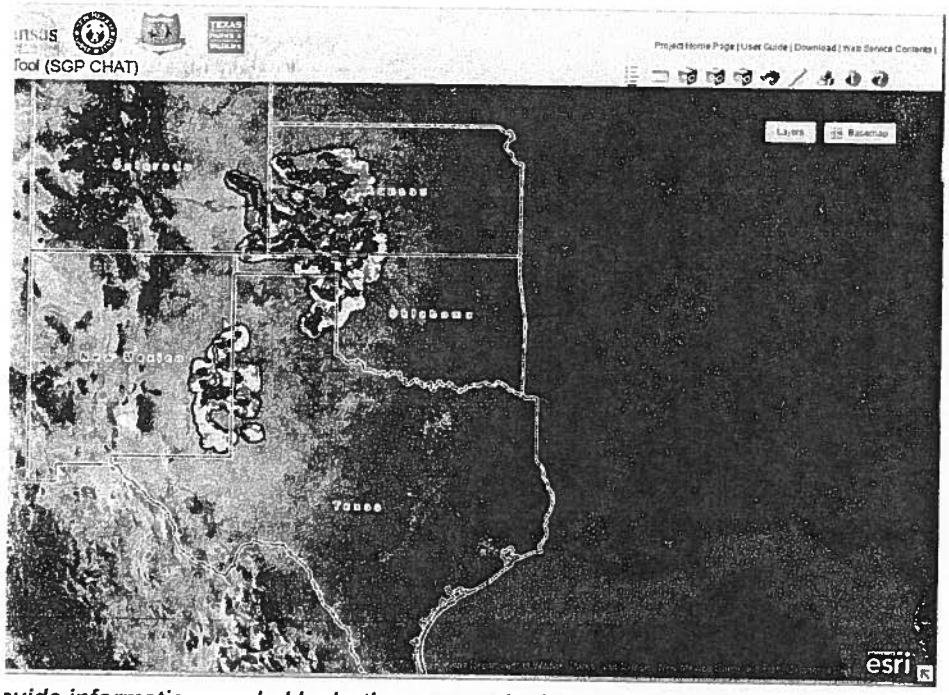
For more information, contact Jennifer Delisle, information manager for the Kansas Natural Heritage Inventory, 785-864-1538 or jdelisle@ku.edu[2].

Links on this page:

1. http://www.natureserve.org/visitLocal/index.jsp
2. jdelisle@ku.edu

Biological
Survey
Understanding our environment

GIS mapping applications



ovide information needed by both conservationists and industry.

For maps providing information on Kansas land cover, Kansas species ranges and known locations, and the influence of the biofuel industry:

http://kars.ku.edu/research/[1]

For interactive web maps covering a wide range of topics including species habitats, flood risk, water resources, crop yields and more:

http://kars.ku.edu/geodata/maps/[2]

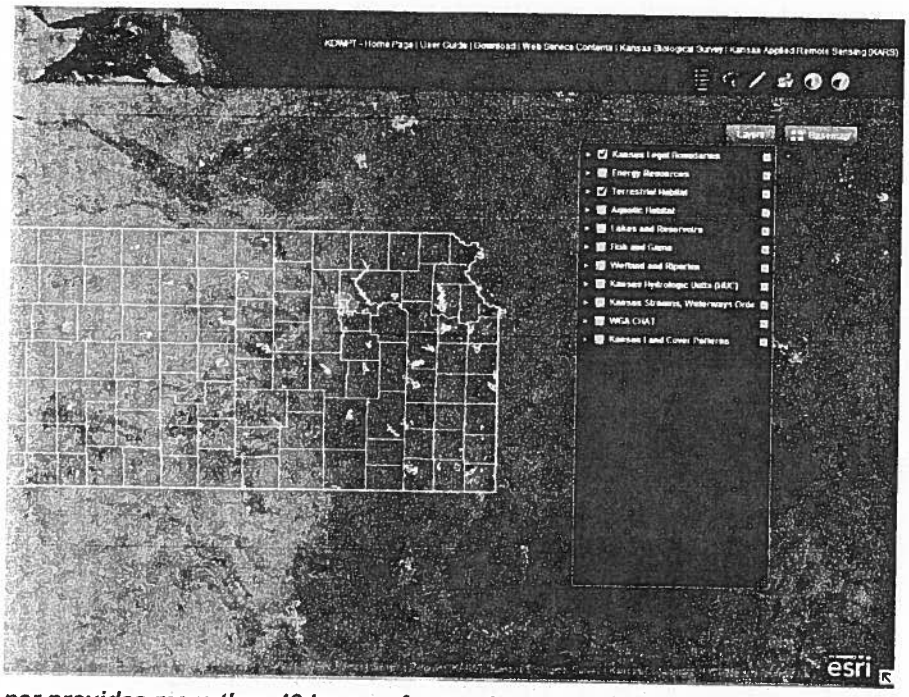
Links on this page:

1. http://kars.ku.edu/research/
2. http://kars.ku.edu/geodata/maps/

Biological Survey

Understanding our environment

Kansas Applied Remote Sensing



ner provides more than 40 layers of natural resource and infrastructure data.

KARS was established in 1972 by the National Aeronautics and Space Administration (NASA) and the State of Kansas to conduct applied research on techniques that enable public agencies and private firms to better utilize data from satellite and airborne remote sensing systems. KARS undertakes projects with federal, state and local agencies, as well as private industry. These projects are designed to identify and enhance ways in which remote sensing technologies and related geographic information systems (GIS) can aid in decision-making, policy formulation and planning in a variety of applications. KARS projects have involved land use, land cover inventory, monitoring land use change, rangeland and forest land characterization, wildlife habitat evaluation, mapping of irrigated lands, surface mined lands inventory, soil conservation needs assessment, wetlands inventory and urban area analysis.

Program staff include specialists with backgrounds in geography, ecology, biology, environmental studies and natural resource management. This diversity reflects the interdisciplinary approach

used to apply remote sensing and GIS technologies. The program's expertise in both landscape-level and close-range remote sensing is nationally recognized. In addition, KARS has more than 30 years of experience developing databases and natural resource models for implementation in GIS environments. KARS staff also have extensive experience in providing national and international workshops, short courses and training sessions on remote sensing and GIS technologies. Since its inception, KARS has been influential in fostering the introduction and growth of remote sensing and GIS technologies within the state and across the nation.

The program currently maintains its own website: http://kars.ku.edu/[1]

Links on this page:

1. http://kars.ku.edu/

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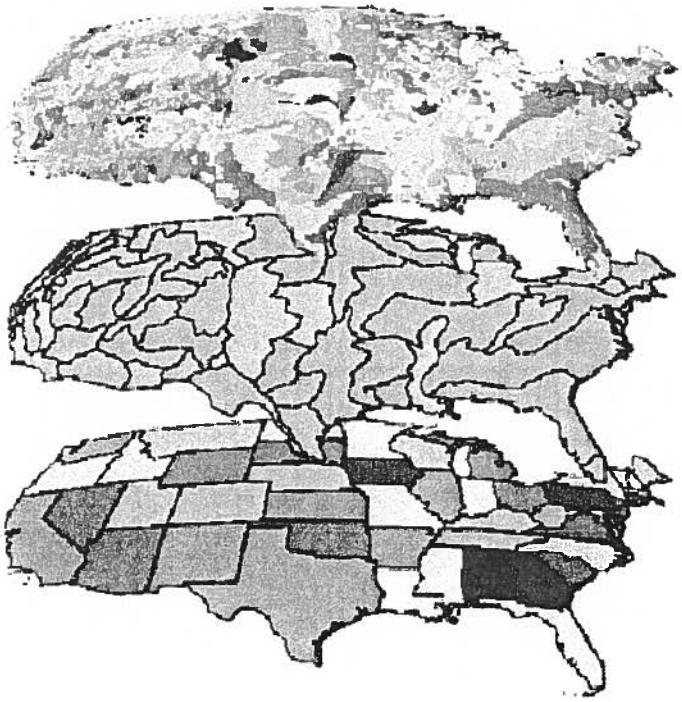
OKLAHOMA GAP ANALYSIS PROJECT

A GEOGRAPHIC APPROACH TO PLANNING FOR BIOLOGICAL DIVERSITY

JUNE 2001 FINAL REPORT



Oklahoma Cooperative Fish and Wildlife Research Unit
Oklahoma State University

William L. Fisher and Mark S. Gregory

United States Geological Survey, Biological Resources Division

INTRODUCTION

How This Report is Organized

This report is a summation of a scientific project. While we endeavor to make it understandable for as general an audience as practicable, it will reflect the complexity of the project it describes. A glossary of terms is provided to aid the reader in understanding the report, and for those seeking a detailed understanding of the subjects, the cited literature should be helpful. The organization of this report follows the general chronology of project development, beginning with the production of the individual data layers and concluding with analysis of the data. It diverges from standard scientific reporting by embedding results and discussion sections within individual chapters. This was done to allow the individual data products to stand on their own as testable hypotheses and provide data users with a concise and complete report for each data and analysis product.

We begin with an overview of the Gap Analysis mission, concept, and limitations. We then present a synopsis of how the current biodiversity condition of Oklahoma came to be, followed by land cover mapping, animal distribution prediction, species richness, and land stewardship mapping and categorization. Data development leads to the Analysis section, which reports on the status of the elements of biodiversity (natural community alliances and terrestrial vertebrate species) for Oklahoma. Finally, we describe the management implications of the analysis results and provide information on how to acquire and use the data.

The Gap Analysis Program Mission

The mission of the Gap Analysis Program is to prevent conservation crises by providing conservation assessments of native vertebrate species and their habitats and to facilitate the application of this information to land management activities.

This is accomplished through the following five objectives:
1) Map actual land cover as closely as possible to the Alliance level (FGDC 1997).
2) Map the predicted distribution of those terrestrial vertebrates that spend any important part of their life history in the project area and for which adequate distributional habitats, associations, and mapped habitat variables are available. Map other taxa as cooperative opportunities allow.
3) Document the representation of natural land cover types and animal species in areas managed for the long-term maintenance of biodiversity.
4) Make all GAP Project information available to the public and those charged with land use research, policy, planning, and management.
5) Build institutional cooperation in the application of this information to state and regional management activities.

To meet these objectives, it is necessary that GAP be operated at the state level but maintain consistency with national standards. Within the state, participation by a wide variety of cooperators is necessary and desirable to ensure understanding and acceptance of the data and

forge relationships that will lead to cooperative conservation planning.

The Gap Analysis Concept

The Gap Analysis Program (GAP) brings together the problem-solving capabilities of federal, state, and private scientists to tackle the difficult issues of land cover mapping, vertebrate habitat characterization and assessment, and biodiversity conservation at the state, regional, and national levels. The program seeks to facilitate cooperative development and use of information. Throughout this report we use the terms "GAP" to describe the national program, "GAP Project" to refer to an individual state or regional project, and "gap analysis" to refer to the gap analysis process or methodology.

Much of the following discussion was taken verbatim from Scott et al. (1993), Davis et al. (1995), and Edwards et al. (1995). The gap analysis process provides an overview of the distribution and conservation status of several components of biodiversity. It uses the distribution of actual vegetation and terrestrial vertebrates and, when available, invertebrate taxa. Digital map overlays in a GIS are used to identify individual species, species-rich areas, and vegetation types that are unrepresented or under represented in existing management areas. It functions as a preliminary step to the more detailed studies needed to establish actual boundaries for potential biodiversity management areas. These data and results are then made available to institutions as well as individual land owners and managers so that they may become more effective stewards through more complete knowledge of the management status of these elements of biodiversity. GAP, by focusing on higher levels of biological organization, is likely to be both less expensive and more likely to succeed than conservation programs focused on single species or populations (Scott et al. 1993).

Biodiversity inventories can be visualized as "filters" designed to capture elements of biodiversity at various levels of organization. The filter concept has been applied by The Nature Conservancy, which has established Natural Heritage Programs in all 50 states, most of which are now operated by state government agencies. The Nature Conservancy employs a fine filter of rare species inventory and protection and a coarse filter of community inventory and protection (Jenkins 1985, Noss 1987). It is postulated that 85-90% of species can be protected by the coarse filter, without having to inventory or plan reserves for those species individually. A fine filter is then applied to the remaining 15-10% of species to ensure their protection. Gap analysis is a coarse filter method because it can be used to quickly and cheaply assess the other 85-90% of species.

The intuitively appealing idea of conserving most biodiversity by maintaining examples of all natural community types has never been applied, although numerous approaches to the spatial identification of biodiversity have been described (Kirkpatrick 1983, Margules et al. 1988, Pressey and Nicholls 1989, Nicholls and Margules 1993). Furthermore, the spatial scale at which organisms use the environment differs tremendously among species and depends on body size, food habits, mobility, and other factors. Hence, no coarse filter will be a complete assessment of biodiversity protection status and needs. However, species that fall through the

pores of the coarse filter, such as narrow endemics and wide-ranging mammals, can be captured by the safety net of the fine filter. Community-level (coarse-filter) protection is a complement to, not a substitute for, protection of individual rare species.

Gap analysis is essentially an expanded coarse-filter approach (Noss 1987) to biodiversity protection. The vegetation types mapped in GAP serve directly as a coarse filter, the goal being to assure adequate representation of all types in biodiversity management areas. Landscapes with great vegetation diversity often are those with high edaphic variety or topographic relief. When elevational diversity is very great, a nearly complete spectrum of vegetation types known from a biological region may occur within a relatively small area. Such areas provide habitat for many species, including those that depend on multiple habitat types to meet life history needs (Diamond 1986, Noss 1987). By using landscape-sized samples (Forman and Godron 1986) as an expanded coarse filter, gap analysis searches for and identifies biological regions where unprotected or under represented vegetation types and vertebrate species occur.

A second filter uses combined species distribution information to identify a set of areas in which all, or nearly all, mapped species are represented. There is a major difference between identifying the richest areas in a region (many of which are likely to be neighbors and share essentially the same list of species) and identifying areas in which all species are represented. The latter task is most efficiently accomplished by selecting areas whose species lists are most different or complementary. Areas with different environments also tend to have the most different species lists for a variety of taxa. As a result, a set of areas with complementary sets of species for one higher taxon (e.g. mammals) often will also do a good job representing most species of other higher taxa (e.g. trees, butterflies). Species with large home ranges, such as large carnivores, or species with very local distributions may require individual attention. Additional data layers can be used for a more holistic conservation evaluation. These include indicators of stress or risk (e.g. human population growth, road density, rate of habitat fragmentation, distribution of pollutants) and the locations of habitat corridors between wildlands that allow for natural movements of wide-ranging animals and the migration of species in response to climate change. These more detailed analyses were not part of this project but are areas of research that GAP as a national program is pursuing.

General Limitations

Limitations must be recognized so that additional studies can be implemented to supplement GAP. The following are general project limitations; specific limitations for the data are described in the sections that describe them:

1. GAP data are derived from remote sensing and modeling to make general assessments about conservation status. Any decisions based on the data must be supported by ground-truthing and more detailed analyses.

2. GAP is not a substitute for threatened and endangered species listing and recovery efforts. A primary argument in favor of gap analysis is that it is proactive: it seeks to recognize and

manage sites of high biodiversity value for the long-term maintenance of populations of native species and natural ecosystems before individual species and plant communities become critically rare. Thus, it should help to reduce the rate at which species require listing as threatened or endangered. Those species that are already greatly imperiled, however, still require individual efforts to assure their recovery.

3. GAP data products and assessments represent a snapshot in time generally representing the date of the satellite imagery. Updates are planned on a 5-10 year cycle, but users of the data must be aware of the static nature of the products.

4. GAP is not a substitute for a thorough national biological inventory. As a response to rapid habitat loss, gap analysis provides a quick assessment of the distribution of vegetation and associated species before they are lost and provides focus and direction for local, regional, and national efforts to maintain biodiversity. The process of improving knowledge in systematics, taxonomy, and species distributions is lengthy and expensive. That process must be continued and expedited to provide the detailed information needed for a comprehensive assessment of our nation's biodiversity. Vegetation and species distribution maps developed for GAP can be used to make such surveys more cost-effective by stratifying sampling areas according to expected variation in biological attributes.

The Study Area – A Brief Description of Oklahoma

The project study area includes the entire state of Oklahoma (Map 1). Oklahoma has a geologically diverse landscape. In the past, portions of Oklahoma have several times sunk below and risen above sea level. As a result, large areas of the state were covered by shallow seas, and thick layers of marine shale, limestone, and sandstone were deposited. At the same time in adjacent areas, shales and sandstones were laid down as alluvial and deltaic deposits near the ancient seas. Uplift resulted in gentle arching of broad areas, and folding and faulting in southern Oklahoma during the Pennsylvanian Period led to the formation of three principal mountain belts, the Ouachita, Arbuckle, and Wichita Mountains. Nearly 99% of Oklahoma's outcropping rocks are of sedimentary origin, and the remainder are: igneous rocks in the Wichita Mountains; igneous and metamorphic rocks in part of the Arbuckle Mountains; and an area of mildly metamorphosed rocks in the Ouachita Mountains. Oklahoma has a land area of 69,919 square miles (181,089 square kilometers). Oklahoma's topography slopes down from west to east. The highest elevation, 4,973 ft (1516 m), in the state is Black Mesa in Cimarron County in the Oklahoma Panhandle, and the lowest elevation, 287 ft (88 m), is in the southeastern corner of the State, where the Little River flows into Arkansas. Rainfall and temperatures vary significantly between the eastern and western borders of the state. Average annual precipitation ranges from over 50 inches (127 cm) in southeastern Oklahoma to 18 inches (46 cm) in the Panhandle, whereas average annual temperatures range from 65 °F (18 °C) in the southeast to 55 °F (13 °C) in the Panhandle. Oklahoma is composed of 77 counties. The name "Oklahoma" comes from the Choctaw words "okla" meaning people and "humma" meaning red, so the state's name literally means "red people."

