

**BEFORE THE
PUBLIC SERVICE COMMISSION
STATE OF NEW YORK**

Application of Champlain Hudson Power Express, Inc. for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the PSL for the Construction, Operation and Maintenance of a High Voltage Direct Current Circuit from the Canadian Border to New York City.

Case No. 10-T-0139

**APPLICATION OF CHAMPLAIN HUDSON POWER EXPRESS, INC. AND CHPE
PROPERTIES, INC. FOR AN AMENDMENT TO CERTIFICATE OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED**

Champlain Hudson Power Express, Inc. and CHPE Properties, Inc. (the “Applicants”) submit this Application (the “Application”) to the Public Service Commission (the “Commission”) for an Amendment to the Certificate of Environmental Compatibility and Public Need issued in this proceeding on April 18, 2013 (the “Certificate”). This application is made pursuant to Section 123(2) of the Public Service Law (“PSL”), and notice of this application is being provided pursuant to PSL § 122 (2) and the Commission’s rules. In light of the minor nature of the proposed changes to the Certificate conditions, no hearing should be required.¹

The Applicants respectfully request that the Commission waive one aspect of the notice requirements contained in § 85-2.10 of the Commission’s rules (16 NYCRR § 85-2.10). The

¹ See, e.g. Case 08-T-0034: *Application of Hudson Transmission Partners, LLC for a Certificate of Environmental Compatibility and Public Need for a 345 kV Submarine/Underground Electric Transmission Link Between Manhattan and New Jersey*, Order Granting Amendments to Certificate of Public Convenience and Necessity (Nov. 3, 2011); See, e.g. Case 08-T-0034: *Application of Hudson Transmission Partners, LLC for a Certificate of Environmental Compatibility and Public Need for a 345 kV Submarine/Underground Electric Transmission Link Between Manhattan and New Jersey*, Order Approving Certificate Amendments and Directing Compliance (Jan. 12, 2017); Case 02-T-0036: *Application of Neptune Regional Transmission System LLC for a Certificate of Environmental Compatibility and Public Need for the Construction of two 600 megawatt (+/- 500 kV) High-voltage Direct Current Submarine/Underground Electric Transmission Cables - Petition to Amend Opinion and Order Issued January 23, 2004 filed by Neptune Regional Transmission System LLC*, Order Granting Amendment of Certificate of Environmental Compatibility and Public Need (Aug. 26, 2005), at 4 (finding that an amendment to a certificate condition does not require a hearing where the proposed amendment “will not result in any material increase in any environmental impact or a substantial change in the location of the transmission facility.”)

Commission's rules require that notice be provided to residents of each municipality in which any portion of the facility is proposed to be located, both as primarily and alternatively proposed. Notice is accomplished through publication in a newspaper of general circulation. Inasmuch as this Petition does not propose any change in the location of the facility or involve any material increase in any environmental impact, the Applicants request that the Commission determine that the minor changes proposed herein do not necessitate publication of notice in numerous newspapers, at great cost to the Applicants, along the entire length of the 330 mile route of the Champlain Hudson Power Express project (the "Project").

In support of their request for an amendment, the Applicants state as follows:

1. On April 18, 2013, the Commission granted the Certificate to the Applicants authorizing them to build, maintain, and operate the Project. The Project is a high voltage, direct current ("HVDC") transmission line extending approximately 330 miles from the international border with Canada to a converter station in Astoria, Queens. The HVDC transmission line will be buried within waterways and along existing rights-of-way. The Project's HVDC cable system consists of two solid dielectric (*i.e.*, no fluids) HVDC electric cables, each approximately six inches in diameter. The cables will be installed either underwater or underground along the entire length of the Project route, minimizing visual and other potential environmental impacts.
2. In making its finding that the Project will serve the public interest, convenience, and necessity, the Commission took note of the Project's "unique and substantial benefits" and concluded that it would "advance major energy and policy goals" of both New York State (the "State") and New York City ("NYC").² The Commission also concluded that the Project would provide a "significant amount of additional capacity that would enhance energy security" in NYC and, through the import of "renewable energy," would increase supply diversity and enhance system reliability.³ In addition, the Commission noted that

² Case 10-T-0139: *Application of Champlain Hudson Power Express, Inc. for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the PSL*, Order Granting Certificate of Environmental Compatibility and Public Need (April 18, 2013), at 100 (the "Order").

