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SCENIC HUDSON

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Via e-mail to: Jerry.Pell@hq.doe.gov
Dr. Jerry Pell
Office of Electricity Delivery and Energy Reliability (OE-20)
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

Dear Dr. Pell:

Scenic Hudson, Inc. is a 47-year-old nonprofit environmental organization and separately incorporated land trust dedicated to protecting and enhancing the scenic, natural, historic, agricultural and recreational treasures of the Hudson River and its valley.

Scenic Hudson has been protecting the Hudson Valley's cherished landscapes and ecosystem since 1963. We understand and appreciate that our future depends on a shift toward clean, renewable energy and that the project proponents believe the proposed Champlain Hudson Power Express ("CHPE") transmission line project will move us in that direction. The scope of the Draft Environmental Impacts Statement ("DEIS") should take a hard look at the benefits and costs of the project in this context.

A project of this magnitude – unprecedented in the Hudson Valley – must be designed and implemented in a manner that will not harm the sensitive Hudson River estuary or the communities through which the power transmission lines will pass. Scenic Hudson urges the Department of Energy ("DOE") to carefully assess the potential negative environmental effects of the proposed project in the DEIS.

1. Re-suspension of PCBs and other contaminants

The installation of the portion of the proposed transmission line that will be buried under the Hudson River has the potential to re-suspend and re-distribute contaminants settled in the River's sediment, impacting the water quality, aquatic and wetlands species and human health. In some areas, conventional dredging is proposed as the preferred method to install the cable, increasing the likelihood of re-suspension of contaminants. This DEIS must evaluate how CHPE will determine which method (water jet trenching, mechanical plowing or dredging) will be used in which area and the varying environmental impact of each of these methods, as well as the potential for re-suspension of contaminants and ways that risk can be minimized.

The contaminants known to exist in the Hudson River include pesticides such as DDT as well as concentrations of heavy metals.[1] Most pervasively, PCBs have settled in the sediment and could pose a major hazard if re-suspended. PCBs are human carcinogens and can also cause non-cancer health effects, such as reduced ability to fight infections, low birth weights, and learning problems. PCBs can build up in the tissue of humans exposed through direct contact, drinking water or, most often, by eating contaminated fish.[2]

The Hudson River from Hudson Falls to Manhattan was declared a Superfund site over 25 years ago due to the presence of PCB contamination. PCBs dumped into the river by General Electric over a period of thirty years remain buried in sediment along the river bottom[3]. The proposed route for the transmission line specifically avoids burying cable under the River for a stretch of the Upper Hudson near Fort Edwards, where the Environmental Protection Agency ("EPA") has begun dredging, due to the concern about the potential for re-suspension of these PCBs.

This DEIS must address the potential for re-suspension of PCBs and other contaminants in the Mid- and Lower-Hudson River due to the burying of cable in contaminated sediment. While the concentration of PCBs is greatest in the Upper Hudson, it is undisputed that PCBs contaminate the Mid- and Lower-Hudson River as well.[4] Some areas of cable may be buried using methods such as horizontal water jet trenching that are less likely to greatly disturb the sediment, but other areas are proposed to be mechanically plowed or dredged, significantly increasing this risk. These different methods and their environmental impacts should all receive a hard look.

The re-suspension of PCBs would impact wildlife and aquatic species, as well as human health. In addition to recreational uses of the Hudson such as swimming, boating, and fishing, there are several communities that have drinking water intakes on the Hudson River in the areas where cable is proposed to be installed, including but not limited to Rhinebeck, Port Ewen, Lloyd and Poughkeepsie.

2. Effects on Aquatic Organisms and Habitat

The Hudson River and its surrounding valley are habitat to a number of sensitive species that could be adversely impacted by the proposed CHPE project. These include several species protected by federal or state law as well as sensitive benthic communities that are most prone to the effects from installation of the cable as well as ongoing effects from the operation of the transmission cables. Scenic Hudson believes that the potential detrimental effects of the construction, installation and maintenance of the transmission cable of aquatic resources and wildlife must be thoroughly evaluated, especially the potential cumulative effects of the installation and operation of the cable along with existing stresses such as contamination.

The impact of installation of the cable on sub-aquatic vegetation and riverfront riparian habitat should be carefully investigated. Sub-aquatic vegetation is an important component of the Hudson River ecosystem, as it supports benthic communities. Many species of fish use sub-aquatic vegetation beds as foraging and nursery habitat, as well as use these beds to hide from predators.[5]

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[1] U.S. Geological Survey, Water Quality in the Hudson River Basin.
[2] U.S. Environmental Protection Agency, Human Health Risk Assessment for Mid-Hudson River Executive Summary, December 1999.
[3] U.S. Environmental Protection Agency, Hudson River Dredging Project Background, available at: http://www.epa.gov/hudson/
[4] *Id.*
[5] Lawrence P. Rozas, Fish and macrocrustacean use of submerged plant beds.