THE OKLAHOMA GAP ANALYSIS PROJECT

FINAL REPORT

30 June 2001

William L. Fisher
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Mark S. Gregory
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Contract Administration Through:
Oklahoma Cooperative Fish and Wildlife Research Unit
Oklahoma State University, Stillwater, Oklahoma 74078

Submitted by:
William L. Fisher

Research Performed Under:
Cooperative Agreement No. 14-16-0009-1554
Research Work Order No. 14

EXECUTIVE SUMMARY

The Oklahoma Gap Analysis project (OK-GAP) was initiated in 1993 as a cooperative effort between the US Geological Survey, Biological Resources Division, and other federal, state, and private natural resource interests in Oklahoma. The objectives of the project were to: (1) prepare a map of the current distribution of land cover types, (2) estimate terrestrial vertebrate species distributions relative to land cover types, (3) classify land stewardship by categories of conservation status, and (4) identify and analyze gaps in the conservation of biological diversity from representative areas. The OK-GAP is an initial step toward a more detailed and comprehensive effort at long-term planning for biodiversity conservation in Oklahoma.

The land cover map developed by OK-GAP identifies 46 land cover types based on interpretation of Thematic Mapper (TM) imagery and field reconnaissance. The minimum mapping units (MMU) for the map are 0.81 hectares for all land cover types. Twenty-three scenes of TM data for 1991-1993 obtained from the Multi-Resolution Land Characteristics Consortium (MRLC) were used to create the map. We used airborne videography from 17 flight lines flown over Oklahoma to aid in classifying the TM scenes. Field reconnaissance was conducted to verify video classification of land cover types and verify UTM coordinates of the flight lines. We conducted an accuracy assessment of the land cover map using data from three independent sources: field reconnaissance, an existing database, and a previous land cover map of Oklahoma. Forest and other land cover types had the highest overall accuracy (78% and 85%, respectively), shrublands and herbaceous lands were intermediate (53% and 56%, respectively), and woodlands had the lowest accuracy (22%). Woodlands were most often misclassified as forests or other land cover types, and shrublands were typically misclassified as herbaceous types. These misclassifications most likely were the result of structural differences (i.e., vegetation height and crown density) between the land cover types, the small MMU of the map, and the simple random sampling design we used.

Distributions of 411 terrestrial vertebrate species were mapped. Using habitat (land cover type) associations, we predicted the potential distributions of 382 species, including 75 mammals, 178 birds, 81 reptiles, and 48 amphibians. In addition, we mapped the distributions of 29 imperiled species (state and federal threatened or endangered species and species of special concern). Range limits of each species were delineated on maps from scientific literature sources and reviewed by experts. The range maps were eventually converted to a presence/absence grid map consisting of 337 hexagons (635 sq km) to cover Oklahoma. Wildlife habitat relation models were developed for each of the 410 species based on their associations with individual land cover types. Accuracy of the predicted distributions was assessed for 20 species of birds; we did not assess the accuracy of any other group. Mean accuracy for the 20 species was 71% and ranged from 45-92%.

The stewardship map of Oklahoma was developed from original maps of 379 public and private managed land units. We identified 14 land stewards, including eight federal agencies, five state and city agencies, and one private organization. All stewardship land areas were categorized based on management for biodiversity maintenance on a scale of 1 through 4, with 1 being the

highest, most comprehensive level of management for conservation and 4 being the lowest. Ninety-three percent of the total land area of Oklahoma is comprised of private, unrestricted status 4 lands. Of the remaining 7% of total land area, 28% was classified as status 1 and 2 stewardship lands, 21% as status 3 lands, and the remainder was either status 4 lands or water.

Gap analysis was conducted on all land cover types and predicted animal distributions with representation on status 1 and 2 stewardship lands. Nine land cover types had less that 1% representation, 32 types had between 1% and 10% representation, and two types had between 11% and 20% representation on status 1 and 2 lands. Of these, shinnery oak shrubland in west-central Oklahoma, gypsum grasslands in western Oklahoma, and dwarf white oak forests in southeastern Oklahoma were among the vegetation alliances in need of further study and possible protection. Habitats for 19 mammals, 14 birds, 8 reptiles, and 10 amphibians merit increased conservation and management attention in Oklahoma. These 51 species are designated as federal and state Threatened or Endangered or Candidate or Special Concern species and, except for the small-footed myotis (mammal) and red-cockaded woodpecker (bird), have less than 20% of their predicted distribution on status 1 and 2 lands. Six areas of the state support either high numbers of species or unique vegetation alliances. It is obvious from this analysis that biodiversity conservation efforts in Oklahoma will have to focus on educating and working with private land owners.

An Oklahoma biodiversity plan was published in 1996 under the direction of the Oklahoma Department of Wildlife Conservation. The purpose of the plan was to provide information about Oklahoma's biodiversity and make recommendations on how biodiversity conservation could be included in a variety of economic and other activities. Information generated from the OK-GAP specifically addresses one of the biological recommendations of the plan: continued research to address information needs for biodiversity conservation. We hope that future researchers and managers will build upon the information developed by the OK-GAP to help make biodiversity conservation a reality in Oklahoma.

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The stewardship map of Oklahoma was developed from original maps of 379 public and private managed land units. We identified 14 land stewards, including eight federal agencies, five state and city agencies, and one private organization. All stewardship land areas were categorized based on management for biodiversity maintenance on a scale of 1 through 4, with 1 being the

highest, most comprehensive level of management for conservation and 4 being the lowest. Ninety-three percent of the total land area of Oklahoma is comprised of private, unrestricted status 4 lands. Of the remaining 7% of total land area, 28% was classified as status 1 and 2 stewardship lands, 21% as status 3 lands, and the remainder was either status 4 lands or water.

Gap analysis was conducted on all land cover types and predicted animal distributions with representation on status 1 and 2 stewardship lands. Nine land cover types had less that 1% representation, 32 types had between 1% and 10% representation, and two types had between 11% and 20% representation on status 1 and 2 lands. Of these, shinnery oak shrubland in west-central Oklahoma, gypsum grasslands in western Oklahoma, and dwarf white oak forests in southeastern Oklahoma were among the vegetation alliances in need of further study and possible protection. Habitats for 19 mammals, 14 birds, 8 reptiles, and 10 amphibians merit increased conservation and management attention in Oklahoma. These 51 species are designated as federal and state Threatened or Endangered or Candidate or Special Concern species and, except for the small-footed myotis (mammal) and red-cockaded woodpecker (bird), have less than 20% of their predicted distribution on status 1 and 2 lands. Six areas of the state support either high numbers of species or unique vegetation alliances. It is obvious from this analysis that biodiversity conservation efforts in Oklahoma will have to focus on educating and working with private land owners.

An Oklahoma biodiversity plan was published in 1996 under the direction of the Oklahoma Department of Wildlife Conservation. The purpose of the plan was to provide information about Oklahoma's biodiversity and make recommendations on how biodiversity conservation could be included in a variety of economic and other activities. Information generated from the OK-GAP specifically addresses one of the biological recommendations of the plan: continued research to address information needs for biodiversity conservation. We hope that future researchers and managers will build upon the information developed by the OK-GAP to help make biodiversity conservation a reality in Oklahoma.

LAND STEWARDSHIP

Introduction

To fulfill the analytical mission of GAP, it is necessary to compare the mapped distribution of elements of biodiversity with their representation in different categories of land ownership and management. As will be explained in the Analysis section, these comparisons do not measure viability but are a start to assessing the likelihood of future threat to a biotic element through habitat conversion—the primary cause of biodiversity decline. We use the term "stewardship" in place of "ownership" in recognition that legal ownership does not necessarily equate to the entity charged with management of the resource, and that the mix of ownership and managing entities is a complex and rapidly changing condition not suitably mapped by GAP. At the same time, it is necessary to distinguish between stewardship and management status in that a single category of land stewardship such as a national forest may contain several degrees of management for biodiversity.

The purpose of comparing biotic distribution with stewardship is to provide a method by which land stewards can assess their relative amount of responsibility for the management of a species or plant community, and identify other stewards sharing that responsibility. This information can reveal opportunities for cooperative management of that resource, which directly supports the primary mission of GAP to provide objective, scientific information to decision makers and managers to make informed decisions regarding biodiversity. It also is not unlikely that a steward that has previously borne the major responsibility for managing a species may, through such analyses, identify a more equitable distribution of that responsibility. We emphasize, however, that GAP only identifies private land as a homogenous category and does not differentiate individual tracts or owners, unless the information was provided voluntarily to recognize a long-term commitment to biodiversity maintenance.

After comparison to stewardship, it is also necessary to compare biotic occurrence to categories of management status. The purpose of this comparison is to identify the need for change in management status for the distribution of individual elements or areas containing high degrees of diversity. Such changes can be accomplished in many ways that do not affect the stewardship status. While it will eventually be desirable to identify specific management practices for each tract, and whether they are beneficial or harmful to each element, GAP currently uses a scale of 1 to 4 to denote relative degree of maintenance of biodiversity for each tract. A status of "1" denotes the highest, most permanent level of maintenance, and "4" represents the lowest level of biodiversity management, or unknown status. This is a highly subjective area, and we recognize a variety of limitations in our approach, although we maintain certain principles in assigning the status level. Our first principle is that land ownership is not the primary determinant in assigning status. The second principle is that while data are imperfect, and all land is subject to changes in ownership and management, we can use the intent of a land steward as evidenced by legal and institutional factors to assign status. In other words, if a land steward institutes a program backed by legal and institutional arrangements that are intended for permanent biodiversity maintenance, we use that as the guide for assigning status.

The characteristics used to determine status are as follows:

- Permanence of protection from conversion of natural land cover to unnatural (human-induced barren, exotic-dominated, arrested succession).
- Relative amount of the tract managed for natural cover.
- Inclusiveness of the management, i.e., single feature or species versus all biota.
- Type of management and degree that it is mandated through legal and institutional arrangements.

The four status categories can generally be defined as follows (after Scott et al. 1993, Edwards et al. 1995, Crist et al. 1995):

Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management.

Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.

Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.

Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

Mapping Standards

A base map consisting of the Oklahoma state boundary and county lines was digitized from paper USGS 1:250,000 topographic sheets (in UTM projection). Following patching, this coverage was imported into ARC/INFO (ESRI 1997) and projected into Albers Equal Area Conic projection. The projected base map had the same projection parameters as the land cover map:

Projection: Albers Equal Area Conic
Units: meters
Spheroid: GRS1980
Datum: NAD83

1st parallel: 29.5 degrees
2nd parallel: 45.5 degrees
Central meridian: -96.0 degrees
Projection origin latitude: 23.0 degrees
False easting: 0.0 meters
False northing: 0.0 meters

Methods

Stewardship Mapping

We digitized 379 public and private managed land units, including all 44 counties with state school lands parcels. This represented nearly all (about 95%) of the public and private managed areas, open space and wild lands in Oklahoma that we were able to locate maps.

Original source maps for many tracts varied greatly in detail, scale and format (Appendix 3). Thus, tract boundaries were plotted by hand from the source maps onto 7.5 USGS topographic maps (1:24,000). Digitizing was performed with GRASS 4.1 (USA-CERL) software in the UTM coordinate system by UTM zone. The data set subsequently was imported into ARC/INFO, attributes reassigned, and the polygons were projected to Albers Equal Area Conic projection with parameters matching the land cover and vertebrate distribution data sets. Water bodies for reservoirs or stream reaches within the tracts were not digitized from the topographic maps. Instead, water body polygons were created from TIGER/line 1992 data, and the stewardship layer was updated with this information.

Managed area tract boundaries were initially lumped into 16 agency ownership map files that were subsequently patched together in the final layer. Land owners were consulted in an attempt to resolve contradicting claims (e.g., state school lands, US Army Corp of Engineers lands). The final stewardship layer included boundary maps of all publicly-owned lands and all other managed lands for which we received written permission to publish. We also solicited letters from the US Fish and Wildlife Service and The Nature Conservancy for permission to release ownership information.

Sites mainly known for sensitive bat species or sensitive cave habitats were excluded from stewardship coverage. Several managed areas now closed to the public also were omitted from this data set at the request of their owners.

Management Status Categorization

Stewardship status for each polygon using the four GAP categories listed above was initially assigned by researchers at the Oklahoma Natural Heritage Inventory and subsequently modified by researchers at Oklahoma State University. Several plots of the land stewardship layer were produced for review and comment on the status assignments.

Results

Private lands comprise 93.5% of Oklahoma (Table 6). Federal lands and state lands each make up about 3% of the total land area. The greatest concentrations of federal lands are in the southeastern portion (USFS) and around the reservoirs (USACE) of the state (Map 3). State school lands comprise the single greatest area (1.7%) of state lands followed by lands owned and managed by the ODWC (0.7%). Approximately 1% of Oklahoma's surface consists of water. Status 1 through 3 lands are located primarily in the eastern one-third of Oklahoma (Map 4). Status 4 lands, which comprise the vast majority of Oklahoma, occur throughout the state (Map 4).

CONCLUSIONS AND MANAGEMENT IMPLICATIONS

Management Implications

The purpose of GAP is to identify elements of biodiversity (i.e., land cover types and vertebrate species) in need of protection before they become rare. The approach gap analysis uses is to associate a management status with a land area as an indication of the management activities that have the potential for conserving biological diversity. As such, the status designation for an area provides a simplified indication of the suitability of the area for protecting a vegetation type or vertebrate species. This indication, however, does not factor in requirements such as a species' home range size in relation to the size of the managed area, isolation from other managed areas, or the disturbance regime needed to maintain a population. Nor does it account for the response of different species to the same management practice. Nevertheless, gap analysis provides a first-level assessment of the protection a land area provides for vegetation communities and terrestrial vertebrate species.

Although the greatest vertebrate species richness occurs in the eastern half of Oklahoma, at least six areas in the state support either high numbers of unique vegetation types and vertebrate species. The Ozark Plateau in northeastern Oklahoma and the Ouachita Mountains in southeastern Oklahoma both have over 310 species of vertebrates and have the highest floristic and vegetational diversity in the state (Hoagland 2000). The Arbuckle Mountains in south-central Oklahoma and Wichita Mountains in southwestern Oklahoma are ancient mountain ranges that were identified as Great Plains landscapes of biological significance by Aldrich et al. (1997). They support a diversity of natural vegetation types (e.g., Ashe Juniper/little bluestem woodland in the Arbuckle Mountains and plateau live oak/little bluestem woodland in the Wichita Mountains [Aldrich et al. 1997]) and species (around 290 vertebrate species in the Wichita Mountains and about 310 vertebrate species in the Arbuckle Mountains). The Great Salt Plains and the mesas and buttes of the Gypsum Hills in northwestern Oklahoma contain unique vegetation types (e.g., gypsum grasslands), over 280 species of vertebrates, and habitat for the largest interior least tern nesting population in Oklahoma or Kansas (Aldrich et al. 1997). The Black Mesa at the tip of the Oklahoma Panhandle also has a diversity of vegetation types, including one-seed juniper woodlands and sandsage prairie, over 255 vertebrates species, and several species of concern, including the lesser prairie chicken and the bald eagle. In each of the six areas, there are a few status 1, 2 or 3 areas that afford protection to some the elements listed above.

In Oklahoma, less than 2% of the land area was identified as providing protection (status 1 and 2) for biodiversity. Most of these lands were not originally established to protect biodiversity, rather they were purchased and are managed for more utilitarian purposes such as wildlife and waterfowl management, tourism, and recreation. However, two large lands areas, Tallgrass Prairie Preserve in north-central Oklahoma and McCurtain County Wilderness Area in southeastern Oklahoma, make up 6% of status 1 and 2 lands and are managed specifically for biodiversity conservation. What is obvious is that 93% of Oklahoma is privately owned and not managed for biodiversity. Clearly, status 1 and 2 lands in Oklahoma are not sufficient to sustain

species richness and natural ecosystems over the long term.

State-wide Biodiversity Planning

Biodiversity planning was formally initiated in Oklahoma in 1993 when the Oklahoma Department of Wildlife Conservation assembled a biodiversity council and biodiversity task force to develop a biodiversity plan for the state. The Council was composed of directorate-level individuals from various federal and state governmental agencies and private organizations that were either responsible for biodiversity management or whose activities impacted biodiversity. The Task Force was composed of seven committees (biology, conservation and recreation, education, forestry and agriculture, land resources, mineral resources and water resources) composed of recognized leaders within their profession or organization that created the biodiversity plan. The Plan, *Oklahoma's Biodiversity Plan: A Shared Vision for Conserving Our Natural Heritage*, was published in 1996 (Murray 1996). The purpose of the Plan was to provide information about Oklahoma's biodiversity and make recommendations on how biodiversity conservation could be included in a variety of economic and other activities.

The report listed five biological recommendations that were needed to maintain Oklahoma's biological diversity:

1. Integrate biodiversity conservation with activities at all societal and economic levels,
2. Identify and protect natural areas that are especially sensitive to disturbance,
3. Improve biodiversity management on public lands,
4. Continue research to address information needs for biodiversity conservation, and
5. Provide scientific oversight to biodiversity conservation efforts.

Additional goals and recommendations were made regarding educational efforts to increase biodiversity management efforts. Unfortunately, there has not been a concerted effort to implement the recommendations of the Plan since its completion.

The OK-GAP specifically addresses recommendation 4. Geographic information system databases and spatial datasets provide spatially explicit information that can be used interactively by governmental agencies and private entities for understanding the distribution of vegetation types and terrestrial vertebrates in Oklahoma. Such information can form the basis for continued research on species' distributions and habitats to aid agencies and individuals in conservation efforts.

The OK-GAP information needs to be a dynamic, not static, information base for biodiversity conservation in Oklahoma. Continual updating and revision of the data are necessary not only to improve mapping predictions but also to evaluate changes in distribution patterns over time. We identified several landscape-level patterns on vegetation and terrestrial vertebrate species distribution in Oklahoma. We also acknowledged the limitations of our analyses. We hope that future researchers and managers will build upon the information developed for OK-GAP to help make biodiversity conservation a reality in Oklahoma.

From: Brenda Smith
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 9:57:46 PM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

Finally, the Department of Energy estimates Clean Line wind power will reduce carbon dioxide (CO2) emissions by up to 14,000,000 tons per year. That's about as much carbon dioxide released by 1.9 million homes' electricity use for one year, or about four coal-fired power plants. CO2 is a primary greenhouse gas, as well as contributor to ocean acidification.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Brenda Smith
2131 N Meridian Rd Apt 121
Apt 121
Tallahassee, FL 32303

From: Vivian Stockman
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 7:44:27 AM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

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Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Vivian Stockman
PO Box 6753
Huntington, WV 25773

From: Gloria Tatum
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 8:34:20 AM

To Whom It May Concern:

The proposed Plains and Eastern Clean Line transmission project would greatly expand wind energy access to the Southeast. The project could positively impact land and natural resource use.