³ Order, at 97.

Project would serve to facilitate proper functioning of the energy markets in the State and would afford “price stability benefits.”⁴ At the heart of the Commission’s determination to grant the Certificate was the conclusion that “the Facility’s expected emission reductions are a substantial environmental benefit, a benefit that is expected to be enduring.”⁵

3. Since the Certificate was issued, the need for urgent and substantial efforts to address and reduce the amount of greenhouse gases (“GHG”) released into the atmosphere due to human activity has become increasingly evident. For example, on September 18, 2019, the United Nations released an important new report regarding climate change and the measures that countries need to take in order to combat its global impacts.⁶
4. Since the Certificate was issued, the challenge of serving NYC with reliable and low carbon sources of energy has become more urgent as a result of the determination to close Indian Point Energy Center in 2021.⁷
5. Since the Certificate was issued, the Applicants have worked diligently, in parallel efforts, to obtain the additional governmental permits and approvals necessary in order to fully and finally authorize construction and operation of the Project, to conduct outreach and coordination efforts directed at interested stakeholders, to finalize the commercial arrangements that will allow for Project financing, and to refine the Project construction program with a view towards further minimization of Project impacts.
6. With respect to governmental permits and approvals, major advances were made in October of 2014 with the issuance by the U.S. Department of Energy of the Project’s Presidential Permit (further defined below) and in April of 2015 with the issuance by the

⁴ Order, at 98.

⁵ Order, at 52.

⁶ https://www.undp.org/content/undp/en/home/librarypage/environment-energy/climate_change/ndc-global-outlook-report-2019.html

⁷ <https://www.city-journal.org/atomic-power>.

U.S. Army Corps of Engineers (“USACE”) of the Project’s Corps Permit (further defined below). These permits may be viewed on the Project website.⁸

7. With respect to outreach and coordination efforts directed at interested stakeholders, the Applicants have reached agreements and secured resolutions of support from many host municipalities, have participated in the quarterly meetings of the Environmental Trust Governance Committee, and conducted hundreds of meetings with landowners, non-governmental organizations, agencies, officials, and other individuals and groups.
8. With respect to commercial arrangements, the Applicants have pursued various opportunities regarding potential counterparties, including responding to the “Request for Information—Supplying New York City with Renewable Power” issued by NYC on July 10, 2015 and the “Large-Scale Renewables Request for Proposals” issued on June 2, 2017 by the New York Power Authority.
9. In 2019, both NYC and the State adopted major legislative programs aimed at curbing GHG. On April 18, 2019, the NYC Council adopted the Climate Mobilization Act, which includes measures that will reduce the carbon footprint of large commercial buildings.⁹ Four days later, on Earth Day, Mayor DeBlasio publicly announced that his administration had decided to supply 100% of the NYC governmental electricity demand with renewable hydropower transmitted from Canada to NYC.¹⁰
10. Following the Mayor’s remarks, Daniel Zarrilli, Director of OneNYC, stated that NYC expected to begin relying on Canadian hydropower within five years.¹¹ It is critical to note

⁸ <http://www.chpexpress.com/permits.php>

⁹ Local Law 97 of 2019; NYC Charter Chapter 26 Section 651; NYC Code, Title 28, Chapter 3, Article 320; NYC Code, Title 28, Chapter 3, Article 321.