Benthic organisms have the greatest potential to be adversely impacted by proposed project, as they live in the sediment in which the cables will be buried. Benthic organisms play an important role in the aquatic ecosystem, regulating plankton abundance, processing sediments, providing food for other species, and often acting as the foundation of commercial fisheries.[6] This DEIS must address the effects of both the temporary disturbance of benthic habitat during installation and the permanent alteration of benthic habitat in those areas where rip-rap or concrete mats will be placed over the cable rather than burying it. In addition, alternative systems that would be porous and mitigate impacts to benthic communities should be investigated.

A. Thermal and Electromagnetic Effects

Scenic Hudson also believes that the DEIS must evaluate how the electromagnetic field ("EMF") and thermal effects of the cable might affect sensitive aquatic species. This should include the segment of the transmission line downstream from the converter station, along which alternating current will flow, presenting the potential for increased EMF impacts.

EMF may affect aquatic species that use the earth's magnetic field for orientation during navigation. Electro-sensitive species could be attracted or repelled by the electrical fields generated by the transmission cables. Areas of breeding, feeding or nursing are particularly prone to these effects because of the congregation or dispersion of sensitive individuals in the benthic community.[7]

CHPE asserts that the effects from the heat effusing from the transmission cables will be negligible due to the depth beneath the riverbed at which the cable will be buried. However, even if effects were negligible on many aquatic species, those benthic species and shellfish that live within the sediment could be affected to a greater degree. Even a small increase in heat can affect not only survival, but spawning and migration behavior of aquatic species. Elevated temperature typically decreases the level of dissolved oxygen water, which can harm aquatic animals such as fish, amphibians and copepods. Thermal pollution may also increase the metabolic rate of aquatic animals, resulting in these organisms consuming more food in a shorter time than if their environment were not changed. As a result food chains are compromised and biodiversity can be decreased as a result.[8]

B. Protected Species

The Hudson River and its surrounding tidal wetlands are habitat to a number of species protected by federal and state law and thus deserving special attention to ensure they are not impacted by the CHPE. Scenic Hudson urges that the DEIS carefully consider any impacts of the construction, operation and maintenance of the transmission line may have on these designated species.

- Shortnose sturgeon have been protected under the U.S. Endangered Species Act since its inception in 1973, and habitat for juveniles to adults is found all along the Hudson River in areas where the transmission cable is proposed to run.[9] Atlantic sturgeon are currently

[6] The Hudson River Project, available at: http://www.riverproject.org/riverdive_today.php

[7] Intelligent Energy Europe, "Electromagnetic Fields and Marine Organisms", available at: http://www.wind-energy-the-facts.org/en/environment/chapter-2-environmental-impacts/electromagnetic-fields-and-marine-organisms.html

[8] U.S. Environmental Protection Agency, Technical Development Document for the Final 316(b) Phase III Rule, June 2006.

[9] New York Department of Environmental Conservation, "Freshwater Fishes – Sturgeon", available at: http://www.dec.ny.gov/animals/7025.html

protected under a fishing moratorium that may extend until 2038 and are a candidate for listing under the Endangered Species Act.[10]

- Federally endangered bald eagles breed and winter in marshes, coves, and inlets the Hudson River[11], and the potential of construction activity to disturb birds nesting nearby and of the clearing or altering of land along the portions of the route to be buried underground to disturb foraging areas must be evaluated.

- Bog turtles are present in the mid-Hudson Valley wetlands and are endangered in New York State and threatened under federal law due to degradation of habitat.[12]

In addition to giving special attention to the species mentioned above, Scenic Hudson urges that the DEIS evaluate the potential impacts to Significant Coastal Fish and Wildlife Habitat ("SCFWH"), Essential Fish Habitat and New York Natural Heritage Program Rare Species designated by state or federal agencies as requiring special protection.

C. Spread of Invasive Species

The potential of the installation process to spread invasive species must be investigated in the DEIS as well. Over the past several decades, several non-native species have been introduced into the Hudson River Estuary. Since they have no natural predators in the Estuary, some have multiplied exponentially and have driven the numbers of other, native species down dramatically.

