UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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DEC 1 3 2013

Brian Mills, National Environmental Policy Act Document Manager
Office of Electricity Delivery and Energy Reliability, OE-20
US Department of Energy
Washington, D.C. 20585

Dear Mr. Mills:

The U.S. Environmental Protection Agency (EPA) has reviewed the Department of Energy's draft environmental impact statement (DEIS) dated September 2013 for the Champlain Hudson Power Express Transmission Line Project (CHPE). The proposed project would be an approximately 336-mile long, 1,000-megawatt, high-voltage merchant electric power transmission system that includes a dual transmission line that would extend to Astoria, Queens, New York. The CHPE is a high voltage direct current transmission system, consisting of two cables, which will run electricity from Canada south to the New York City area. The cables will be placed under the sediments of Lake Champlain, the Hudson River, the Harlem River and the East River with some upland placement along the route. The project will include a converter station to be located in Astoria, New York, and several cooling stations to be located with the cables in upland areas. This review was conducted in accordance with Section 309 of the Clean Air Act, as amended (42 U.S.C 7609, PL 91-604 12 (a), 84 Stat. 1709) and the National Environmental Policy Act (NEPA).

EPA recognizes that this project has already undergone an in-depth review by the New York State Public Service Commission (NYSPSC), and has been granted a Certificate of Environmental Compatibility and Public Need by that Commission. While the Commission's proceedings are mentioned in various places in the DEIS, it might have been more useful for the public if the DEIS summary had contained a brief explanation of the NYSPSC proceedings, and a listing of important documents and the websites for those documents, especially the NYSPSC Certificate Conditions for the CHPE project.

We have enclosed a list of technical comments on the DEIS, and in light of our concerns on habitat loss due to anchor chain sweep, lack of wetlands mitigation plans and the document's lack of impacts analysis for underwater blasting, EPA has rated the DEIS as "EC-2" (Environmental Concerns- Insufficient Information; see enclosed rating sheet).

Thank you for the opportunity to comment. Also included is a list of resources, **"U.S. EPA Region 2, Green Recommendations"** that can assist you in greening this and future projects. If you have any questions regarding this review or our comments, please contact Lingard Knutson of my staff at (212) 637-3747.

Sincerely,

Judy-Ann Mitchell

Judy-Ann Mitchell, Chief
Sustainability Planning and Multi-Media Programs Branch

Enclosures

EPA Comments on Champlain Hudson Power Express
Draft Environmental Impact Statement dated September 2013

General Conformity

1. The general conformity applicability analysis emissions are not presented on a calendar year basis. However, EPA acknowledges that by including the total emissions in each nonattainment area, even for segments that may span greater than one year, the applicability analysis provides a conservative estimate.

2. There appears to be an error in calculating the emission factor for several marine vessels and dredges. Using EPA's "Current Methodologies in Preparing Mobile Source Port-Related Emission Inventories" (http://epa.gov/cleandiesel/documents/ports-emission-inv-april09.pdf), a typical NOx emission factor for tugboats is 10 g/kW-hr. Converted to pounds, this factor would be 0.02 lb/kW-hr. However, Appendix M shows an emission factor of 0.02 lb/hr, where it appears that the engine's rated power has not been taken into account. We recommend checking all marine and dredging emission factors and updating the general conformity analysis as necessary.

Wetlands

1. Several sections of the DEIS, such as S.S.8, 2.6.8 and 5.2.8 mention that a conceptual wetlands mitigation plan has been supplied to the New York District Army Corps of Engineers. That mitigation plan should be included in the EIS to allow for wider public and agency comment.

2. According to Section 5.2.8 of the DEIS, restoration of the temporary wetland impact areas will consist of re-grading to original contours and seeding with annual ryegrass, followed by natural plant establishment and succession. Some tree species may re-sprout from stumps and roots, but this passive restoration of 16.2 acres of forested wetland will likely take 30 to 50 years to yield a mature wetland community. EPA recommends that the planned restoration of cleared forested wetland areas be augmented with a wetland seed mix and planting of native tree and shrub saplings.