¹⁰ The relevant portion of the press release reads as follows: “The City government of New York City, in an average day, uses as much electricity as everybody in the state of Vermont. And within the next five years, we will convert all of our electricity that the City government uses to renewable sources. All of it will come from renewable energy. That electricity will come down to us – it’s zero-emission electricity coming to us from Canada, from Quebec, hydropower that is being produced right now.” <https://www1.nyc.gov/office-of-the-mayor/news/211-19/transcript-mayor-de-blasio-new-york-city-s-green-new-deal>.

¹¹ *ibid.*

that, in order to meet the Mayor's supply timeline, Applicants now require the completion of the closing of the Project's construction financing in late 2020.

11. Finally, on July 18, 2019, Governor Cuomo signed into law the Climate Leadership and Community Protection Act,¹² the most ambitious effort to curtail GHG emissions adopted to date by any state, and this landmark legislation will require significant amounts of new renewable energy.
12. It must be noted that all of the actions taken by the State and NYC in 2019 with respect to the GHG issue (the "2019 Initiatives") are extremely time sensitive in terms of the prospects for successfully meeting the ambitious GHG reduction goals that have now been enacted into law.¹³
13. With respect to the refining of Project construction plans with a view towards further minimization of Project environmental impacts, the Applicants have worked to optimize construction means and methods and, most recently, have undertaken a thorough examination of the administrative record in this proceeding (the "Project Documentation") to determine whether any updates are necessary or appropriate in terms of construction scheduling or design. As a result of this review and improvements in construction practices, Applicants are seeking to supplement the Project Documentation with a new construction methodology and to revise certain Certificate Conditions that, as drafted, might unnecessarily and unintentionally hinder the Project's construction and post-construction compliance programs.
14. The Applicants explain in more detail the need for these minor revisions under the following three separate Headings:
 - a) Updating Previous Filings Relating to Project Construction,
 - b) Avoiding Delay in Project Construction (Condition #11),

¹² L. 2019, c. 106.

¹³ The NYC legislation (Local Law 97) requires emission reductions from buildings to begin by 2024. The CLCPA mandates that 70% of the State's energy must come from renewable power by 2030. In February 2019, NYSERDA reported that 28.13% of the State's energy came from renewable power in 2017.

- c) Ensuring Efficient Processing of Construction and Post-construction Filing Requirements (Conditions 95[a][i], 140, and 156[b]).

Updating Previous Filings Relating to Project Construction

- 15. As noted above, the Applicants have undertaken a comprehensive and ongoing review of the Project Documentation. As a result of this exercise, the Applicants have concluded that one of the “typical” installation detail design drawings appearing in the Project Documentation should be supplemented to reflect the Applicants’ interest in installing the cables within a conduit along overland portions of the Project. Currently, the Project Documentation only contemplates direct burial of the cables in an open trench.
- 16. This particular change is described in detail in an addendum to Section 7 of the Project Best Management Practices (the “Addendum”). The change results in a number of benefits, as further explained and quantified in the Addendum:
 - a) It reduces the length of open trench required at any given time during the construction cycle,
 - b) It reduces the duration of community impacts as installation within one place will progress more quickly, and
 - c) It provides more flexibility in scheduling of the differing construction trades necessary to dig the trench, install the conduit, backfill the trench, and pull the cable.

It is important to note that the width and depths of the trenches will remain unchanged, as will the size and frequency of the splice vaults, from those associated with the direct burial technique. Thermal impacts to surrounding soils will also be slightly reduced by virtue of the insulating effect of the conduits.

- 17. To achieve this Project design improvement and to make the appropriate complementary update of the administrative record, the Applicants hereby submit the Addendum and accompanying supplementary design drawing, both of which are attached hereto and identified as Exhibits “A” and “B,” for inclusion in the Project Documentation.