On of the most prominent of these species is the zebra mussel, whose filtration of the water column is believed to be changing the distribution of sub-aquatic vegetation in the Hudson River and thus altering important habitat for other aquatic species. Zebra mussel's introduction to the River has also contributed to the decline of various zooplankton, a food source for many species as well as consumers themselves of phytoplankton and detrital material. Zebra mussel has also dramatically changed the benthic macroinvertebrate community in the mid-Hudson Estuary since the early 1990s.[13]

More recently, the invasive Chinese mitten crab has been collected in the Hudson River. It competes aggressively with native crustacean populations and damages native vegetation and increases shoreline erosion.[14]

Invasive plant species in the Hudson River include the water chestnut, which starves other organisms of oxygen via hypoxia by dissolving the oxygen content of the water[15], as well as purple loosestrife.[16] Invasive species pose a great risk to biodiversity of the Hudson River, and can result in habitat loss. Therefore, the potential of the CHPE project to aggravate the spread of these species must be assessed.

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[10] *Id.*

[11] New York State Department of Environmental Conservation, "Bird Species – Bald Eagle", available at: http://www.dec.ny.gov/animals/9382.html

[12] Hudson River Valley Institute, "Bog Turtle".

[13] David L. Strayer, "Zebra Mussels and the Hudson River".

[14] New York Department of Environmental Conservation, "Chinese Mitten Crab Alert for the Hudson River Estuary", available at: http://www.dec.ny.gov/animals/35888.html

[15] Cary Institute of Ecosystem Studies, "No Longer Henry's Hudson: Exotic Species Alters River Habitat", 2002-2003.

[16] Bernd Blossey, "Purple loosestrife management plan for the lower Hudson River Valley", 2003.

3. Floodplains and Wetlands

The portions of the proposed route utilizing the railroad right-of-way would cross Federal Emergency Management Agency-mapped floodplains associated with the Hudson River, as would the underground connection to the Yonkers converter station.[17] The DEIS must carefully assess the impacts of having the cable cross floodplain areas and alternatives that would not take the cable across floodplain areas.

Wetlands serve as natural habitat for many species of plants and animals and absorb the forces of flood and tidal erosion to prevent loss of upland soil. There are thirty-two wetlands mapped by NYSDEC along the proposed route[18], which are vitally important to the biodiversity of the Hudson River Estuary's ecosystem. Wetlands are some of the most ecologically and economically valuable habitats in the Hudson Valley, but they are also one of the most threatened.[19]

There is the potential for the proposed project to have a detrimental impact on these sensitive and vitally important areas, especially during the construction and installation phase. Any potential impacts from construction equipment and activities on wetlands should be evaluated in the DEIS. Further, the impacts of Horizontal Directional Drilling ("HDD"), which is proposed for transition points where the cables enter and exit the water, on wetlands must be investigated.

4. Alternate Routes

Scenic Hudson urges that the DOE examine the feasibility of using the I-87 (NYS Thruway/Northway) corridor, immediately parallel to the Hudson River, as an alternative, land-based overhead route for the transmission cables in the DEIS. This could potentially mitigate environmental impacts to a greater extent than either the proposed submerged route or alternative route buried along the existing railroad right-of-way. New York has a policy of preventing linear co-location of utility facilities, other than telecommunications, with the highway right-of-way; however, exceptions to this policy can be granted.[20] The DEIS should examine the environmental impacts of this alternative and, if it further mitigates environmental impacts, direct CHPE to seek an exception to this policy.

Effects of the proposed alternative land route on sensitive wetlands need to be evaluated as well. A visual assessment should also be included to determine the extent of visual impact. If an alternative land route is chosen, whether overhead or buried along the railroad right of way, the potential for greater or lesser environmental impacts than the preferred submerged route needs to be assessed.

5. Renewable Potential of Electricity Source

This DEIS must carefully examine and analyze the renewable nature of the proposed power source and the assurances from CHPE that the source will remain renewable in the form of a new hydroelectric dam to be constructed in Quebec.

New dam construction does not meet the criteria for New York State's Renewable Energy Portfolio, which only recognizes new hydroelectric facilities as "renewable" for purposes of the Renewable Energy Portfolio when they are sourced from low-impact run-of-river with no new storage impoundment and a

[17] CHPE Supplement to Article VII Application, Attachment B.
[18] *Id.*
[19] New York State Department of Environmental Conservation, "Conserving Wetlands in the Hudson Valley".
[20] New York State Energy Planning Board, 2009 State Energy Plan, at 67-68.

capacity of 30MW or less.[21] Yet studies presented by CHPE claim that this project would expand New York's renewable energy base in the RPS by 13%.[22] This conflict must be investigated and the true overall renewable nature of the energy source identified.