Sediment/Habitat

1. Sections S.6.3 and 2.4.10.1 discuss the aquatic construction sequence, and state that the "plowing process would be conducted using either a dynamically positioned cable ship or a positioned cable barge." EPA assumes that a "positioned cable barge" is the same as an anchored position vessel, as described in Section 5.1.2. Because of the anchor chain sweep, the use of an anchored position barge or vessel will exponentially increase the impact to benthic habitat compared to a dynamically positioned vessel. Section 5.1.9 does mention anchor sweep, but does not quantify the loss of benthic habitat, nor does Section 5.3.4 "Impacts of construction on shellfish and benthic communities." Should the applicant use an anchored position vessel in either Lake Champlain or the Hudson River,

mid-line buoys should be employed to minimize the effect of anchor chain sweep on the benthic habitat. Use of mid-line buoys is standard on Federal Energy Regulatory Commission pipeline certificates in this region. EPA is also concerned as to whether the disturbance from anchor chain sweep was included in Table 2-3 - Summary of Potential Impacts Associated with the Proposed CHPE Project, Aquatic Habitat and Species resource area.

2. In section 2.4.2, the fourth paragraph, last line states, "If necessary, blasting could be used to create a trench in which to bury the cables." EPA understands that in water blasting is proscribed by the NYSPSC order and was not mentioned in the New York District Army Corps of Engineers Public Notice (NAN-2009-01089-EYA) for this project. However, if in water blasting is considered a possible construction technique, the DEIS must evaluate its environmental impacts, especially to endangered fish.

3. Section 5.3.5 of the DEIS states, "Installation of the proposed aquatic transmission line would result in up to 485 acres of riverbed disturbance in the Hudson River Segment," however the Army Corps of Engineers Public Notice (above) states that the anticipated impacts from the buried cable installation for the entire project is 338 acres. This discrepancy must be rectified.

4. The applicant needs to clarify what areas will be backfilled with clean fill and what they propose as "clean fill." Particular clarification is necessary for those areas of federal channels (total 9 miles) where the applicant will be excavating 15-feet of material below the federal channel. The DEIS states, "Once a segment of trench is excavated, cable would be laid, and the clamshell dredge or excavator would place clean backfill back into the trench," details need to be provided for this backfilling.

Cumulative Impacts

1. The discussion of cumulative impacts should be expanded and updated to address the potential for the installation of the New England Clean Power Link (transmission line) project which includes burial of 100 miles of two six-inch cables under Lake Champlain. It is our understanding that the New England Clean Power Link project is to be developed by the same development team behind the Champlain Hudson Express project and that it will also require DOE review. Therefore, we believe it is appropriate for the analysis to include a description of both projects in the cumulative impacts analysis. Moreover, the EIS should explain whether opportunities exist for synchronized and co-located installation of the projects to further reduce impacts. More information about the New England Clean Power Link project can be found at: http://www.necplink.com/about.php

2. Section 6.1.1.3 and 6.1.2.2 discuss the Coast Guard' proposed federal anchorage in the Hudson River west of Yonkers, between mile posts 319 and 320. The Coast Guard effort is well into its planning process, and is very likely to occur. While section 6.1.2.2 states that the anchorage should be constructed before the CHPE is installed, and that the CHPE would be rerouted "slightly" to the east, EPA is concerned that the DEIS did not assume

the new routing as part of the preferred alternative, has not included any approval or discussion by the Coast Guard or that the CHPE would be safe for mariners near the new anchorage.

3. Section 6.1.2.14 should include a discussion of marine vessel safety during the simultaneous construction of both the CHPE and the Tappan Zee Hudson River Crossing. Any required Coast Guard permits or safety plans with the New York State Thruway and its contractors should be noted.