Avoiding Delay in Project Construction (Condition #11)

18. Certificate Condition 11 states that Project construction may not commence unless and until three governmental permitting processes have been completed. These specified processes are:
- a) Issuance by appropriate Canadian federal and/or provincial authorities of those approvals and permits necessary in order to allow for the construction of transmission facilities interconnecting with the bulk power system operated by TransÉnergie (or a successor to such organization) and extending to the New York border;*
 - b) Issuance by the USDOE of an approval pursuant to Executive Orders 10485 and 12038 (the “Presidential Permit”); and*
 - c) Issuance by the USACE of permits pursuant to section 404 of the Federal Clean Water Act and section 10 of the Federal Rivers and Harbors Act (the “Corps Permit”)...*

This condition should be amended as explained below as a result of a number of circumstances that have arisen since the issuance of the Certificate.

19. First, Condition 11 has already been substantially complied with and will be conclusively complied with in due course. The two governmental authorizations within the control of the Applicants have been obtained: the Presidential Permit was issued on October 6, 2014 and the Corps Permit was issued on April 20, 2015. TransÉnergie forecasts that it will approve the Hydro Quebec Network Impact Study before the end of 2019 and that Canadian permits and approvals will be issued in due course pursuant to applications to be filed in April of 2021.
20. Second, as noted above, NYC Mayor DeBlasio has publicly announced that NYC intends to begin serving its governmental energy requirements through physically delivered Quebec hydropower. In order to meet this deadline, the Project’s 42-month construction

program must begin approximately 15-18 months¹⁴ in advance of the latest date upon which Hydro Quebec now predicts that it will receive permits in Canada.

21. The Applicants are currently working with Hydro Quebec in an effort to accelerate the Canadian permitting timeline so that the needed Canadian permits are issued in as timely a manner as possible, but this process is not within the Applicants' control. Thus, in order to provide the Applicants with some flexibility regarding the commencement of construction in New York, the Applicants respectfully request that Certificate Condition 11 be modified as set forth in the redlined text below and redlined changes shown:

*The Certificate Holders shall not commence construction of the Facility prior to ~~the issuance~~ (i) **the filing by TransÉnergie (or a successor to such organization) with the Government of Quebec under the Environmental Quality Act and with the Canadian Energy Regulator under the Canadian Energy Regulator Act of applications for** ~~by appropriate Canadian federal and/or provincial authorities of those approvals and permits necessary in order to allow for the construction of transmission facilities interconnecting with the bulk power system operated by TransÉnergie (or a successor to such organization) and extending to the New York border~~ (ii) **the issuance** by the United States Department of Energy of an approval pursuant to Executive Orders 10485 and 12038, and (iii) **the issuance** by the United States Army Corps ("USACE") of permits pursuant to section 404 of the Federal Clean Water Act and section 10 of the Federal Rivers and Harbors Act. The Certificate Holders shall provide copies of said permits **or applications** to the Secretary within fifteen (15) days of receipt.*

¹⁴ TDI's current construction schedule contemplates the commencement of the following activities during this 15-18 month period: (1) submarine route clearing (*i.e.* grapnel run), (2) water to land transitional Horizontal Directional Drills ("HDD") and some upland HDDs, (3) conduit laying along portions of the upland route and potentially some pulling of the cable through these conduits, (4) laying of the cable within Lake Champlain.

**Ensuring Efficient Processing of Construction and Post-Construction Filing Requirements
(Conditions 95[a][i], 140, and 156[b])**

22. During the Applicants' review of the Certificate Conditions, three conditions were identified that create some risk that certain filings making up the Project's Environmental Management and Construction Plan ("EM&CP") and a certain post-construction compliance filing could be rejected based solely on obsolete information or deficient wording in the text of the conditions. The relevant Conditions are 95(a)(i), 140, and 156(b).
23. Conditions 140 reads as follows (a portion of the preceding condition is also shown to provide context):

139. Following final completion of construction of a particular Segment, the Certificate Holders shall prepare and provide to the DPS the as-built design drawings, which shall include a detailed map or maps showing: (a) the boundary of the permanent Facility ROW...