While the Plains and Eastern Clean Line project will use land, this project may actually help reduce natural resource usage overall. As noted in the EIS, the project would likely displace other forms of energy usage, like coal or natural gas powered generation.

Compared to other threats to land use, the Clean Line project uses a relatively small amount of land. According to the Farmland Information Center, nearly 2.5 million acres of rural land was lost to development nationwide from 2007-2010. That's a loss of about 0.2% out of the nearly 1.4 billion acres of rural land. According to the National Resources Inventory by the U.S. Department of Agriculture, the United States loses about an acre of agricultural land every minute. Additionally, every year, about 7-11 million acres of cropland fails or is abandoned. That's about 3-5% of all cropland. Specifically in Arkansas, Oklahoma, Tennessee and Texas, about 122,000 acres of agricultural land are lost annually across the four states due to development.

Given that Clean Line's one-time-use of 5,916 acres is a very small portion of rural land development, many of the acres used can ultimately be returned to production, the project footprint is smaller than other forms of existing power generation, and that the clean wind power produced can offset the negative effects that other energy resources have on natural resources and public health, it's clear the Plains and Eastern Clean Line project is a net benefit to land and natural resource conservation.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Gloria Tatum
1103 Willivee Dr.
Decatur, GA 30033

From: Robt Temple
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Friday, July 10, 2015 1:44:22 PM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Robt Temple
738 Monroe Dr. NE #7
Atlanta, GA 30308

From: Ursula Tischner
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 11:22:06 AM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

Finally, the Department of Energy estimates Clean Line wind power will reduce carbon dioxide (CO2) emissions by up to 14,000,000 tons per year. That's about as much carbon dioxide released by 1.9 million homes' electricity use for one year, or about four coal-fired power plants. CO2 is a primary greenhouse gas, as well as contributor to ocean acidification.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Ursula Tischner
422 e 56th street
Savannah, GA 31405

TRAIL OF TEARS ASSOCIATION
RESOLUTION OPPOSING THE CLEAN LINE ENERGY ORGANIZATION
PROPOSED PLAINS AND EASTERN TRANSMISSION LINE ROUTE
ACROSS OR ALONG THE TRAI OF TEARS

WHEREAS; **Clean Line Energy** is an entity developing a series of transmission lines across the great plains region, and

WHEREAS; said Clean Line Energy proposes to establish a transmission line referred to as ***Eastern and Plains Line*** from western Oklahoma across the Cherokee Nation and Arkansas into Tennessee; and

WHEREAS; said *Eastern and Plains Line* route is projected to cross or run alongside the **National Historic Trail of Tears** route traveled by Cherokees during the forced removal of the Cherokee Nation from their ancestral homelands as designated by the National Park Service; and

WHEREAS; said route will be disruptive and destructive of the National Historic Trail routes and infringe on the interpretation and preservation thereof; and

WHEREAS; the Cherokee Nation Tribal Council passed Resolution #03-15 in opposition to the Plains and Eastern Clean Line project, and

WHEREAS; the **Trail of Tears Association** is a non-profit entity dedicated to protection and preservation of the National Trail of Tears Historic Trail and promotion of the historic legacy association with the removal of the Tribal Nations along said Trail, and

THEREFORE, BE IT RESOLVED by the **Board of Directors of the Trail of Tears Association** that said **Trail of Tears Association is opposed to the proposed Eastern and Plains Line proposed by the Clean Line Energy organization**.

Passed by unanimous consent of the National Trail of Tears Association Board of Directors in Brentwood Tennessee, this 31st day of March, 2015.

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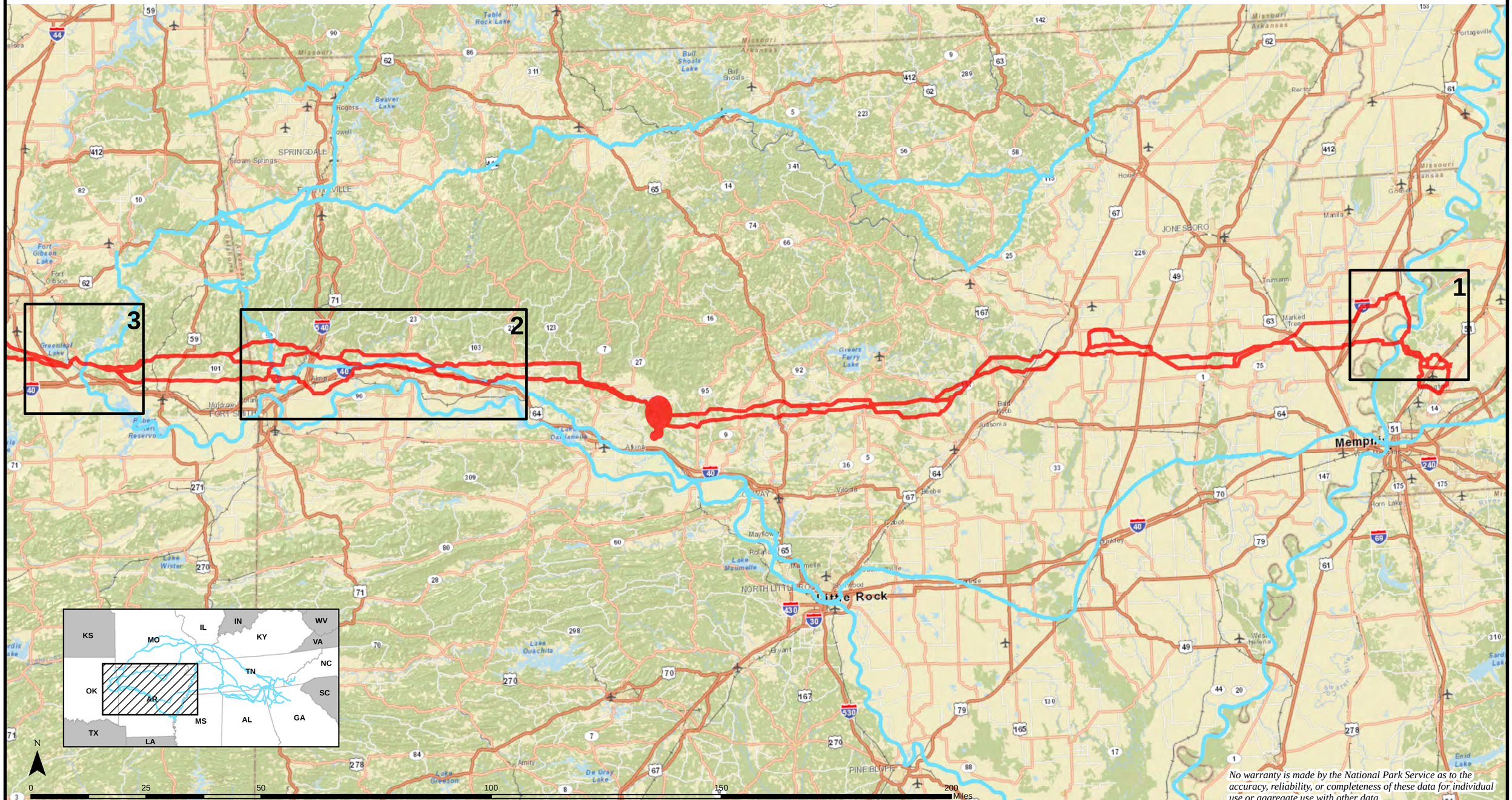
Trail of Tears National Historic Trail

Plains and Eastern Transmission Line

Plains and Eastern Network | Trail of Tears NHT | DRAFT



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4 February 2015

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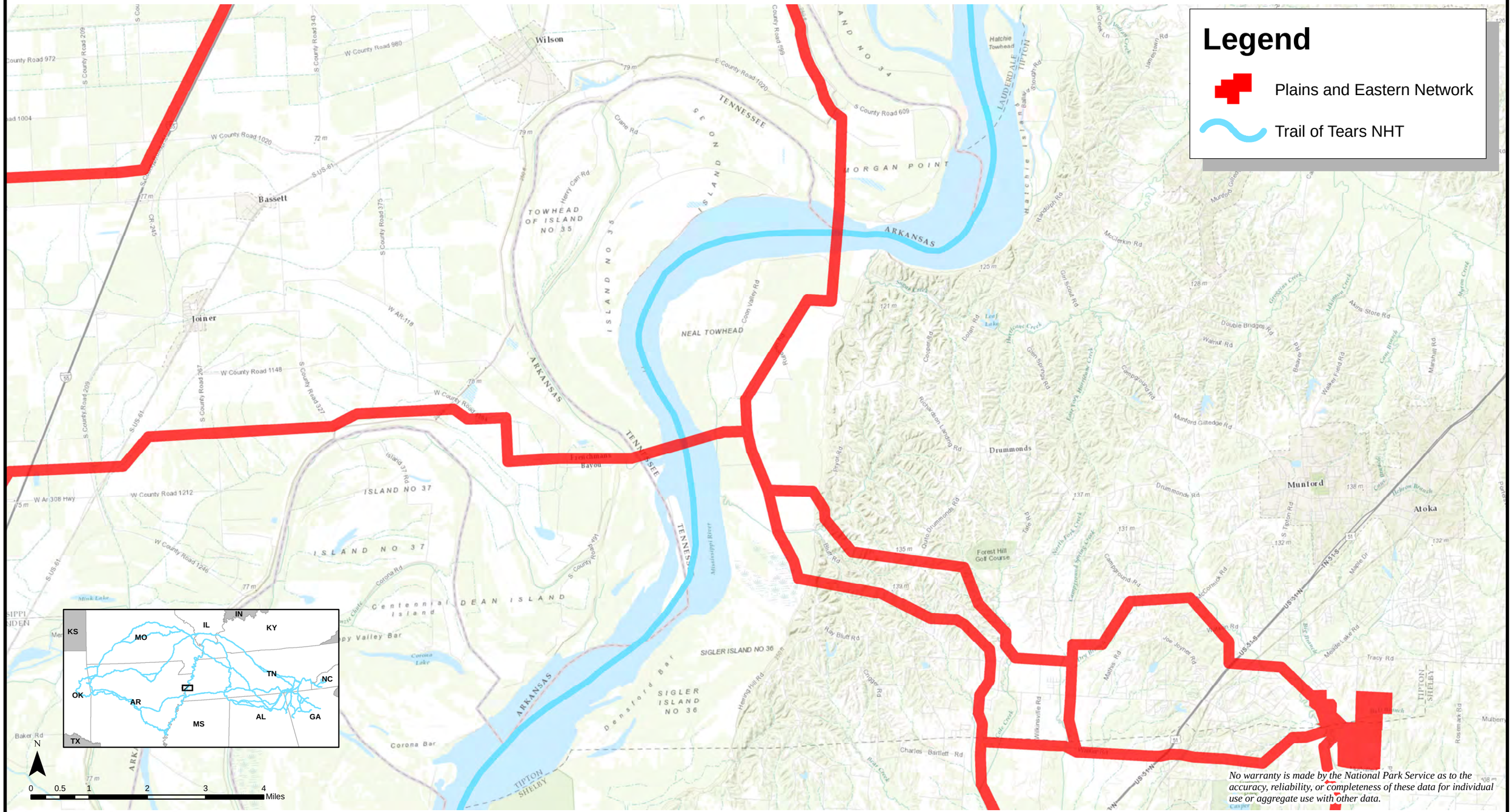
Plains and Eastern Transmission Line #1

DRAFT



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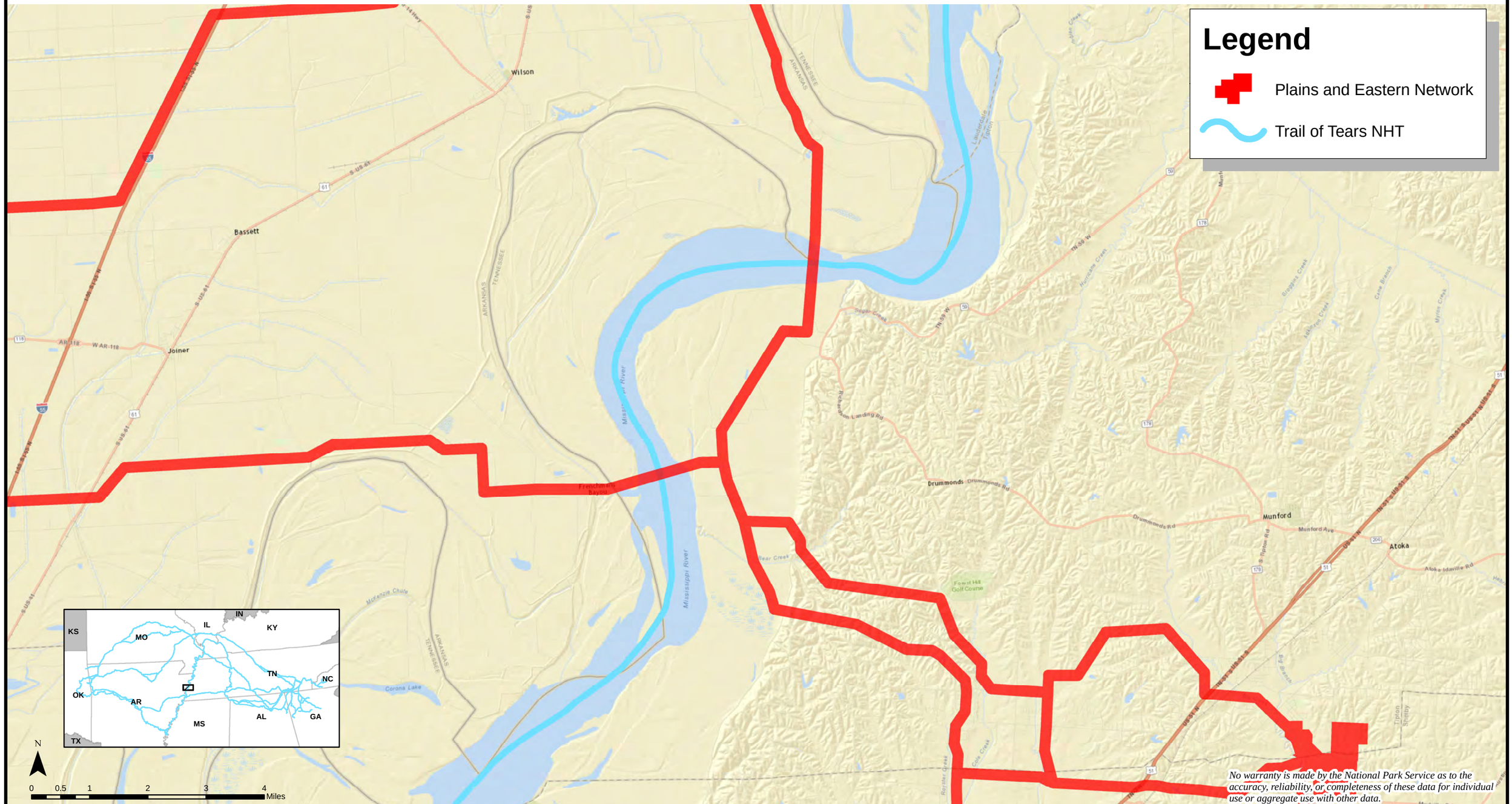
Plains and Eastern Transmission Line #1

DRAFT



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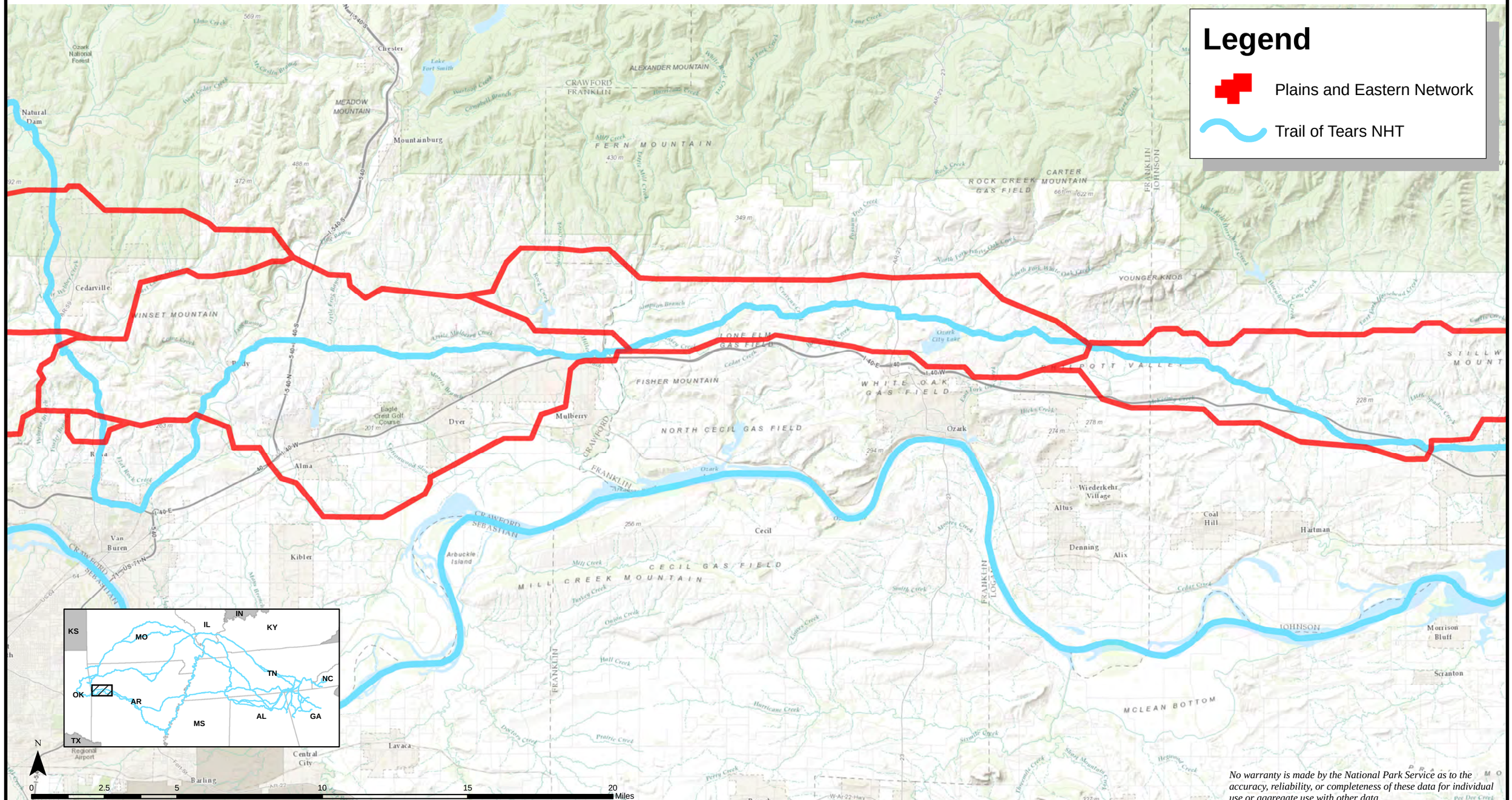
Plains and Eastern Transmission Line #2