General

1. EPA notes that the DEIS does not appear to contain information about the Champlain Valley National Heritage Partnership (CVNHP) in its evaluation of cultural resources. The CVNHP is administered by the Lake Champlain Basin Program. More information can be found at http://www.champlainvalleynhp.org/index.htm

2. EPA recommends that the Endangered Species Action Biological Assessments and Essential Fish Habitat consultation be included in the DEIS, or incorporated by reference.

3. In Section S.8.6, final paragraph, please provide the reference the study on forest fragmentation that indicates that displacement impacts associated with a 26-foort-wide corridor is not significant.

4. Section 1.6.2. Please supplement the description of EPA's role in the CHPE project by including the following - EPA is required under Section 309 of the CAA to review and publicly comment on the environmental impacts of major federal actions including actions that are the subject of draft and final EISs, and responsible for implementing certain procedural provisions of NEPA (e.g., publishing the Notices of Availability of the draft and final EISs in the *Federal Register*) to establish statutory timeframes for the environmental review process.

5. Page 2-7, last sentence on the page. There is a partial sentence "2-7 and" that should be deleted.

6. Page 5-78 discusses the use of vegetative buffers around the cooling stations. All vegetative buffers should use native plants.

7. On page 5-115, the second paragraph states "post-installation monitoring for the Long Island Replacement Cable in 2010…suggested that concrete mats were not a major disturbance to benthic communities." Please add the reference for that statement.

EPA Region 2 Green Recommendations

To the maximum extent possible, project managers are encouraged to utilize local and recycled materials; to recycle materials generated onsite; and to utilize technologies and fuels that minimize greenhouse gas emissions.

Further, to the extent feasible, renewable energy (including, but not limited to solar, wind, geothermal, biogas, and biomass) and energy-efficient technologies should be incorporated into the design, construction, and operation of all types of projects.

To that end, the following information and internet hyperlinks are provided for your consideration and use:

- **Multi-media green building and land design practices**
  Utilize green building practices which have multi-media benefits, including energy efficiency, water conservation (see WaterSense below), and healthy indoor air quality. Apply building rating systems and no-cost online tools and guides, such as ENERGY STAR, Portfolio Manager, Target Finder, Indoor Air Quality Package, and WaterSense for building construction. The ENERGY STAR website (see below) includes, among other things, information on new single-family homes, multi-family homes, commercial and other buildings, and schools. The website also provides an ENERGY STAR "Training Center" free of charge.

  U.S. Green Building Council (USGBC) LEED Programs and Guides: http://www.usgbc.org/

  ENERGY STAR home page: http://www.energystar.gov

  ENERGY STAR Target Finder (no-cost online tool to set energy performance targets): http://www.energystar.gov/targetfinder

  Indoor Air Quality: http://www.epa.gov/iaq

- **Water conservation and efficiency in building construction**
  Promote water conservation and efficiency through the use of water efficient products and practices. For new building construction and restoration projects, we recommend considering the use of products with the WaterSense label where appropriate. Devices receiving the EPA WaterSense label must be at least 20% more water efficient than (and must meet or exceed the performance standards of) non-labeled devices of the same type. Additionally, when possible, consider the use of WaterSense Certified Professional Irrigation Partners and WaterSense Builder Partners. These professionals use WaterSense labeled devices where appropriate, are trained in the latest water conservation practices, and use the latest water efficiency tools and technologies, including irrigation equipment and xeriscaping for landscaping and best management practices for construction in the WaterSense New Home Specifications. Visit the WaterSense website for tips on water efficiency, a WaterSense labeled product search tool, a list of WaterSense Partners, access to the Water Budget Tool at: http://www.epa.gov/watersense/

  In addition to using WaterSense labeled products and certified professionals, there are many water conservation strategies and best management practices that can be used in new construction and/or restoration. Here are some useful links to water conservation information:

  - Green Building Encyclopedia:
    http://www.whygreenbuildings.com/water_conservation.php

Consider designs for storm water management on compacted, contaminated soils in dense urban areas:

Additional information: http://www.epa.gov/brownfields/tools/swdp0408.pdf

- **Alternative and Renewable Energy**
  The Department of Energy's "Green Power Network" (GPN) provides information and markets that can be used to supply alternative generated electricity. The following link identifies several suppliers of renewable energy:

  Additional information:
  http://apps3.eere.energy.gov/greenpower/buying/buying_power.shtml?