140. Each edge of the permanent overland Facility ROW shall be no closer than (a) when located entirely within lands owned or controlled by a railroad company or a public highway, six (6) feet to the outer surface of the nearest installed cable and (b), in all other areas, eight (8) feet to the outer surface of the nearest installed cable.

24. The specified corridor widths contained in Certificate Condition 140 may not be achievable in certain limited areas where topographical, environmental, proximity (to nearby infrastructure), or other constraints exist. In other Certificate conditions where precise numeric requirements are imposed, a "safety valve" is typically introduced to confirm that departure from the numeric requirement, if justified and approved by the Department of Public Service as part of the EM&CP review process, may be allowable (*see, e.g.*, Certificate Conditions 66[a], 95[b][ii], 106[e], 150, and 156[a]). Certificate Condition 140 should have included similar language allowing deviations in certain necessary circumstances. Therefore, the Applicants respectfully request that Certificate Condition 140 be revised to read as follows (redlined addition shown):

140. Except as may be detailed, justified, and approved by the Department of Public Service pursuant to the EM&CP process, Each edge of the permanent overland Facility ROW shall be no closer than (a) when

located entirely within lands owned or controlled by a railroad company or a public highway, six (6) feet to the outer surface of the nearest installed cable and (b), in all other areas, eight (8) feet to the outer surface of the nearest installed cable.

25. One might note that the corridor width requirement is driven primarily by the concern that sufficient land control should be retained in order to facilitate vegetation management over the life of the Project. This concern is aptly addressed by Certificate Condition 5, which requires the Applicants to:

...acquire and maintain the continuing right to enter onto and use certain additional lands immediately adjacent to the Facility ROW needed for repair and maintenance purposes, including preclusion of vegetative encroachment, on terms prohibiting the owners of such land from taking any action on that land that would interfere with such repair and maintenance activities.

As Condition 5 implies, the proper determination of what rights will be needed to protect the cables in particular locations is best determined in the context of the EM&CP process.

26. With respect to the possible rejection of EM&CP filings themselves, the Applicants note that two conditions of the Certificate are problematic with respect to the Harlem River (specifically, 156(b) and 95[a][i]), which, unique among the water bodies affected by the Project, is effectively a bank-to-bank maintained Federal Navigation Channel (“MFNC”).
27. Certificate Condition 156(b) currently reads as follows:

For the HVDC Transmission System installed in Lake Champlain and the Hudson and Harlem Rivers, the Allowed Deviation Zone shall be anywhere within those bodies of water where the water depth exceeds twenty (20) feet at mean low water, and where installed in the East River the Allowed Deviation Zone for the HVDC Transmission System shall be anywhere where the water depth exceeds ten (10) feet at mean low water....

28. For Lake Champlain and the Hudson, Harlem, and East Rivers, Certificate Condition 156(b) excludes shallow areas from the in-water Allowed Deviation Zone.¹⁵ In Lake

¹⁵ Pursuant to Certificate Condition 156, an approvable EM&CP filing must show that cable installation will take place within a “Allowed Deviation Zone,” unless certain limited circumstances relating to environmental impacts and engineering constraints are presented.

Champlain and the Hudson River, the shallows exclusion by its terms precludes cable installation in areas in which the depth of water is less than 20 feet at mean low water/ Mean Low Tide (“MLT”). In the East River, the shallows exclusion by its terms precludes cable installation in areas in which the depth of water is less than 10 feet at MLT.