DRAFT



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Plains and Eastern Transmission Line #2

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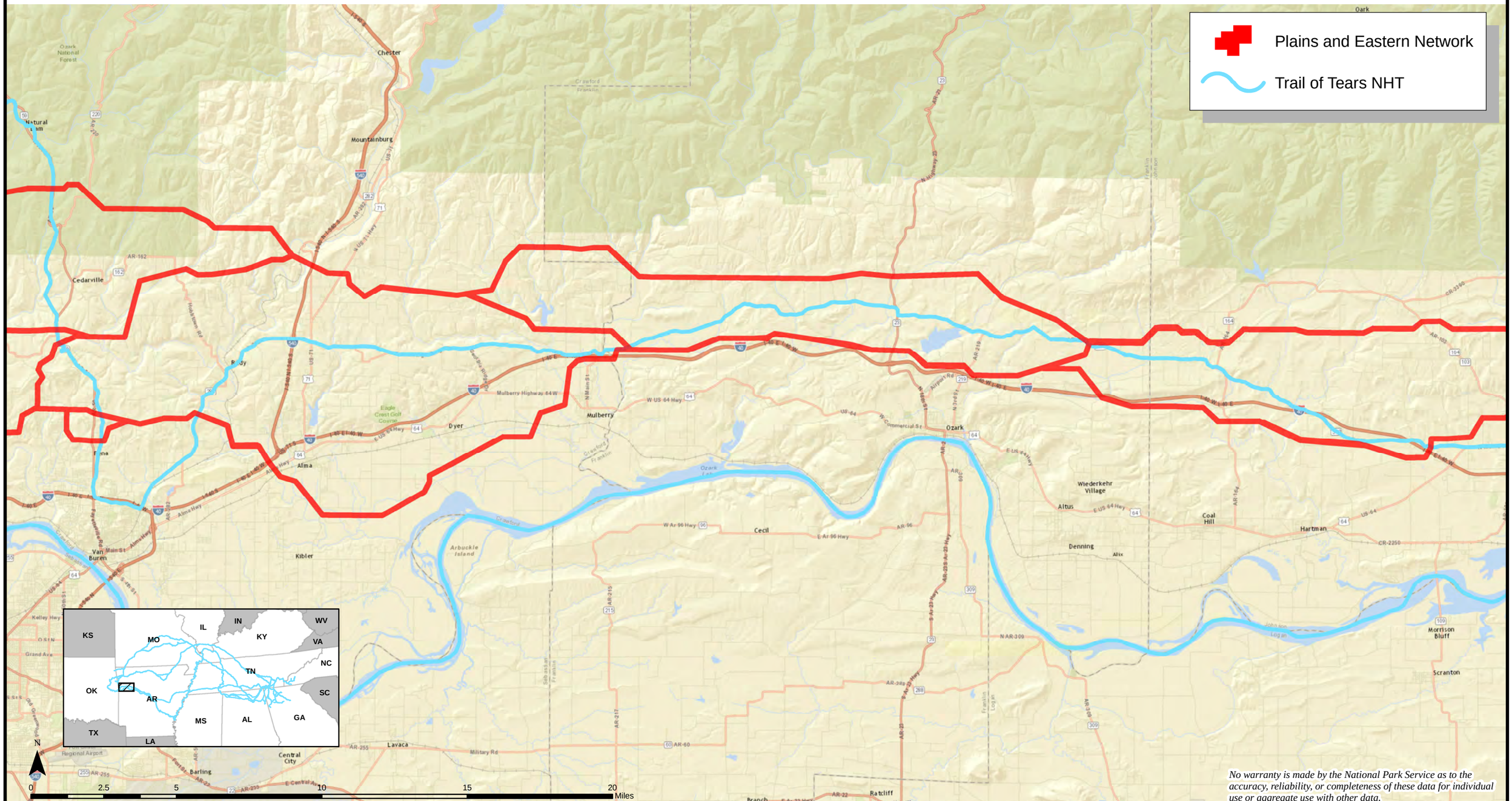

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Plains and Eastern Transmission Line #3

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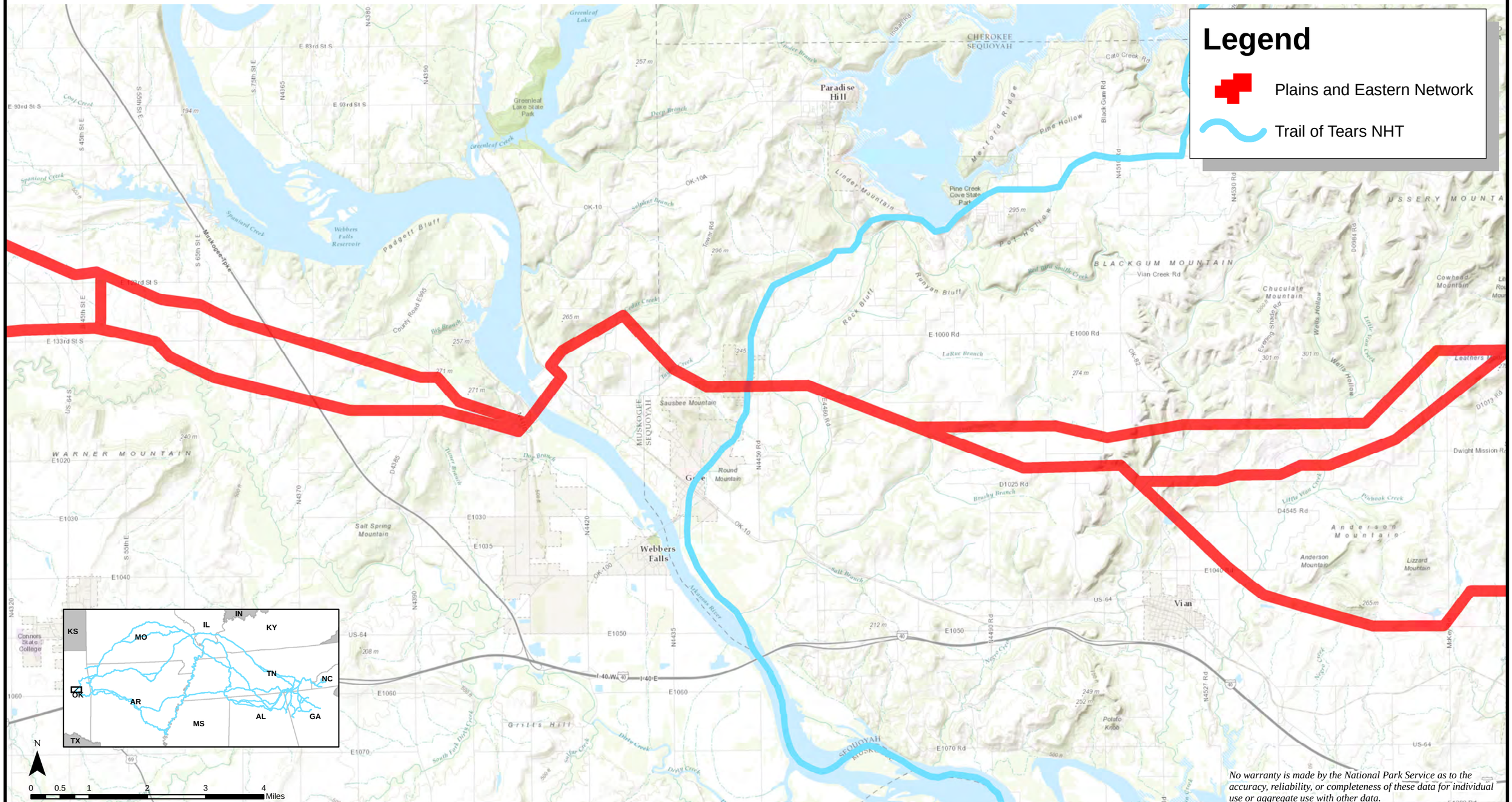

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Plains and Eastern Transmission Line #3

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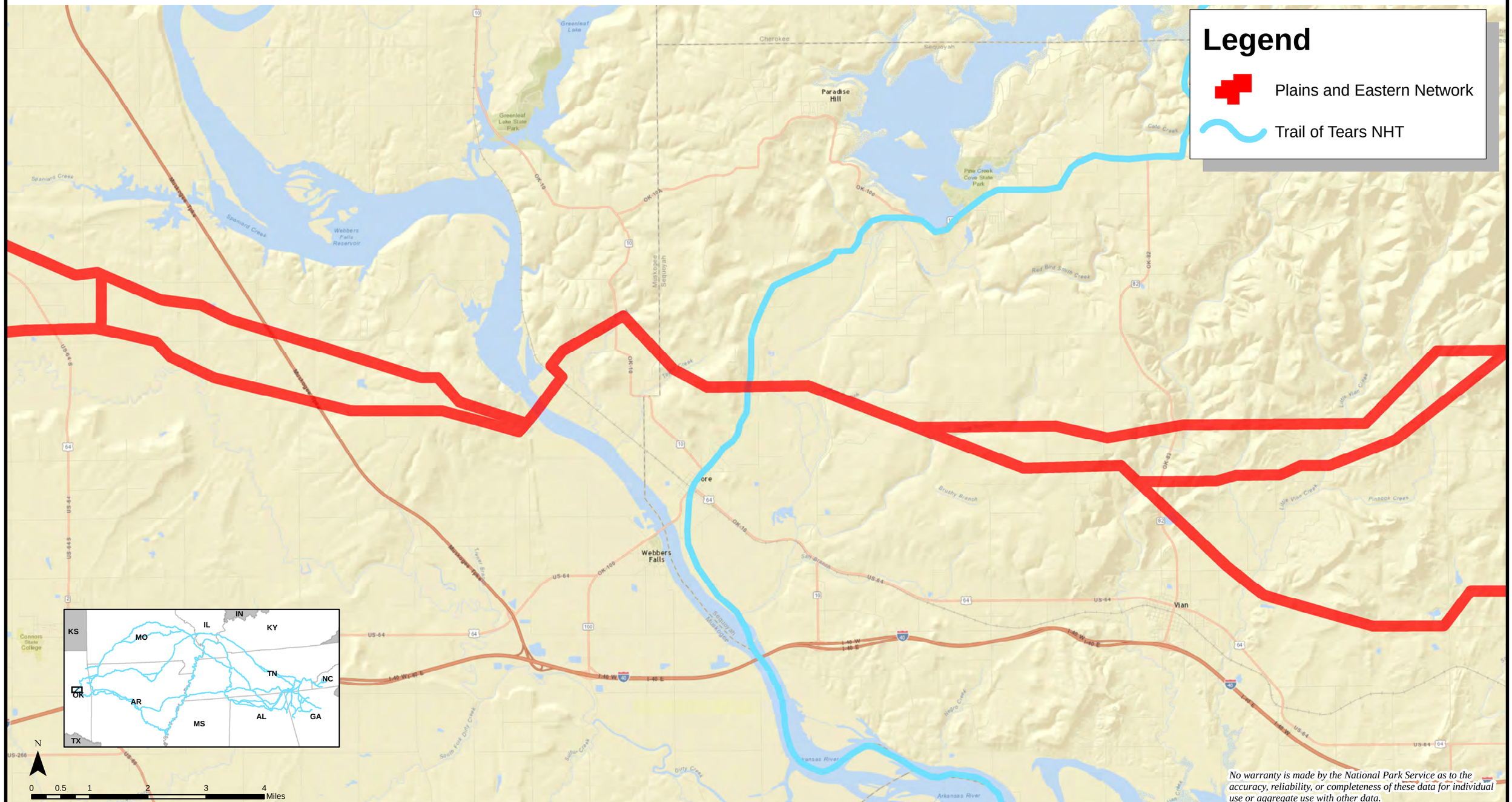

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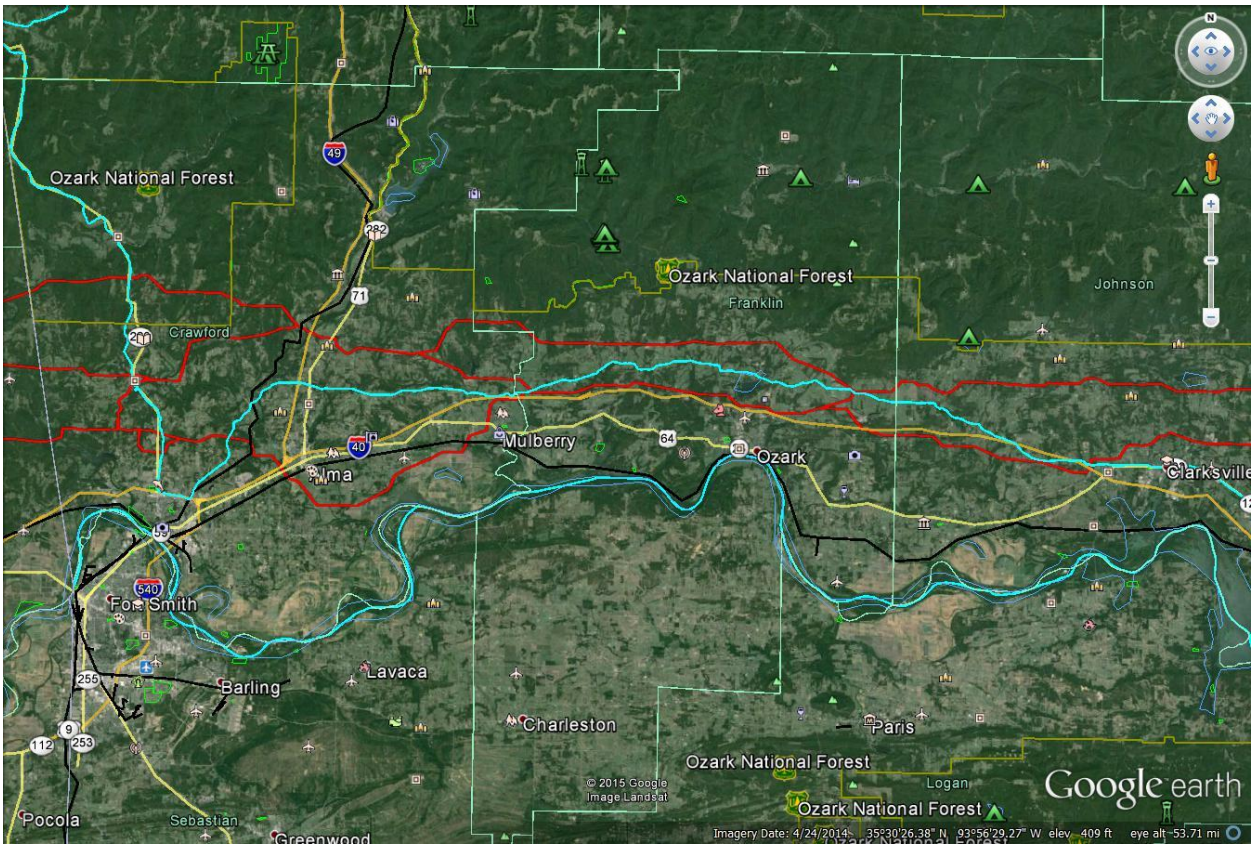
Ozark National Forest
Ozark National Forest
Franklin
Johnson
Crawford
Mulberry
Ozark
Clarksville
Alma
Fort Smith
Barling
Lavaca
Charleston
Paris
Ozark National Forest
Logan
Ozark National Forest
Pocola
Sebastian
Greenwood
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Image Landsat
Google earth
Imagery Date: 4/24/2014 35°30'26.38" N 93°56'29.27" W elev 409 ft eye alt 53.71 mi

From:	Dave Ulery
To:	CES.CommentsPlainSandEasternEIS; Alison Millsaps
Subject:	Missing petition text for BLOCK PECL...
Date:	Thursday, April 30, 2015 5:27:34 PM
Attachments:	Block PECL - Petition Text.pdf

To whom it concerns:

In viewing the comment submissions, I note that the Change.org petition text has been omitted here:

http://plainsandeasterneis.com/comments-on-the-draft-environmental-impacts-statement/category/36-other-groups-and-members-of-the-public-comments.html?download=250:week-ending-april-24-2015-u3-comments&start=40

and here:

http://plainsandeasterneis.com/comments-on-the-draft-environmental-impacts-statement/category/36-other-groups-and-members-of-the-public-comments.html?download=251:week-ending-april-24-2015-u4-signatures&start=40

Attached to this email is the petition text. I request that you add it to the top of both documents linked above. I would like to receive confirmation that you received this message, and that it was added. Thank you.

Dave Ulery

From: Louise Usechak
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 12:50:53 PM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Louise Usechak
20 Corn Lane
Shrewsbury, NJ 07702

From: Michael Vaughan
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Saturday, July 11, 2015 9:11:18 PM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

Finally, the Department of Energy estimates Clean Line wind power will reduce carbon dioxide (CO2) emissions by up to 14,000,000 tons per year. That's about as much carbon dioxide released by 1.9 million homes' electricity use for one year, or about four coal-fired power plants. CO2 is a primary greenhouse gas, as well as contributor to ocean acidification.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Michael Vaughan
2626 Weigelia Rd
Atlanta, GA 30345

From: Christine Von Kolnitz
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 7:31:12 AM

To Whom It May Concern:

I support the development and use of wind power for the Southeast. The proposed Plains and Eastern Clean Line wind power transmission project would connect substantial amounts of wind energy resources from the Plains to the Southeast. The project would also create tens of thousands of high quality jobs. Several utility companies are already purchasing wind power resources via existing alternating current (AC) transmission lines. These purchases are significant because much of our region has few or no requirements for the development or use of renewable energy resources; therefore, the existing purchases of wind energy are predominately dependent on low cost wind energy resources. But because existing transmission routes are limited, adding additional wind power resources from the Plains to the Southeast will be difficult without the Plains and Eastern Clean Line wind power transmission project.