The DEIS must explore the true renewable qualities of the energy source, as well as the possibility that CHPE could end up using a different source of power for transmission through its cables as the project progresses.

6. Yonkers Converter Station

Scenic Hudson understands there may be economic benefits the proposed converter station could possibly bring to the City of Yonkers. However, if the converter station is built on the site proposed by CHPE, every effort should be made to ensure that the converter station is designed in a manner that contributes to, rather than stifles, revitalization on the downtown waterfront.

The developer of the project has proposed to site this station near Wells Avenue and Alexander Street, within the area covered by the Alexander Street Master Plan. This area is also near Yonkers Station and ripe for development with transit-oriented uses, such as the recently constructed Hudson Park at Yonkers project.

The Master Plan aims to create a vibrant new waterfront neighborhood of residences, businesses, and open spaces; provide public access to the Hudson River; promote a pedestrian and cyclist friendly streetscape; maintain and improve public views of the Hudson River; and increase public access by foot and by vehicle into and within the Master Plan Area.[23] However, the construction of the proposed converter station - an industrial facility taking up approximately three acres of land devoid of public uses - could conflict with these redevelopment goals.

Scenic Hudson urges that the DEIS evaluate the effect the proposed converter station will have on the land use goals of the City of Yonkers, and consider viable alternatives for the design of the converter station. One possibility is to construct retail and/or office space that "wraps around" parts of the converter station facing south and west in order to activate the street and generate pedestrian uses in conformance with the Master Plan. This way, the converter station could bring needed economic benefit to the area, while also furthering the goals in the Master Plan and avoiding the creation of areas devoid of retail and commercial activity in close proximity to Yonkers Station and the new library. The DEIS should evaluate whether there would be adverse health effects associated with such human uses in close proximity to the converter station.

Another possibility would be to find an alternative site for the converter station, such as the old Glenwood Power Station. This former power station is currently for sale, fits with the location preference of CHPE (sited near the Hudson River and close to Manhattan), and is already an industrial site.

Again, Scenic Hudson recognizes there may be economic benefits the converter station could potentially bring to the City, but seeks to find creative solutions to impacts associated with large utilities - in this case

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[21] State of New York Public Service Commission Case 03-E-0188, Attachment "Eligible Electric Generation Technologies". This case limits facilities eligible for New York's Renewable Portfolio Standard to upgrades with no new storage impoundment, and new facilities are limited to low-impact run-of-river facilities with capacity of 30 MW or less and no new storage impoundment.

[22] CHPE Supplement to Article VII Application, Attachment A.

[23] Yonkers Alexander Street Master Plan at 3-1.

three acres - on prime real estate on a downtown waterfront that would otherwise be used for transit-oriented development.

7. Visual Impacts

The visual impact of the converter station and mitigation strategies must be assessed in the DEIS. A thorough visual analysis determining places from which the converted station would be seen should be prepared. The analysis should include computer-generated visual simulations in order to understand how the converter station would look from important vantage points. These should include the Library, Yonkers Station, Hudson River, upland neighborhoods, adjacent sidewalks, and nearby intersections. Views from Palisades Interstate Park (National Natural Landmark), located across the river in New Jersey and in Rockland County, as well as views from Philipse Manor Hall, listed on the National Register of Historic Places and a State Historic Site[24], must be assessed. Other locations should be identified in consultation with City officials.

In addition, temporary visual impacts along the Hudson River due to equipment and nighttime lighting must be evaluated. CHPE has indicated that construction will often go on 24 hours a day, 7 days a week due to the nature of installing the cable under the riverbed. The impacts of increased vessel activity in the River during installation should be investigated as well.

We hope that these comments will inform the scope of the DOE's DEIS on this project, and that the DEIS will allow Scenic Hudson and other intervening parties to better understand the scale of the potential environmental impacts of the project.

Conclusion

Scenic Hudson understands and appreciates that our future depends on a shift toward clean, renewable energy and urge that the DEIS take a hard look at whether the proposed CHPE transmission line project will have positive environmental benefits. A project of this magnitude – unprecedented in the Hudson Valley – must be designed and implemented in a manner that will not harm the sensitive Hudson River estuary or the communities through which the power transmission lines will pass. Scenic Hudson urges the DOE to carefully assess the potential negative environmental effects of the proposed project in the DEIS.

Scenic Hudson hopes that these scoping comments will result in a DEIS that provides a thorough evaluation of all potential impacts of this project.

Sincerely,

Hayley Mauskapf
Environmental Advocacy Associate

[24] New York State Office of Parks, Recreation and Historic Preservation, http://nysparks.state.ny.us/historic-sites/37/details.aspx