- **Clean Diesel**

  For new equipment utilize contract specifications requiring advanced pollution controls and clean fuels: http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract-Spec.pdf and http://www.epa.gov/cleandiesel/technologies/index.htm

  Implement diesel controls, cleaner fuel, and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other construction activities, including:

  1. Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and
  2. Use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts, repowers, or newer, cleaner equipment.

  Additional information: *A How To Guide for Diesel Engine Retrofits in the Construction Industry*: http://www.mass.gov/dep/air/diesel/conretro.pdf

- **Utilizing recycled materials in construction projects**
  Many industrial and construction byproducts are available for use in road, building or infrastructure construction. Use of these materials can save money and reduce environmental impacts. The Recycled Materials Resource Center has developed user guidelines for many recycled materials and compiled existing national specifications.

  Additional information: http://rmrc.wisc.edu
  http://www.fhwa.dot.gov/pavement/recycling/rectools.cfm
  http://www.epa.gov/osw/conserve/imr/index.htm

- **Encourage cost-efficient, environmentally friendly landscaping**
  EPA's GreenScapes program provides cost-efficient and environmentally friendly solutions for landscaping. Designed to help preserve natural resources and prevent waste and pollution, GreenScapes encourages companies, government agencies, other entities, and homeowners to make more holistic decisions regarding waste generation and disposal and the associated impacts on land, water, air, and energy use.

  Additional information: http://www.epa.gov/wastes/conserve/tools/greenscapes/index.htm

- **Incorporate on-site energy generation and energy efficient equipment upgrades into projects at drinking water and wastewater treatment facilities**

Consider using captured biogases in combined heat and power systems, and renewable energy (wind, solar, etc.) to generate energy for use on-site. Evaluate the potential energy savings associated with upgrading to more energy efficient equipment (pumps, motors, lighting, etc.).

Additional information: http://water.epa.gov/infrastructure/sustain/goinggreen.cfm
http://www.epa.gov/region9/waterinfrastructure/howto.html

- **Incorporate green practices into remediation of contaminated sites**
  Encourage or incentivize the use of green remediation practices, including designing treatment systems with optimum energy efficiency; use of passive energy technologies such as bio-remediation and phyto-remediation; use of renewable energy to meet power demands of energy-intensive treatment systems or auxiliary equipment; use of cleaner fuels, machinery, and vehicles; use of native plant species; and minimizing waste and water use.

  Additional information: http://cluin.org/greenremediation/index.cfm

- **Encourage development in brownfield sites**
  Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. These sites are often "infrastructure-ready," eliminating the need to build new roads and utility lines which are necessary in undeveloped land.

  Additional information: http://www.epa.gov/brownfields/

- **Encourage use of Smart Growth and transit-oriented development principles**
  Smart Growth and transit oriented development (TOD) principles help preserve natural lands and critical environmental areas, and protect water and air quality by encouraging developments that are mixed-use, walkable and located near public transit. Encourage use of bicycling with bike commuter parking, storage, and changing facilities. Facilitate increased carpooling or alternative vehicles with preferable parking spaces and/or electric vehicle plug in spots.

  Additional information: http://www.epa.gov/smartgrowth

- **Integrated Design Process**
  The Integrated Design Process calls for the active and continuing engagement of all stakeholders throughout the building design, development, construction, and post-construction phases including the owners, architects, engineers, building department officials, and others. This process creates a higher-performing building at lower cost, allows various building systems to work together to eliminate redundant and unnecessary capacity, and minimizes change order costs.

  Additional information: http://www.wbdg.org/design/engage_process.php

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION

Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommend for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1-Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analysis, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."