Conservatively, the Plains and Eastern Clean Line project would support tens of thousands of high quality jobs over the life of the project. Supporting the Plains and Eastern Clean Line high voltage direct current transmission project would provide job benefits to the Southeast, and potentially beyond. Clean Line's project is anticipated to have its greatest jobs impact during the construction phase, with many fewer jobs for maintenance and operations. Clean Line has signed an agreement with General Cable for up to 25 million conductor feet of transmission line to be manufactured in Malvern, Arkansas. Pelco Structural LLC in Oklahoma will be providing tubular steel transmission structures (towers).

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Christine Von Kolnitz
1071 Cottingham Dr
Mount Pleasant, SC 29464

From: Christine Voss
To: CES.CommentsPlainSandEasternEIS
Subject: Support Clean, Wind Energy for the Southeast
Date: Thursday, July 09, 2015 7:44:47 AM

A newly proposed transmission project would connect high quality wind power to the Southeast. The proposed Plains and Eastern Clean Line project would provide up to 4,000 megawatts of wind power from western Oklahoma and Texas to the Southeast.

By using wind power instead of dirtier forms of power generation, the Plains and Eastern Clean Line project is anticipated to cut air pollution. Specifically, the U.S. Department of Energy calculated the project could displace up to 11,100 tons of nitrogen oxides (NOx) and sulfur oxides (SOx) by up to 33,000 tons annually per year. NOx and SOx emissions can cause asthma and other respiratory diseases, as well as premature death. They can also create smog, acid rain and nitrogen-polluted waterways.

Finally, the Department of Energy estimates Clean Line wind power will reduce carbon dioxide (CO2) emissions by up to 14,000,000 tons per year. That's about as much carbon dioxide released by 1.9 million homes' electricity use for one year, or about four coal-fired power plants. CO2 is a primary greenhouse gas, as well as contributor to ocean acidification.

Thank you for this opportunity to comment and please ensure the project is responsibly sited in order to provide access to wind power resources to the Southeast.

Christine Voss
106 Locust Ct.
Pine Knoll Shores, NC 28512

From:	Alex White
To:	CES.CommentsPlainSandEasternEIS
Cc:	Mark S Squillace
Subject:	Draft EIS late submission
Date:	Tuesday, April 28, 2015 3:11:56 AM
Attachments:	Alex White_Final Comment_Plains & Eastern Draft EIS.docx

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To whom it may concern:

Please accept and find attached my public comment to the Plains & Eastern Draft EIS. I understand that my comment will be considered "if practicable," but I hope the agency finds time to review it. I think the agency would find that it encapsulates a different perspective than many of the comments received.

Because this comment was completed as a law school assignment, I have cc'd my professor on this email.

Thank you,

Alex White

--
Alex White
J.D. Candidate 2015
University of Colorado Law School

Alex White
703 15th Street, Boulder, CO 80302 awhite1205@gmail.com

April 27, 2015

Dr. Jane Summerson, NEPA Document Manager
Plains & Eastern EIS
216 16th Street, Suite 1500
Denver, CO 80202

Re: Alex White Comments on the Draft Environmental Impact Statement for the Plains & Eastern Clean Line Transmission Project (DOE/EIS–0486)

Dear Dr. Summerson:

This comment supports Department of Energy (DOE) participation in the Plains & Eastern Clean Line Transmission Project ("Project"). Its specific, base position is to oppose the Draft EIS's potential No Action Alternative.[1] The comment does not take a stance on the relative merits of the various alternative line segments, although it does support the Arkansas Converter Station alternative.[2] Thus, in accordance with the comment's primarily generalized focus, the comment assumes a broader perspective than may be traditional in comments considered in conjunction with environmental impact statements. Its substance stresses the necessity to, and the impropriety of deciding not to, participate in and guide to completion the Project.

Although warranted in its own right, the Project serves as a representative example of the new, long-distance, interstate electric transmission infrastructure needed throughout the United States. The comment begins by summarizing and substantiating that need. Despite the near-unanimous recognition of that need, various long-established impediments operate to discourage

[1] For a description of the No Action Alternative, see U.S. DEP'T OF ENERGY , OFFICE OF ELEC. DELIVERY & ENERGY RELIABILITY, PLAINS & EASTERN CLEAN LINE PROJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT SUMMARY § S.5.3.1, at S-34 (2014) [hereinafter DRAFT EIS SUMMARY].
[2] For a description of the Arkansas Converter Station alternative, see U.S. DEP'T OF ENERGY , OFFICE OF ELEC. DELIVERY & ENERGY RELIABILITY, PLAINS & EASTERN CLEAN LINE PROJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT § 2.4.3.1, at 2-31 to 2-33 (2014) [hereinafter DRAFT EIS].

efforts to meet it. And new impediments have arisen to defeat even those recent efforts that were otherwise undeterred. Section 1222 of the Energy Policy Act of 2005 (EPAct 2005),[3] however, offers DOE the means by which to succeed where efforts through other avenues have failed. The comment highlights these impediments and failures and discusses the ways in which Section 1222 could overcome them. The comment premises its opposition to the No Action Alternative on the sum of these considerations. It concludes in turn that none of the Draft EIS's identified impacts of the Project overcome the prudency of DOE participation in the Project, which participation the comment urges is in the public interest. Finally, the comment also discusses some particular suggestions for DOE's participation and for the Project that most likely will contribute to a sounder overall result.

I. DOE should recognize that federal government involvement is necessary to stimulate new, long-distance, interstate electric transmission infrastructure in the United States.

Despite DOE's likely familiarity with the rationales behind modern calls for a broader assertion of federal authority over power transmission, the author feels they bear repeating here, and in general, cannot be stressed enough. As will be recounted below, the reasons for such pleas and the reasons behind the United States' need for new and upgraded high-voltage transmission infrastructure are in many respects inseparable. Thus, the comment begins in this Part I by summarizing the need for new transmission infrastructure, explaining the existing impediments to meeting the need for new infrastructure, and detailing the largely failed approaches utilized thus far. Then, Part II demonstrates the ways in which DOE is positioned to overcome these impediments with respect to the Project and thereby succeed where prior approaches have failed to meet the nation's current transmission needs.

[3] Energy Policy Act of 2005, Pub. L. No. 109-58, § 1222, 119 Stat., 594, 962 (2005) (codified at 42 U.S.C. § 16421).

A. DOE should take into account the need for new interstate electric transmission infrastructure in the United States.

Although a variety of factors contribute to the need for new interstate transmission infrastructure, two relatively modern developments stand out as the most prominent:

> (1) Federal- and state-level policies promoting competition in electric power generation and the concomitant deregulation of the wholesale electric power industry;[4] and
>
> (2) A dramatic increase in demand for renewable energy, prompted by policy shifts toward promoting and/or addressing energy independence, general environmental awareness and protection, and concerns about climate change, among other things.[5]

The competition policies and creation of regional wholesale markets—solidified in 1996 by Federal Energy Regulatory Commission (FERC) Order 888[6]—had the intended effect of inducing non-utility companies to construct substantial amounts of new generation capacity whose production was not, at least formally, linked to a particular geographic service territory.[7] Likewise, both the general public's increasing interest in a clean energy future and the various federal and state incentives and policy positions promoting renewable energy development[8] have driven investor and developer focus on renewable resources that often are geographically distant from population centers.[9]

The problem derives from the fact that, while these developments have occurred and are occurring still on the generation side of the electric power industry, the transmission side of the

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[4] Ashley C. Brown & Jim Rossi, *Siting Transmission Lines In a Changed Milieu: Evolving Notions of the "Public Interest" In Balancing State and Regional Considerations*, 81 U. COLO. L. REV. 705, 710–11 (2010); *see also* Sandeep Vaheesan, *Preempting Parochialism and Protectionism In Power*, 49 HARV. J. ON LEGIS. 87, 88 (2012) ("Legal barriers to new entry and competition in the generation sector have been steadily removed.").

[5] Brown & Rossi, *supra* note 4, at 711; Vaheesan, *supra* note 4, at 88 ("State and federal rules have . . . sought to place renewable energy on an equal economic footing with fossil fuel technologies and encourage entry by clean technologies.").

[6] Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 62 Fed. Reg. 12274 (Mar. 14, 1997) (codified at 18 C.F.R. pt. 35) [hereinafter Order 888].

[7] *See* Vaheesan, *supra* note 4, at 88.

[8] *See* Alexander D. White, Comment, *Compromise in Colorado: Solar Net Metering and the Case for Renewable Avoided Cost*, 86 U. COLO. L. REV. 101, 104, 106–07 (2015).

[9] Brown & Rossi, *supra* note 4, at 711, 737.

industry has not seen parallel developments. Instead, transmission infrastructure remains largely tied to the vertically-integrated public utilities that for most of the twentieth century constructed and operated the transmission lines necessary to deliver their generation to their captive customer base.[10] For the most part, such utilities operated within a specified and limited geographic area—often wholly within the borders of one state—and their transmission systems therefore were largely geographically isolated from the systems of other utilities in neighboring states.[11] Although many utilities interconnected their systems with larger regional grids in order to realize reliability benefits and various economic efficiencies,[12] these benefits and efficiencies were available primarily in the more densely populated regions of the country, such as the Northeast, and "this pattern of development did not emphasize the construction of very long-distance, inter-regional lines . . . ."[13] And in any event, control over, investment in, and maintenance of the intrastate grids remained dispersed to the individual utilities that constructed them. Understandably, such transmission infrastructure centered around population centers, as did the generation plants owned and operated by the monopolist utilities.[14]

The result is that, as the two modern developments at the outset have contributed to a generation-side power industry no longer wed to particular load centers, "[a] regime of long-distance trading of power has . . . been superimposed on a fragmented grid."[15] Thus, "[a]lthough

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[10] *See* ADAM VANN, CONG. RESEARCH SERV., R40657, THE FEDERAL GOVERNMENT'S ROLE IN ELECTRIC TRANSMISSION FACILITY SITING 1 (2010).
[11] *See* Jim Rossi, *The Trojan Horse of Electric Power Transmission Line Siting Authority*, 39 ENVTL. L. 1015, 1018–19 (2009) [hereinafter Rossi, *The Trojan Horse*].
[12] VANN, *supra* note 10, at 2.
[13] STAN MARK KAPLAN & ADAM VANN, CONG. RESEARCH SERV., R41193, ELECTRICITY TRANSMISSION COST ALLOCATION 4 (2010), *available at* http://digital.library.unt.edu/ark:/67531/metadc93838/m1/1/high_res_d/R41193_2010Apr19.pdf.
[14] The traditional utility structure, discussed in this paragraph and below, begets the jurisdictional impediments discussed in Section B.
[15] Vaheesan, *supra* note 4, at 88.

regional markets and renewable energy promise significant economic and environmental benefits, they are unlikely to realize their full potential without new transmission capacity."[16]

1. Deregulation exacerbates the need for transmission infrastructure.

With respect to modern, competitive wholesale markets, deregulation has had the perverse—although not ultimately unjustified—effect of creating a greater demand for transmission capacity while simultaneously disincentivizing investment in it. The investment disincentive is inherent in a condition necessary for functional competitive markets: open, non-discriminatory access to transmission. If the incumbent, vertically-integrated utilities could favor their own generation through reserved capacity or lower prices, market entry would be discouraged.[17] Thus, in Order 888, FERC required utilities to "functionally unbundle" their transmission and generation operations and to file with FERC an Open Access Transmission Tariff (OATT) that provided minimum terms and conditions of non-discriminatory service.[18] In essence, this allowed new generators, who paid nothing for the transmission necessary to carry their power, to pay the same transmission rates that the utilities, who (through their ratepayers) did pay for that transmission, had to now charge their newly separated generation entities. Although critical to the functional operation of competitive wholesale markets, open access thus injected a free-rider problem to the prospect of transmission development.[19] New independent generators, with neither the economic incentive nor, most likely, the means to build additional transmission capacity, could nonetheless demand fair access to any new transmission capacity

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[16] *Id.*
[17] *See* Brown & Rossi, *supra* note 4, at 729 ("[N]ew entrant bulk power suppliers must have access to transmission under terms and conditions that are comparable to existing suppliers, rather than on conditions that are anticompetitive.").
[18] Order 888, *supra* note 6, at 12276.
[19] *See* Steven J. Eagle, *Securing a Reliable Electricity Grid: A New Era In Transmission Siting Regulation?*, 73 TENN. L. REV. 1, 4–6 (2005); *see also* KAPLAN & VANN, *supra* note 13, at 4.

built by utilities. And utilities, whose expenditures are ultimately recouped from ratepayers,[20] faced greater opposition to such investments from state regulators reluctant to tax ratepayers for projects whose benefits they would be forced to share on equal terms with the independent generators.

Relatedly, the market-induced demand for new transmission is both actual and systemically inherent. Bulk power supply markets depend for their success on the physical availability of transmission capacity; otherwise, market entry will be artificially impeded.[21] A potential generation supplier who finds it economically justified to build a plant and sell power on the wholesale market will nonetheless fail to do so if transmission constraints preclude delivering such power to buyers. And as noted above, deregulation has in fact already spurred independent power producers to build substantial amounts of new generation.[22] But because utilities operating under the traditional regulatory framework had little incentive to build transmission beyond that required to bring their own generation to their customers, that existing infrastructure is presently strained by the addition of new, non-utility generation.[23]

2. The increased demand for renewable energy exacerbates the need for transmission infrastructure.

With respect to the demand for renewable energy, "[i]t is impossible to talk about developing renewable energy resources in the United States without also talking about developing electric transmission infrastructure."[24] New transmission is needed because "[m]any renewable resources, such as wind and solar, are geographically distant from the large load

[20] White, *supra* note 8, at 113–14.
[21] *See* Brown & Rossi, *supra* note 4, at 729.
[22] *See supra* note 7 and accompanying text.
[23] *See* Brown & Rossi, *supra* note 4, at 730.
[24] Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801, 1802 (2012).

centers that may need them."[25] The valuable wind resources of the Oklahoma panhandle region subject to development under the Project are a case in point. Indeed, "[g]iven that wind power—the most economically viable renewable resource on a bulk-power basis—is feasible predominantly in locations far removed from load centers, the demand for new multistate transmission facilities has been brought clearly into focus."[26] Unlike fossil fuel resources, which can be harvested where they occur naturally and transported near existing transmission infrastructure for localized generation, renewable resources do not accommodate such flexibility and instead must be processed where they are found. Thus, transmission infrastructure must be brought to them. But because of utilities' historic reliance on fossil fuel resources and the superior economics of building fossil fuel-fired generation close to population centers, such infrastructure is largely nonexistent today.

* * *

The need for new transmission infrastructure is not merely one grounded in industry-efficiency considerations; rather, it is grounded in benefitting and protecting the public. Without a modernized and expanded grid, the public will be increasingly susceptible to widespread power outages caused by extreme weather events, reliability failures, and congestion constraints; will be left exposed to grid-targeting cyber attacks and growing energy prices; and will be unable to realize the benefits of large-scale renewable energy integration.[27] Accordingly, DOE must recognize that efforts to meet the country's transmission needs are synonymous with efforts to serve the public interest.

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[25] Brown & Rossi, *supra* note 4, at 737.
[26] *Id.* at 711.
[27] *See* Alexandra B. Klass, *The Electric Grid at a Crossroads: A Regional Approach to Siting Transmission Lines*, 48 U.C. DAVIS L. REV. (forthcoming 2015) (manuscript at 17–19) (referenced with author's permission) [hereinafter Klass, *Crossroads*], *available at* http://www.law.northwestern.edu/research-faculty/searlecenter/events/energy/documents/Electric_Grid_at_a_Crossroads_KLASS.pdf.

Having summarized the present need for new, long-distance transmission infrastructure, the comment next outlines some of the primary impediments to its development. These impediments are, to a significant extent, inseparable from the conditions contributing to the present need. But in order to highlight the importance of DOE participation in the Project, it is worthwhile to consider the impediments separately.

B. DOE should take into account the fundamental jurisdictional impediment and other existing barriers to the construction of new interstate transmission infrastructure.

Overlaying the current need for new transmission infrastructure is a fundamental jurisdictional impediment to its achievement—a problem also originating from the interaction between the vestiges of the traditional public utility model and dynamic modern developments in the electric power sector. That impediment is a combination of state jurisdiction over transmission siting approval—and, relatedly, over which entities receive approval to utilize the power of eminent domain within a state—and over rate regulation. As a consequence of this jurisdictional framework, "any interstate line must obtain siting permission and eminent domain authority from every state through which it passes, following each state's permitting process and standards."[28] As explained below, this is a problem.

Transmission siting decisions in some states are made by localities exercising land-use regulatory authority, but the predominant modern model vests a centralized agency in each state with power over such decisions.[29] Regardless of which decisionmaking framework is in place, however, two fundamental aspects of the siting paradigm remained unchanged.[30] These aspects—(1) that the cost of new transmission is recovered through retail rates by the utility

[28] Alexandra B. Klass, *Takings and Transmission*, 91 N.C. L. REV. 1079, 1101 (2013) [hereinafter Klass, *Takings and Transmission*].
[29] Brown & Rossi, *supra* note 4, at 707. For a discussion of the transition to this modern model, see *id*. at 706–09.
[30] *Id*. at 709.

building it and (2) that states retain near-exclusive jurisdiction over siting decisions[31]—combine to impede many efforts to construct new interstate transmission facilities. Though technically separate factors, their effects are intertwined.

Currently, most states impose cost-of-service rate regulation on (more or less) vertically integrated public utilities operating within the state's borders.[32] Under cost-of-service regulation,[33] a utility's expenditures on new transmission facilities are recouped from its ratepayers through retail electricity rates.[34] This pervasive practice ties the costs of utility-built transmission to a particular geographic area. And although retail ratepayers commonly are credited over time for the revenues later derived from wholesale users of the transmission line,[35] the ratepayers nonetheless must bear "the full risk of the residual revenue responsibility for the line . . . ."[36] Thus, "the allocation of costs [is rendered] a critical (in many cases, determinative) component of obtaining siting approval for a proposed new transmission line."[37] Cost-of-service ratemaking therefore provides state siting agencies with "a powerful economic incentive to be parochial in siting decisions."[38] From a cost-based perspective, states inherently are discouraged from approving an interstate transmission line being built by a jurisdictional utility if the costs or financial risk of the line are carried by local ratepayers while the benefits are realized primarily in another state.[39] The resulting impediment to new interstate lines, of course, derives from the fact that states retain jurisdiction over the decision whether to grant siting approval for such lines.

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[31] *Id.* at 709–10.
[32] *See* White, *supra* note 8, at 112.
[33] For a brief summary of cost-of-service rate regulation, see *id.* at 112–14.
[34] *Id.*
[35] Brown & Rossi, *supra* note 4, at 727.
[36] *Id.* at 709.
[37] *Id.* at 709–10.
[38] *Id.* at 710.
[39] *Id.*

Relatedly, and compounding the problem, some states grant eminent domain authority only to public utilities[40]—a fact that renders cost-allocation concerns fundamentally germane to all transmission siting decisions made by those states' siting agencies. The separate, obvious implication of this condition is that merchant transmission is precluded in such states unless the merchant line obtains public utility status there. This topic is broached further below; for now, suffice it to say that this aspect of states' current control does nothing to smooth the path of new transmission development.

Even where a transmission line technically could receive state approval, the state model is skewed against approval of interstate lines. State regulators typically have focused on (1) a "determination of the operational and economic 'need' for a transmission line, and (2) an assessment of the environmental impacts of building a [transmission] line."[41] This orientation disadvantages new interstate lines significantly. To determine whether there is a "need" for a particular new transmission facility, states historically have focused on weighing the costs and benefits of the new line to determine whether the new line would benefit intrastate ratepayers.[42] In making these determinations, "state officials likely place greater weight on in-state costs and benefits and discount costs and benefits accruing to other states."[43] Indeed, many regulators are forced by law to take this approach in making need determinations.[44] And even when no law prohibits state regulators from considering out-of-state benefits, they nonetheless are naturally incentivized to favor in-state benefits by virtue of their political accountability to their state's

[40] *See* Klass, *Takings and Transmission*, *supra* note 28, at 1123–26.
[41] Rossi, *The Trojan Horse*, *supra* note 11, at 1019.
[42] *Id*. at 1019–20; Vaheesan, *supra* note 4, at 115–16.
[43] Vaheesan, *supra* note 4, at 116.
[44] Brown & Rossi, *supra* note 4, at 722.

residents.[45] Because many new interstate lines, such as the Project, generate local costs and primarily regional benefits, they often fail to satisfy individual states' need criteria.[46]

Interstate lines face similar hurdles to siting approval under state agencies' consideration of environmental impacts. Because "eminent domain is the main legal significance of siting approval," the environmental issues aspect of a state's siting determination is often limited to local impacts.[47] Although traditional environmental impacts, such as pollution and emissions, are considered, "the vast majority of the debate in . . . siting proceedings is focused on impacts to local landowners and other [NIMBY] concerns."[48] Arkansas landowners' comments to the Draft EIS demonstrate these concerns. When dealing with proposed interstate lines, state regulators are likely to overemphasize these local concerns, and NIMBYism therefore can prevent approval of even those interstate lines with significant overall benefits.[49] Indeed, local impacts have defeated state approval even where the financial costs of a transmission line would not have been assessed locally.[50]

Even if a new transmission line ultimately could succeed in garnering the blessing of each locality and/or state through which it planned to pass, the transaction costs of seeking (and defending against opposition to) numerous separate approvals could be prohibitive. In light of the aforementioned deregulation- and renewable-related pressures on the country's existing transmission infrastructure, the state jurisdictional impediment has become more pronounced than ever before. Hence the calls over the past decade for preemptive federal siting authority.[51]

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[45] Vaheesan, *supra* note 4, at 115.
[46] *Id*. at 116.
[47] Rossi, *The Trojan Horse*, *supra* note 11, at 1021.
[48] *Id*.
[49] *See* Eagle, *supra* note 19, at 25–26.
[50] Rossi, *The Trojan Horse*, *supra* note 11, at 1022 (detailing Arizona regulators' refusal to grant siting approval for a transmission line that would have brought power from Arizona to California and would have been paid for by California ratepayers).
[51] *See, e.g.*, VANN, *supra* note 10, at 12–13.

Although states level vociferous objection to such authority, there is an "obvious irony" in their contentions: "while much of the states' political opposition to the expansion of federal siting authority focuses on arguments against preemption of local authority, the irony is that states themselves only acquired siting powers by expressly preempting local jurisdictions."[52] Against the backdrop of this jurisdictional complication, the next section describes the ways in which other options and approaches to meeting the current transmission need have either failed outright or failed effectively. The sum of these considerations points emphatically to the conclusion that DOE should act on its available authority to guide the Project forward.

C. The failure of other options and approaches demands that DOE act on available authority.

This section summarizes the to-date failure of three once-auspicious methods of constructing new transmission infrastructure in the twenty-first century.

1. The failed potential of merchant transmission.

The inherent disincentives to transmission development and looming protectionist power of state jurisdiction was not entirely lost on the architects of electric industry reform. Thus, when the federal government initiated the transition to deregulated wholesale markets, it was expected that merchant transmission companies would step in to ameliorate at least a portion of the anticipated accompanying dearth of transmission infrastructure development.[53] "Merchant" transmission companies are private companies that, unlike traditional public utilities, bear the market risk of constructing transmission projects and recover project costs through negotiated

[52] Brown & Rossi, *supra* note 4, at 741.
[53] *See, e.g.*, PAUL L. JOSKOW, CTR. FOR ENERGY & ENVTL. POL'Y RES., TRANSMISSION POLICY IN THE UNITED STATES 46–47 (2004), *available at* http://dspace.mit.edu/bitstream/handle/1721.1/45025/2004-017.pdf?sequence=1&origin=publication_detail.

rates, as opposed to cost-based rates imposed on a captive customer base.[54] In theory, the newly competitive wholesale marketplace would have allowed for the possibility of selling power from cheaper markets into markets where high demand and congestion rendered power prices inflated.[55] Thus, merchant transmission naturally would be encourage by the prospect of "earn[ing] revenues from exploiting price differentials between" these different markets.[56]

Yet, this expectation did not materialize. And today, merchant transmission companies own only approximately four percent of the country's transmission facilities.[57] This failure likely is attributable to the same jurisdictional scenario impeding traditional utilities' transmission development.[58] State pushback to interstate merchant lines followed almost immediately behind the restructuring efforts. One of the initial driving forces behind this opposition was protectionism in favor of incumbent, jurisdictional utilities that often have the ear of state regulators and fear the competitive potential of merchant transmission.[59] The Cross-Sound Cable story is representative. Without delving into the elsewhere-exhausted details,[60] state opposition embroiled the Cross-Sound merchant line in legal battles for nearly two years before it achieved operation only after the Northeastern Blackout of August 2003 underscored its necessity and Federal Energy Regulatory Commission (FERC) intervened directly.[61]

Although the increased demand for renewable energy is making merchant transmission projects more attractive again, the same state-opposition impediments persist. As noted above,

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[54] *See* Klass, *Takings and Transmission*, *supra* note 28, at 1096 n.99.
[55] Vaheesan, *supra* note 4, at 111.
[56] *See id.*
[57] Klass, *Takings and Transmission*, *supra* note 28, at 1121–22.
[58] *See supra* Part I.B.
[59] *See* Vaheesan, *supra* note 4, at 120–21.
[60] For a chronology of the battle surrounding the Cross-Sound Cable, see Linda L. Randell & Bruce L. McDermott, *Chronicle of a Transmission Line Siting: Cross-Sound Cable Co. Shows How Transmission Siting is Much Harder to do Now than in the Good Old Days*, PUB. UTILS. FORTNIGHTLY, Jan. 1, 2003, *available at* http://www.wiggin.com/files/Cross%20Sound%20Cable%20Co.pdf. *See also* Vaheesan, *supra* note 4, at 121–22.
[61] *See* Vaheesan, *supra* note 4, at 122.

some states grant siting approval and its associated eminent domain authority only to public utilities and will not confer utility status to merchant transmission companies.[62] A handful of states have granted "transmission-only" utility status to merchant lines and thereby given those lines eminent domain authority;[63] however, the laws of a majority of states either prohibit merchant lines from using eminent domain or do not speak to the issue, therefore leaving the decision to state regulators.[64] In turn, when determining whether there is the requisite "public use" or "public benefit" to justify using eminent domain for a new line,[65] those regulators employ the same intrastate-focused cost-benefit inquiries already parsed. As seen with the Project itself, interstate transmission expansions "spawn massive NIMBY concerns, frequently generating state and local opposition."[66] Consequently, many proposed merchant lines have been unable to survive states' parochial impact analyses[67] despite their theoretical ability to overcome the cost-allocation impediments of state ratemaking jurisdiction.

The Project provides a case in point, having reached divergent outcomes before the regulatory authorities of the three states through which it seeks to pass. In its origin state, Oklahoma, although the Project gained approval to operate as a transmission-only public utility, it did not receive eminent domain authority.[68] The Oklahoma agency did not deny eminent domain authority either; rather, it asserted a lack of jurisdiction to make the determination.[69] In

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[62] *See supra* Part I.B.
[63] Klass, *Takings and Transmission*, *supra* note 28, at 1121.
[64] *See id.* at 1124–26.
[65] *Id.* at 1105–06, 1108.
[66] Jim Rossi, *Transmission Siting In Deregulated Wholesale Power Markets: Re-imagining the Role of Courts in Resolving Federal-State Siting Impasses*, 15 DUKE ENVTL. L. & POL'Y F. 315, 319 (2005).
[67] *See supra* Part I.B; *see also* Vaheesan, *supra* note 4, at 118–20 (describing the demise of the New York Regional Interconnect, largely because of NIMBY opposition).
[68] Application of Plains & Eastern Clean Line LLC, to Conduct Bus. as an Elec. Util. in the State of Okla., No. 590530, at 15, 17 (Okla. Corp. Comm'n Oct. 28, 2011), *available at* http://www.plainsandeasterncleanline.com/sites/plains_eastern/media/OK.PUD_2010-00075.Order_Approving_Utility_Status_1.pdf.
[69] *Id.* at 12 ("OCC does not have subject matter jurisdiction to determine whether Clean Line may exercise the power of eminent domain in any instance. Such jurisdiction rests with the district courts.").

its terminus state, Tennessee, on the other hand, the Project was granted both public utility status and concomitant eminent domain authority.[70] But on the other end of the spectrum, in its intermediate state, Arkansas, the Project was denied both public utility status and, by default, eminent domain authority.[71] Despite the fact that the Arkansas agency was generally supportive of Clean Line's goals and was "not opposed to independent transmission construction," it felt that its hands were tied by state law.[72] Indeed, the agency's order highlighted directly the systemic issues plaguing transmission development: "The difficulty the [agency] now faces is that the law governing public utilities was not drafted to comprehend changes in the utility industry such as this one—where a non-utility, private enterprise endeavors to fill a void in the transmission of renewable power that is much needed . . . ."[73]

Under the status quo, the potential of merchant transmission to meet the United States' transmission needs has failed—many proposed merchant transmission projects have folded, and untold others have been deterred from seeking approval in the first place. Likewise, absent federal intervention, the Project and many similarly situated future interstate merchant ventures will flounder in the morass of loosely juxtaposed state permitting regimes. As the following subsection shows, however, one formerly promising effort at facilitating such federal intervention has thus far been thwarted, rendering paramount DOE's ability to act upon available authority to carry the Project forward.

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[70] Michael Sheffield, *$2B Wind Power Project Gets State Approval*, MEMPHIS BUS. J. (Jan. 15, 2015, 2:32 PM), http://www.bizjournals.com/memphis/news/2015/01/13/2b-wind-power-project-gets-state-approval.html?page=all; *see also* E-mail from Kelly Cashman-Grams, Deputy General Counsel and Hr'g Officer, Tenn. Regulatory Auth'y, to Julie Morton (Jan. 16, 2015, 3:41 PM), *available at* http://www.tn.gov/tra/orders/2014/1400036bh.pdf.
[71] Application of Plains & Eastern Clean Line LLC for a Certificate of Pub. Convenience & Necessity as an Elec. Transmission Util. in the State of Ark., No. 9, at 9–11 (Ark. Pub. Serv. Comm'n Jan. 11, 2011), *available at* http://www.apscservices.info/pdf/10/10-041-u_41_1.pdf.
[72] *Id.* at 9, 11.
[73] *Id.* at 10.

2. The failed potential of § 1221 of EPAct 2005.

Although Congress undoubtedly has the authority to vest FERC with expansive preemptive siting power for interstate lines,[74] like it has done for natural gas pipelines,[75] it has yet to take that politically contentious step. In EPAct 2005, however, Congress made a tentative but progressive move in that direction. Among various notable provisions, section 1221[76] targeted most directly the fragmented jurisdictional arrangement plaguing transmission development. That section "established what is commonly called 'backstop' siting authority for FERC"[77] under certain circumstances. The provision first directed the Secretary of DOE to study triennially electric transmission congestion on the U.S. grid.[78] The provision next vested the Secretary with discretionary power to designate, consistent with such congestion studies, National Interest Electric Transmission Corridors (NIETCs),[79] which are "geographic areas experiencing transmission congestion that adversely affects consumers and wherein the relief of congestion would promote this country's energy independence, national security, and economic growth."[80] It is within NIETCs that section 1221 granted FERC its new authority to issue permits for and approve siting of new or upgraded transmission facilities, provided that one of five circumstances is present.[81]

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[74] For a thorough exposition of the rationales supporting Congress's ability to regulate the siting component of interstate electric transmission under the Commerce Clause, see VANN, *supra* note 10, at 3–8. "[P]recedent seems to reflect a consistent determination by the [United States Supreme] Court that legislation that impacts electricity transmission, even if the direct impact of the legislation is local, necessarily affects interstate commerce." *Id.* at 8.
[75] Klass & Wilson, *supra* note 24, at 1859–60.
[76] 16 U.S.C. § 824p (2012).
[77] VANN, *supra* note 10, at 8.
[78] *See* Klass, *Crossroads*, *supra* note 27, at 16.
[79] 16 U.S.C. § 824p(a)(2).
[80] Debbie Swanstrom & Meredith M. Jolivert, *DOE Transmission Corridor Designations & FERC Backstop Siting Authority: Has the Energy Policy Act of 2005 Succeeded In Stimulating the Development of New Transmission Facilities?*, 30 ENERGY L.J. 415, 431 (2009).
[81] VANN, *supra* note 10, at 8–9; *see also* 16 U.S.C. § 824p(b).

Although section 1221 thus "pave[d] the way for the first significant federal role in electric transmission facility siting;"[82] and although heralded at the time of its passage as having "the potential to fix several of the siting problems currently plaguing the industry" and as a provision whose limitations "do not undermine the significance of the new federal authorization powers";[83] the provision has thus far proven impotent. In addition to states' political opposition, the only two federal appellate court decisions construing section 1221 have hampered—and, perhaps, crippled—its import.

From simply a progress perspective, federal siting authority incurred a major setback in 2011 when the United States Court of Appeals for the Ninth Circuit invalidated DOE's initial, and only, two NIETC designations.[84] As a result of its first congestion study conducted pursuant to section 1221, DOE had in 2007 designated one NIETC in the Southwest and another in the Mid-Atlantic.[85] In a 2-1 decision, however, a panel of the Ninth Circuit determined that DOE's congestion study and NIETC designations were invalid because DOE failed to "[consult] with affected States" before issuing its study, as required by section 1221,[86] and because DOE failed to comply with the National Environmental Protection Act (NEPA) before making its designations.[87] As a result, DOE was relegated back to its drawing board and has not issued an NIETC designation since. To date, "DOE has not successfully designated a NIETC, and FERC has not exercised its backstop siting authority."[88]

But the more fundamental, legal blow dealt to section 1221's promise came two years earlier from the United States Court of Appeals for the Fourth Circuit. In *Piedmont*

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[82] *See* VANN, *supra* note 10, at 8.
[83] Eagle, *supra* note 19, at 38.
[84] Cal. Wilderness Coalition v. U.S. Dep't of Energy, 631 F.3d 1072, 1107 (9th Cir. 2011).
[85] Klass & Wilson, *supra* note 24, at 1817.
[86] *Cal. Wilderness Coalition*, 631 F.3d at 1107; *see also* 16 U.S.C. § 824p(a)(1) (2012).
[87] *See Cal. Wilderness Coalition*, 631 F.3d at 1107; Klass & Wilson, *supra* note 24, at 1817.
[88] Klass, *Takings and Transmission*, *supra* note 28, at 1127.

Environmental Council v. FERC, the Fourth Circuit considered a challenge to a FERC regulation interpreting one of the five circumstances in which section 1221 allows the exercise of federal siting authority within a NIETC—namely, where a state has "withheld approval [of a siting permit] for more than 1 year after the filing of an application."[89] FERC had concluded that "withheld approval for more than 1 year" included situations in which a state denied siting approval within one year.[90] But, in a 2-1 decision, the Fourth Circuit disagreed, holding that FERC's interpretation ran afoul of section 1221's language and precluding a state's denial of a permit application from triggering federal permitting authority under section 1221.[91] It is noteworthy that the dissent, before disagreeing with the majority opinion on its own terms, began with an exposition of the antiquated state-jurisdiction model and EPAct 2005's underlying goal of meeting the country's critical transmission needs through broader federal siting authority.[92]

Although the *Piedmont* decision impacted only one of the five grounds justifying FERC siting authority, it has been interpreted as "seriously hobbling FERC's ability to implement [that] authority."[93] This is because the "withheld approval" ground is the only one with any appreciable potential to implicate FERC's section 1221 authority since the other four grounds are rarely applicable.[94] As long as *Piedmont* remains the law of the land (which is unlikely to change, given the Supreme Court's denial of certiorari in that case[95]), section 1221 has failed to alter the status quo: states remain free to deny approval to a proposed interstate line, and no higher authority can overturn that decision.

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[89] Piedmont Envtl. Council v. FERC, 558 F.3d 304, 310–11 (4th Cir. 2009).
[90] *Id.* at 311.
[91] *Id.* at 313.
[92] *See id.* at 320–21 (Traxler, J., dissenting in part).
[93] Rossi, *The Trojan Horse*, *supra* note 11, at 1037.
[94] VANN, *supra* note 10, at 9.
[95] *Id.* at 12.

3. The failed potential of efficient cost-allocation within RTOs.

As part of its program for introducing competition to the wholesale electricity industry, FERC has approved of and encouraged utilities' participation in Regional Transmission Organizations (RTOs)—non-profit institutions that assume control of transmission infrastructure in a specified geographic region (once voluntarily ceded by individual utilities) and proceed to operate and monitor the transmission of power over that infrastructure.[96] Through Orders 2000, 890,[97] and 1000,[98] FERC paved the way for RTOs to serve as a platform for member-states' consideration of the regional benefits of interstate transmission planning and for allocating on a regional basis the costs of transmission facilities with regional benefits. While RTOs do not themselves possess transmission-line siting authority, RTOs have the ability to coalesce interests across state lines and thereby aid in dismantling the traditional incentives for member-states to make purely parochial siting decisions.[99] Despite their potential, however, RTOs have failed in many cases to meet with an acceptable measure of efficiency the cost-allocation impediments associated with new interstate transmission lines in a deregulated system.

One scenario ultimately resulting in separate United States Court of Appeals for the Seventh Circuit decisions aptly demonstrates this issue. It involves[100] efforts by the PJM Interconnection (PJM), an RTO operating in the Mid-Atlantic region of the U.S., to allocate the

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[96] *See* Regional Transmission Organizations, Order No. 2000, 65 Fed. Reg. 12,088 (Mar. 8, 2000) (codified at 18 C.F.R. pt. 35). An RTO must satisfy twelve minimum characteristics and functions before it can gain FERC approval to operate as such. *Id.* at 12,089.

[97] Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, 72 Fed. Reg. 12,266 (Mar. 15, 2007).

[98] Transmission Planning & Cost Allocation by Transmission Owning & Operating Public Utilities, Order No. 1000, 133 FERC ¶ 61,051 (2011). Order 1000 promoted, among other things, transmission planning within RTOs and declared "'public policy benefits' as a new type of transmission-related benefit." Klass & Wilson, *supra* note 24, at 1824.

[99] *See* Klass & Wilson, *supra* note 24, at 1850–51.

[100] I use the present tense here because, as will be shown, this scenario has not yet reached a conclusion.

costs of certain proposed high-voltage, interstate transmission facilities.[101] Beginning in 2006,[102] PJM sought to allocate the costs of these new facilities to all utilities within PJM on a pro rata basis—i.e., to raise the rates of each utility by a uniform amount sufficient, when combined, to cover the facilities' costs.[103] FERC approved[104] this cost-allocation methodology on the bases of the difficulty of determining utility-specific benefits stemming from such projects and that such transmission projects benefit all PJM members by delivering various reliability benefits to the entire network.[105]

Because the impetus for the underlying transmission projects was to relieve grid congestion and reliability violations in Eastern portions of PJM, however, two Midwestern state utility commissions (operating in states encompassed by the Western-most reaches of PJM) objected to uniform cost allocation and challenged FERC's approval in the Seventh Circuit.[106] Agreeing with the state commissions' assertions that utilities in the Western portion of PJM would receive less benefits from Eastern transmission projects than would Eastern utilities, and finding that FERC had failed to prove that pro-rata sharing was nonetheless justified, the court struck down the cost-allocation methodology and remanded the matter to FERC for further consideration.[107] To greatly oversimplify the events that followed, FERC's order on remand again upheld pro rata cost allocation, was again appealed to the Seventh Circuit, and in 2014—despite a dissenting judge's "emphatic" discussion of the extreme difficulty of quantifying and

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[101] *See* KAPLAN & VANN, *supra* note 13, at 11.
[102] *See* PJM Interconnection, LLC, 119 FERC ¶ 61,063, 61,359 (2007).
[103] *See* Ill. Commerce Comm'n v. FERC ("*Illinois Commerce I*"), 576 F.3d 470, 474 (7th Cir. 2009).
[104] FERC approval of RTO transmission rates is required by the FPA. KAPLAN & VANN, *supra* note 13, at 2. For a discussion of FERC's involvement in setting guidelines for and reviewing cost-allocation methodologies designed for RTO-related transmission projects with regional benefits, see *id.* at 2–6.
[105] *Illinois Commerce I*, 576 F.3d at 474. FERC also relied on a precedential basis ultimately rejected and unimportant here. *Id.*
[106] KAPLAN & VANN, *supra* note 13, at 11.
[107] *See id.* at 11–12; *Illinois Commerce I*, 576 F.3d at 475–78.

apportioning the benefits of such transmission projects[108]—was for similar reasons again struck down by the Seventh Circuit.[109] Thus, through eight years of battling for approval of its methodology, PJM was unable to overcome the cost-allocation hurdles impeding new interstate transmission development within its network.

To be sure, some RTO projects have overcome cost-allocation objections.[110] But even those projects often have not been able to do so efficiently. For example, although Midcontinent Independent System Operator, Inc. (MISO)—an independent system operator, which is the practical equivalent of an RTO[111]—was able to withstand administrative and legal challenges to its plan for allocating the costs of new transmission lines built to access remote wind power, in order to do so it was forced to endure, and to incur the costs associated with, three years of adversarial proceedings.[112] Thus, the potential of efficient cost-allocation within RTOs has failed; consequently, so has the potential for RTO-related transmission development to ameliorate the country's transmission needs.

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Because these other options for and approaches to constructing new transmission infrastructure have failed, DOE must reject the Draft EIS's No Action Alternative and act on its available authority to overcome the systemic barriers to and remedy the need for new transmission development. DOE must recognize that this course of action best serves the common public interest.

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[108] *See* Ill. Commerce Comm'n v. FERC ("*Illinois Commerce II*"), 756 F.3d 556, 565–66 (7th Cir. 2014) (Cudahy, J., dissenting).
[109] *Id.* at 559–65 (Posner, J.).
[110] *See, e.g.*, James W. Moeller, *Interstate Electric Transmission Lines and States' Rights in the Mid-Atlantic Region*, 40 B.C. Envtl. Aff. L. Rev. 77, 81–82 (2013).
[111] *See Illinois Commerce II*, 756 F.3d at 557.
[112] *See generally* Ill. Commerce Comm'n v. FERC, 721 F.3d 764 (7th Cir. 2013); *id.* at 771 (noting that MISO first sought approval of its cost-allocating tariff in 2010).

II. The critical need for DOE to act on available authority and the modest environmental costs of the Project indicate that DOE should reject the No Action Alternative.

As section A will demonstrate, DOE is uniquely positioned to overcome the traditional barriers to new interstate transmission infrastructure in the case of the Project and other similarly situated future ventures. In light of the public need for a secure, robust electric grid, and because of the aforementioned myriad issues impeding construction of the new interstate facilities needed to ensure such a grid, the importance of DOE's seizing its present opportunity cannot be overemphasized. Furthermore, as section B will address, the Project's potential environmental impacts are insufficient to outweigh the efficacy of DOE action or justify the Project's abandonment.

Thus, DOE should reject the No Action Alternative and "participate" in the Project.[113] DOE must, however, avoid the potential pitfalls of leaving such an important development solely in the hands of private enterprise and therefore should not participate superficially. Rather, DOE's participation should be *comprehensive*. The following discussion highlights sporadically some examples of the means by which DOE could ensure successful and societally-acceptable completion of the Project through comprehensive participation.

A. DOE should use its section 1222 authority to participate in the Project and help ameliorate the United States' transmission deficiency.

Subsection 1 summarizes section 1222 of EPAct 2005 and delineates the existing legal basis for DOE to use its section 1222 powers in connection with the Project. Then, subsection 2 explains why, with the assistance of DOE wielding its section 1222 authority, the Project can overcome the historic barriers to new interstate transmission development. Finally, subsection 3

[113] *See* DRAFT EIS SUMMARY, *supra* note 1, § S.2, at S-2 ("DOE needs to decide whether and under what conditions it would participate in the . . . Project.").

lists briefly a non-exclusive selection of additional law- and policy-based benefits stemming from comprehensive DOE participation.

1. DOE should conclude that the Project meets the statutory requirements for DOE participation under Section 1222.

As articulated in the Draft EIS, section 1222 "authorizes the Secretary of Energy, acting through and in consultation with the Administrator of [the] Southwestern [Power Administration (SWPA) or the Western Area Power Administration (WAPA)] . . . , to participate with other entities in designing, developing, constructing, operating, maintaining, or owning new electric power transmission facilities and related facilities located within any state in which [SWPA] operates."[114] SWPA operates in two of the three states that unquestionably would be involved in the Project—Oklahoma and Arkansas, but not Tennessee—and the one other state that may be involved—Texas.[115] Although section 1222 first affords the Secretary participation power in relation to projects located in NIETCs,[116] the provision goes on to separately authorize use of the power for other projects "necessary to accommodate an actual or projected increase in demand for electric transmission capacity."[117] In addition to being necessary to meet such demand, a project must, in order to be eligible for section 1222's application, be "consistent with . . . transmission needs identified . . . by [an] appropriate Transmission Organization . . . or approved regional reliability organization; and efficient and reliable operation of the transmission grid[,]"[118] and meet three other non-remarkable requirements.[119]

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[114] *Id.*; *see also* 42 U.S.C. § 16421(b) (2012).
[115] *See* DRAFT EIS SUMMARY, *supra* note 1, § S.2, at S-2.
[116] 42 U.S.C. § 16421(b)(1)(A).
[117] *Id.* § 16421(b)(1)(B).
[118] *Id.* § 16421(b)(2)(A)–(B).
[119] *See id.* § 16421(b)(3)–(5).

Existing conditions support the conclusion that the Project satisfies these statutory requirements. The statute's final three requirements are easily dispatched with and need not be considered here,[120] but the first three warrant attention.

a. DOE should determine that the Project is "necessary to accommodate an actual or projected increase in demand for electric transmission capacity."

First, with respect to the necessity criterion, DOE itself recognized in a report published this month that the country's grid requires "significant" new transmission construction by 2030[121] and that accessing high-quality renewable resources likely will require new long-distance transmission lines.[122] Additionally, in response to a direct congressional directive to identify "significant potential sources of renewable energy that are constrained in accessing market areas *by lack of adequate transmission capacity*,"[123] a 2009 DOE study recognized the Oklahoma panhandle region as an area where lack of transmission precluded the presently economical development of large quantities of wind resources.[124] In combination with the fact that satisfaction of the necessity criterion is to be determined at the Secretary's discretion,[125] DOE's own official documents provide adequate justification for determining that the Project meets this statutory requirement.

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[120] For ease of access, those requirements, along with the rest of section 1222, can be viewed here: https://www.law.cornell.edu/uscode/text/42/16421.
[121] U.S. DEP'T OF ENERGY, QUADRENNIAL ENERGY REVIEW: ENERGY TRANSMISSION, STORAGE, AND DISTRIBUTION INFRASTRUCTURE ch. 3, at 2, 7 fig. 3-2 (2015) [hereinafter QER REPORT], *available at* http://energy.gov/sites/prod/files/2015/04/f22/QER-ALL%20FINAL_0.pdf.
[122] *Id.* ch. 3, at 8.
[123] American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115, 146 (2009) (emphasis added).
[124] *See* U.S. DEP'T OF ENERGY, NATIONAL ELECTRIC TRANSMISSION CONGESTION STUDY viii, ix fig. ES-1 (2009), *available at* http://energy.gov/sites/prod/files/Congestion_Study_2009.pdf.
[125] *See* 42 U.S.C. § 16421(b).

b. DOE should determine that the Project is consistent with properly identified transmission needs.

Likewise, the Project also satisfies the remaining "consistency" requirements—which, like the necessity requirement, call for *discretionary* findings on the part of the Secretary.[126] First, as for the requirement that a project be "consistent with . . . transmission needs identified . . . by the appropriate Transmission Organization . . . or approved regional reliability organization,"[127] there are two alternative rationales that DOE could rely on to determine that the Project qualifies. First, DOE essentially could declare so itself because SWPA fits the definition of "Transmission Organization" used in section 1222.[128] Because any DOE action in connection with the Project would technically proceed through SWPA, an SWPA determination of transmission need would appear to provide DOE the justification needed to satisfy this clause. Alternatively, and perhaps less controversially, DOE could rely on the recent Southwest Power Pool (SPP)[129] determination that it will need new transmission expansion in order to maintain reliability after the Environmental Protection Agency's Clean Power Plan goes into effect.[130] Similarly, DOE could take note of the "clear" need for new transmission facilities to sustain the fortified, multi-directional grid necessary to accommodate projected future levels of renewable penetration.[131] DOE could rely on these, or other, rationales to find that the Project complies with section 1222. Moreover, the statute does not mandate that the Project satisfy precisely a

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[126] *See id.*
[127] *Id.* § 16421(b)(2)(A).
[128] *See* 16 U.S.C. § 796(29) (2015) (defining "Transmission Organization" to include any "other transmission organization finally approved . . . for the operation of transmission facilities"), *and* About the Agency, SW. POWER ADMIN., http://www.swpa.gov (last updated Jan. 28, 2015) (stating that "[SWPA] operates and maintains 1,380 miles of high-voltage transmission lines . . .").
[129] SPP is an RTO operating in much of the region served by SWPA. *See* About SPP, SW. POWER POOL, http://www.spp.org/section.asp?pageid=1 (last visited April 22, 2015).
[130] N. AM. ELEC. RELIABILITY CORP. (NERC), POTENTIAL RELIABILITY IMPACTS OF EPA'S PROPOSED CLEAN POWER PLAN: PHASE I, at 49 (2015), *available at* http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/Potential%20Reliability%20Impacts%20of%20EPA's%20Proposed%20Clean%20Power%20Plan%20-%20Phase%20I.pdf (summarizing SPP's recent study and conclusions).
[131] *See id.* at viii, 27–28, 32–35.

particular, preconceived facility; rather, the Project must simply be *consistent with*—or, *not inconsistent with*—identified transmission needs.[132]

c. DOE would be amply justified in determining that the Project is consistent with "efficient and reliable operation of the transmission grid."

Second, as for the requirement that a project be "consistent with . . . efficient and reliable operation of the transmission grid,"[133] there is ample evidence that the Project qualifies. The operational efficiency of the Project is difficult to question, as it would provide access to massive, untapped wind resources, would not be duplicative, and is a high-voltage, direct-current (HVDC) line. As for reliability, to begin with, it bears emphasizing that "there is general consensus that more transmission is needed in the United States to maintain grid reliability . . ." and that a force "[d]riving these new interstate lines [is] efforts to increase reliability of [the grid]."[134] In addition, DOE itself recognized recently that "[w]ind generation variability has a *minimal and manageable impact on grid reliability* . . . ."[135]

Regarding the Project specifically, the Draft EIS notes that the Project will be able to interconnect successfully with the existing grid infrastructure in Oklahoma and Arkansas (assuming realization of the Arkansas Converter Station) with the construction of a converter station in Oklahoma (which the Draft EIS accounts for already) and with no network upgrades in Arkansas.[136] Indeed, the Oklahoma agency that granted the Project utility status in that state noted in its approval order that the Project could be used to *enhance* grid reliability in Oklahoma

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[132] *See* 42 U.S.C. § 16421(b)(2)(A).
[133] *Id.* § 16421(b)(2)(B).
[134] Klass, *Takings and Transmission*, *supra* note 28, at 1115–16.
[135] U.S. DEP'T OF ENERGY, WIND VISION: A NEW ERA FOR WIND POWER IN THE UNITED STATES xxiii (2015) (emphasis added).
[136] DRAFT EIS SUMMARY, *supra* note 1, § S.5.4.2, at S-44 to S-45.

and elsewhere in the SPP.[137] Because the Project is a HVDC line, it operates largely outside of the predominant AC grid and therefore will avoid existing congestion on and cause no unscheduled flows to that grid.[138] Relatedly, the Project will likely reduce the energy flows that otherwise would be needed on the AC grid, thus reducing congestion and improving grid reliability.[139] Although the Tennessee Valley Authority (TVA) system will require some upgrades to reliably connect with the Project at its Tennessee terminus, those upgrades are relatively minimal and are being accounted for already in the Draft EIS.[140]

Moreover, and in any event, DOE need not concern itself now with the Project's ultimate reliability. Although SPP has accepted Clean Line's interconnection and reliability studies concerning the Project and has indicated that the Project can be connected reliably,[141] the SPP and TVA's official reliability determinations are at this time outstanding. However, taking into account the various indications of reliability, DOE can rest assured that the Project will not go forward absent reliability approvals from all relevant organizations because it would not otherwise be able to legally commence operations.[142] Further solidifying the notion that DOE would be justified in deeming the Project compliant is the fact that Clean Line will turn over

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[137] Application of Plains & Eastern Clean Line LLC, to Conduct Bus. as an Elec. Util. in the State of Okla., No. 590530, at 8 (Okla. Corp. Comm'n Oct. 28, 2011).
[138] Application for Authorization to Sell Transmission Services at Negotiated Rates and for Related Relief, at 9, 38, Plains & Eastern Clean Line LLC, 148 FERC ¶ 61,122 (Aug. 14, 2014), *available at* http://www.cleanlineenergy.com/sites/cleanline/media/resources/FILED_ER12-____Plains_and_Eastern_Clean_Line_1.pdf.
[139] *See id.* at 9.
[140] *See* DRAFT EIS SUMMARY, *supra* note 1, § S.5.4.2, at S-45.
[141] CLEAN LINE ENERGY PARTNERS, PLAINS & EASTERN CLEAN LINE RFI, APPENDIX I: PROJECT OVERVIEW 2–3 (2013), *available at* http://www.plainsandeasterncleanline.com/sites/plains_eastern/media/Plains_and_Eastern_RFI_Appendix_1_Development_Update.pdf.
[142] Plains & Eastern Clean Line LLC, 2014 WL 3982791 at *9, 148 FERC ¶ 61,122 (Aug. 14, 2014) (order granting negotiated rate authority for the Project).

operational control of the Project to SPP or another RTO or third-party transmission organization that can assure ongoing reliability compliance during the Project's life.[143]

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In light of the foregone discussion, DOE should render a determination that the Project is section 1222-compliant and thereby narrow the remaining issues confronting the Project in the NEPA process. Similarly, DOE should proceed with confidence that the Project is legitimately positioned to take advantage of the benefits of DOE's section 1222 authority, which benefits are turned to below.

2. Section 1222 and the nature of the Project allow the Project to overcome the traditional impediments to new interstate transmission development—an opportunity that DOE should not waste.

To begin with, Clean Line is a merchant transmission company that will bear the market risk of its investment in the Project and will not assess its costs to a captive customer base.[144] Thus, the substantial cost-allocation issues discussed in regard to both RTO-[145] and non-RTO-initiated[146] transmission development do not apply to the Project. Not only does this remove the litigation-related and other transaction costs imposed on such undertakings, it also eliminates the related state-specific ratepayer equity issues that arise when traditionally regulated utilities are involved. Relatedly, Clean Line's status as a private, third-party financer allows it freer access to the capital necessary to fund ambitious, long-distance transmission facilities—e.g., the estimated $2 billion construction and development cost of the Project.[147]

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[143] *Id.*
[144] *Id.* at *4.
[145] *See supra* Part I.C.3.
[146] *See supra* Part I.B.
[147] Wayne Galli & Phil Albert, *Plains & Eastern Clean Lines Keeps Transmission Construction Local* (Dec. 15, 2014), http://www.elp.com/articles/powergrid_international/print/volume-19/issue-12/features/plains-eastern-clean-line-keeps-transmission-construction-local.html.

By far the most important advantage of the Project, however, is DOE's ability to utilize section 1222 to support its success. As noted above, although section 1222 first affords DOE the power to participate in new transmission projects with third parties in relation to projects located in NIETCs,[148] the provision next offers DOE a separate authorization for the use of that power for other projects that meet the statutory requirements broached already.[149] That crucial independent authorization enables the Project to bypass the presently languishing NIETC siting authority also discussed earlier.[150] Most significantly, however, section 1222 allows DOE to sidestep the fundamental jurisdictional barrier thus far thwarting efforts to meet the country's transmission infrastructure deficiencies. Having determined that the Project satisfies the relevant statutory conditions, DOE could proceed under the auspices of section 1222 to participate with Clean Line in moving the Project forward, bringing with it two imperative benefits:

(1) the ability to secure a right-of-way via the federal eminent domain power; and

(2) the ability to transcend, or at least disarm, state siting and permitting requirements.[151]

The assertion that DOE can exercise the power of eminent domain in connection with projects authorized under section 1222 appears to be uncontested. DOE, by itself or through a federal power marketing administration (e.g., SWPA), has express statutory authority to develop transmission lines and related facilities, and to do so in partnership with private companies.[152] And even where not explicitly granted, DOE's transmission-construction power has consistently been interpreted to confer an implied authority to use eminent domain, and power administration-related transmission lines have been deemed to satisfy the "public use"

[148] 42 U.S.C. § 16421(b)(1)(A) (2012).
[149] *Id.* § 16421(b); *see supra* Part II.A.1.
[150] *See supra* Part I.C.2.
[151] *See* Klass, *Crossroads*, *supra* note 27, at 18.
[152] Salt Lake City v. W. Area Power Admin., 926 F.2d 974, 982–83 (10th Cir. 1991); 42 U.S.C. § 7152(a)(1)(D) (2012).

prerequisite to exercising that authority.[153] Given that DOE has declared that the Project will further national goals of "promoting renewable energy and strengthening the Nation's infrastructure,"[154] it is very likely that the taking of land to facilitate the Project would be deemed a public use.[155] Indeed, DOE has already assumed its ability to use eminent domain in connection with the Project in Oklahoma and Arkansas—states in which SWPA operates.[156]

On the other hand, the assertion that DOE can transcend state siting and permitting requirements in connection with the Project is less clearly grounded in explicit legal authority. Although the cases cited above evince clear authority for the proposition that power administration-related projects to do not have to comply with state siting and permitting laws,[157] section 1222 includes a savings clause that could be construed as a contrary congressional intent.[158] However, a better reading of the clause would be that it requires compliance with state law only in regard to facilities *related to* transmission facilities, such as converter stations. The clause states that nothing in section 1222 "affects any requirement of . . . any Federal or State law relating to the siting of *energy facilities*."[159] Although "energy facilities" is not defined in the statute, the remaining section 1222 provisions refer to "electric power transmission facilities" or "existing transmission facilities" when referring to transmission lines—not once do they reference transmission facilities without including the word "transmission."[160] This distinction—

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[153] *See, e.g.*, United States v. 14.02 Acres of Land More or Less in Fresno Cnty., 547 F.3d 943 (9th Cir. 2008); Citizens & Landowners Against the Miles City/New Underwood Power Line v. U.S. Dep't of Energy, 683 F.2d 1171 (8th Cir. 1982))

[154] Letter from Daniel B. Poneman, Deputy Secretary of Energy, U.S. Dep't of Energy, to Michael Skelly, President, Clean Line Energy Partners LLC (Apr. 5, 2012), *available at* http://www.plainsandeasterneis.com/epact-2005-section-1222.html.

[155] *Cf. 14.02 Acres of Land*, 547 F.3d at 952–53 (discussing the wide latitude that federal agencies have in determining "public use," noting courts' limited role in reviewing such determinations, and concluding that WAPA's transmission line development constituted a public use).

[156] DRAFT EIS SUMMARY, *supra* note 1, § S.2.1, at S-2, § S.5.2.5, at S-30.

[157] *See* cases cited *supra* note 153.

[158] 42 U.S.C. § 16421(d)(2) (2012).

[159] *Id.* (emphasis added).

[160] *See, e.g.*, *id.* § 16421(a), (b).

that Congress would intend to confer limited transmission siting preemption but not, for example, converter-station siting preemption—makes sense given the already-contentious nature transmission siting and the fact that support facilities comprise far fewer physical structures and can be sited with greater locational flexibility.

In any event, even if DOE could not preempt siting decisions, its participation with the Project through section 1222 would disarm considerably the siting barriers confronting the Project in Arkansas. First, as will be returned to below, DOE could and should require implementation of the Arkansas Converter Station alternative[161] as part of its final decision to participate. With that decision in place, Arkansas regulators, who have already expressed support for the Project but could not find a legal basis for approving it,[162] would have much more to work with in terms of finding that legal authorization. Because the converter station would allow the Project to serve Arkansas customers, Arkansas regulators would no longer be hampered by the fact that they formerly "could not grant public utility status to [the Project] based on its present lack of plans to serve customers within the state."[163] With DOE's participation effectively serving as an endorsement of the Project's virtue, and the converter station creating a more-than-superficial connection between the Project and Arkansas, Arkansas regulators would be given a link between the regional and public policy benefits of which they are personally receptive and the duty to consider in-state criteria, to which they are statutorily bound.[164] That link, in turn, could be all that is needed to remove the final siting-jurisdiction barrier impeding the Project.

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[161] DRAFT EIS, *supra* note 2, § 2.4.3.1, at 2-31 to 2-33.
[162] *See supra* notes 71–73 and accompanying text.
[163] James J. Hoecker & Douglas W. Smith, *Regulatory Federalism and Development of Electric Transmission: A Brewing Storm?*, 35 ENERGY L.J. 71, 86–87 (2014).
[164] *See id.*

Having determined that the Project is uniquely positioned to overcome the traditional barriers to new transmission development, DOE should seize the opportunity presented and invoke section 1222 to participate in carrying the Project forward. The following subsection 3 elaborates on that concept of participation and recommends that DOE's participation be comprehensive.

3. DOE should recognize the additional benefits of and values protected by comprehensive participation.

The additional benefits of and values protected by comprehensive participation include, but are not limited to, the following.

a. The precedential value of the Project.

Because DOE has never before exercised its section 1222 powers, the implications of its first usage are significant. If its use in connection with the Project were to be invalidated in court, or if the Project in its completed form were to engender significant public condemnation, DOE might face great legal or political difficulties in any subsequent attempt to invoke the provision, even in a factually distinct scenario. Specifically, the outcome of the Project could bear directly on the ultimate success or demise of the four other Clean Line projects currently at various stages of development.[165] But more importantly, because SWPA and WAPA operate in a substantial portion of the United States,[166] the outcome of Project could impact the general future viability of section 1222—a provision with real potential to help ameliorate the country's transmission infrastructure needs.

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[165] Projects Overview, CLEAN LINE ENERGY PARTNERS, http://www.cleanlineenergy.com/projects (last visited Apr. 25, 2015).
[166] *Federal Power Marketing Administrations Operate Across Much of the United States*, U.S. ENERGY INFO. ADMIN. (June 12, 2013), http://www.eia.gov/todayinenergy/detail.cfm?id=11651.

Thus, DOE must participate comprehensively in the Project to ensure that it is "done right." The following sub-points, and part of the forthcoming discussion regarding environmental impacts, bear out specific suggestions for comprehensive participation. But as a general matter, DOE should meaningfully take responsibility for the Project—not its monetary liabilities, but its success and its progression, particularly as presented to the public. DOE should dedicate time and personnel to the Project's details and should work with, and monitor, Clean Line every step of the way. Admittedly, although DOE will not bear the construction and development costs of the Project, truly comprehensive participation may be costly in terms of DOE resource dedication. But DOE has recognized already that increased federal investment in energy infrastructure, including in the context of public-private partnerships, is necessary going forward.[167] In the end, the propriety of increased expenditures today will later appear self-evident if DOE's comprehensive participation helps to ensure a high level of public confidence in section 1222 projects.

b. The public-interest benefits of using the Project as a test case.

Likewise, comprehensive participation would allow DOE to use the Project as a test case for future transmission developments under section 1222—to learn what works and what doesn't work, to document those findings, and to develop better methods where room for improvement exists. Not only would this increase practical efficiencies in later projects, but it would allow DOE to ensure that the public interest is best tended to in those situations. As will be noted below, the Project serves as an ideal test subject because of its relatively insubstantial environmental implications.

[167] *See* QER REPORT, *supra* note 121, summary, at 32.

c. The practical benefits of requiring that the Project include the Arkansas Converter Station alternative.

As explained already, even if section 1222 does not allow DOE to assume control over siting and permitting the Project and therefore does not expressly overcome the impediment currently posed by Arkansas, requiring implementation of the Arkansas Converter Station alternative nonetheless could overcome that impediment from a practical perspective.[168] In addition, the converter station would benefit the Project from a public-perception standpoint as well—no longer would one state be singled out endure the physical presence of the transmission line without having access to its energy. In this way, the Project also would avoid any environmental injustice implications by ensuring a more proportionate distribution of benefits and costs. DOE should be mindful of the ways in which comprehensive participation can stave off public condemnation and thereby smooth the path of future projects invoking section 1222.

d. The practical and legal benefits of owning the Project's physical transmission facilities.

As part of its comprehensive participation, DOE should step beyond merely "designing" or "developing" the Project in conjunction with Clean Line and should participate by "owning" the transmission line, and the right-of-way, as well.[169] DOE ownership—either from the outset or, by operation of contract, at a later date—would squarely situate DOE in the midst of critical Project decisions, would further insulate the Project from public use challenges, and would impute onto the Project a greater presumption of preemptive authority.[170]

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[168] *See supra* Part II.A.2.
[169] 42 U.S.C. § 16421(b) (2012) (stating that DOE may participate by "designing, developing, constructing, operating, maintaining, or owning" a new transmission project).
[170] *See* United States v. 14.02 Acres of Land More or Less in Fresno Cnty., 547 F.3d 943, 952–53 (9th Cir. 2008).

In sum, DOE should determine that the Project satisfies the statutory conditions of section 1222 and, with the assistance of DOE's authority under that provision, is uniquely positioned to overcome the traditional barriers to new interstate transmission. DOE must not allow this opportunity to go to waste. Instead, DOE should reject the No Action Alternative and act on its available authority to participate comprehensively in moving the Project forward. As the final section B manifests, the potential environmental impacts of the Project do not detract from this conclusion, particularly if DOE extends its goal of comprehensive participation to include meaningful environmental mitigation.

B. The potential environmental impacts of the Project do not justify its abandonment so long as DOE agrees to mitigate these impacts.

This brief, final section begins where the Draft EIS finished, taking as its premise the Draft EIS's conclusion that, "[w]hile the relative importance of specific environmental resource areas varies by individual . . . , the [Draft] EIS did not identify widespread, major impacts as a result of construction or operations of the Project."[171] As the Draft EIS illustrates, the Project, like any federal action touching more than seven hundred miles of earth,[172] implicates the full gamut of conceivable NEPA-analysis categories. Undoubtedly, DOE will receive comments that challenge and address meaningfully the intricacies of many, if not all, of the Project's environmental implications. Individual impact analysis is, however, beyond the scope and purpose of this comment. Assuming the premise articulated in the first sentence of this paragraph, it is this comment's position that any remaining impacts do not override the critical need for new interstate transmission infrastructure and do not justify DOE abandoning this rare

[171] DRAFT EIS SUMMARY, *supra* note 1, § S.7.1, at S-73.
[172] The Project consists of "an approximate 720-mile, +/- 600kV HVDC transmission line." *Id.* § S.5.2, at S-21.

opportunity to serve the public interest in an area where, thus far, progress has been severely constrained.

These prevailing considerations should not, however, be taken to suggest that DOE should participate in the Project with disregard for its environmental impacts. It is worth noting that, under section 1222, the Project must comply with all federal environmental laws triggered by its impacts,[173] and must garner environmental approval from EPA under a separate review process.[174] Additionally, in relation to the precedential value of the Project[175] and in the interest of sound agency decisionmaking practice, DOE has a vested interest in making environmental mitigation and oversight central components of its general comprehensive participation in the Project. Although DOE likely will have a more developed understanding of the particular areas of environmental impact requiring attention once it has reviewed all comments to the Draft EIS, the rest of this section outlines two related, suggested aspects of comprehensive participation that could contribute to a sounder overall result.

1. DOE should include a draft Mitigation Action Plan in the Final EIS.

Section 1021.331 of DOE's NEPA implementation regulations compels DOE to prepare a Mitigation Action Plan (MAP) following the completion of every EIS and its associated Record of Decision (ROD).[176] The regulations define a MAP as "a document that describes the plan for implementing commitments made in a DOE EIS and its associated ROD . . . to mitigate adverse environmental impacts associated with an action."[177] The MAP also "shall explain how

[173] 42 U.S.C. § 16421(d)(1).
[174] DRAFT EIS SUMMARY, *supra* note 1, § S.4.1.5, at S-19 (explaining EPA's oversight role under Section 309 of the Clean Air Act).
[175] *See supra* Part II.A.3.a.
[176] 10 C.F.R. § 1021.331 (2012).
[177] *Id.* § 1021.104.

the corresponding mitigation measures . . . will be planned and implemented."[178] Although DOE's regulations do not require preparation of an MAP until after an ROD has been issued, DOE stands to benefit from including a draft MAP in its Final EIS. With the Project's broad reach comes an equally broad swath of impacted resources, communities, and individuals. Because DOE approval of the Project will be controversial regardless of its conditions, once objectors begrudgingly accept the Project's inevitability, they will turn their attention toward ensuring that the least damage is done to that broad swath of affected interests. If DOE included a draft MAP in its Final EIS, DOE could elicit comments on its mitigation plans from parties with sufficient familiarity with the various areas impacted by the Project, thereby ensuring that fully-informed decisions could later be made. Even if DOE ultimately rejects any number of the alternate mitigation techniques suggested, by providing more process to the public, DOE would be helping to safeguard itself from a lasting adverse reaction to the Project that could render future invocation of section 1222 politically infeasible.

2. DOE should incorporate Clean Line's Environmental Protection Measures and DOE's Best Management Practices into the Mitigation Action Plan.

The Draft EIS details numerous general and resource-specific environmental protection measures (EPMs) that Clean Line has developed and agreed to adopt in order to avoid or minimize the Project's impacts on the environment.[179] These EPMs include, for example, "measures to protect land use; soils and agriculture; fish, vegetation, and wildlife; and waters, wetlands, and floodplains."[180] In addition, the Draft EIS noted several best management practices (BMPs) identified by DOE as measures that could further ensure minimization or

[178] *Id.* § 1021.331(a).
[179] *See generally* DRAFT EIS, *supra* note 2; *see also id.*, app. F (listing all EPMs).
[180] DRAFT EIS SUMMARY, *supra* note 1, § S.6.1.1, at S-48.

avoidance of particular adverse impacts.[181] Although DOE has indicated that the EPMs would be made binding after issuance of an ROD, DOE could ensure better vetting of the EPMs, and mandatory compliance with the additional BMPs, by including them in the draft MAP submitted for public comment along with the Final EIS for the Project. Not only would this, too, have a positive effect on the public's confidence in DOE's decisionmaking process, it would demonstrate to Clean Line DOE's stern sincerity in comprehensively participating in and overseeing that the Project is carried out responsibly. By setting clear expectations early, DOE could guard against any later attempts by Clean Line to cut corners. Similarly, DOE could ensure through its solicitation of comments that the proposed EPMs are in fact the best practicable mitigations options available. The end result would be a post-ROD MAP with benchmark mitigation practices that reflect adequate deliberation and a broad range of input.

III. Conclusion

Although the need for new transmission has herein been fleshed out fully, at a time when a substantive, federal renewable energy program is looming and the electric industry transforming, it bears repeating that action addressing our country's untenable grid deficiencies simply must be taken.

> The dirty secret of clean energy is that while generating it is getting easier, moving it to market is not . . . . Achieving [a meaningful level of renewable energy penetration] would require moving large amounts of power over long distances, from the windy, lightly populated plains in the middle of the country to the coasts where many people live. . . . The grid's limitations are putting a damper on such projects already."[182]

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[181] *Id.*

[182] Ill. Commerce Comm'n v. FERC, 721 F.3d 764, 771 (7th Cir. 2013) (quoting Matthew L. Wald, *Wind Energy Bumps into Power Grid's Limits*, N.Y. Times, Aug. 27, 2008, at A1).

The problem underlying that passage, quoted by Judge Richard Posner in 2013 and written in 2008, persists to this day. Thus, regardless of the modest environmental impacts of the Project, DOE should reject its No Action Alternative and participate comprehensively in guiding the Project toward contributing to a cleaner, more secure energy landscape in the United States. If DOE chooses not to participate, it must offer a justification for doing so that is responsive to the concerns outlined in this comment.

Thank you,

s/ Alex White
Alex White