29. The Certificate establishes these varying depth requirements for a simple reason — to reflect the commitment of the Applicants and the other parties to the Joint Proposal of Settlement attached to the Certificate (“JP”) to appropriately protect natural shoal areas from impacts associated with cable installation. With respect to Lake Champlain and the Hudson River, the shallow waters generally involve undisturbed gradual slopes that support a diversity of aquatic life. By contrast, the shallow waters for the Hell Gate section of the East River (where the Project will be installed) involve more abrupt slopes and less abundant aquatic life due to extensive human disturbance, including dredging for the purposes of facilitating navigation. The booklets showing the bathymetry of these areas issued by the National Oceanic and Atmospheric Administration may be accessed at the links listed in the footnote below (each, a “NOAA Chart”).¹⁶ While the Harlem River, which as noted above is itself an MFNC, was originally grouped with the Hudson River in terms of the depth requirements, its topography and its contributions to biodiversity are far more similar to those presented by the East River, and both the Harlem River and the Hell Gate section of the East River are currently listed as impaired due to contaminated soils.¹⁷
30. In the final drafting of Certificate Condition 156(b), the Harlem River was assigned a depth of water installation constraint identical to that applicable in Lake Champlain and the Hudson River, even though the Harlem River has much more in common with the East River than it does with those waterbodies.
31. In meetings attended by Applicants in 2014, the USACE confirmed for the Applicants that the authorized depth of the Harlem River is only 15 feet below MLT (except for a 400 foot

¹⁶ East River: https://www.charts.noaa.gov/BookletChart/12339_BookletChart.pdf
Harlem River: https://www.charts.noaa.gov/BookletChart/12342_BookletChart.pdf

¹⁷ New York State Department of Environmental Conservation. Draft 2018 Section 303(d) List of Impaired Waters. Accessed on September 9, 2019 at: https://www.dec.ny.gov/docs/water_pdf/303dlistdraft18.pdf. The portion of the East River crossed by the project is listed as "ER Portion 1).

stretch in the Marble Hill area where the authorized depth is 18 feet below MLT and the bottom is a rock shelf consisting of Manhattan gneiss) and that much of the Harlem River is in fact less than 20 feet deep at MLT (see Harlem River NOAA Chart). Thus, pursuant to Condition 156(b) as it is written, there is no available Allowed Deviation Zone in several stretches of the Harlem River, and installation of the Project cables in this waterbody is precluded.¹⁸

32. In order to ensure that acceptable EM&CP filings can be prepared for the Project route in the Harlem River, Certificate Condition 156(b) must be revised in order to achieve the proper grouping in terms of the shallows exclusions, and the Applicants respectfully request that it be revised to read as follows (the preceding subsection [a] is also shown to provide context and redlined changes shown):

156. (a) For the overland portions of the Facility, construction outside the Allowed Deviation Zone, to the minimum extent necessary, as detailed and justified in an EM&CP submittal, shall be allowed for appropriate environmental or engineering reasons, except where a conflict with a specific provision of the Certificate would be created.

(b) For the HVDC Transmission System installed in Lake Champlain and the Hudson ~~and Harlem~~ Rivers, the Allowed Deviation Zone shall be anywhere within those bodies of water where the water depth exceeds twenty (20) feet at mean low water, and where installed in the ~~Harlem and East Rivers~~ the Allowed Deviation Zone for the HVDC Transmission System shall be anywhere where the water depth exceeds ten (10) feet at mean low water...

33. A somewhat similar issue arises in connection with the Harlem River in Condition 95(a)(i), which currently reads as follows:

95. The Certificate Holders shall use installation techniques for underwater cable installation activities that are appropriate for the prevailing substrate conditions.

a. Cable installation in the Hudson, Harlem, and East Rivers shall be designed and installed to meet the following criteria:

¹⁸ Certificate Condition 157 does not resolve this issue. According to Certificate Condition 157, a deviation presented in a proposed EM&CP filing will not be allowed where “a conflict with a specific provision of this Certificate would be created.”

- (i) *Where the cables shall be located within the limits of the maintained Federal Navigation Channels in the Harlem, Hudson, and East Rivers, the Certificate Holders shall install the cables to a depth of at least fifteen (15) feet below the federally-authorized depth of the Federal Navigation Channel;*

34. Certificate Condition 95(a) would require the cables to be installed at 30 foot below MLT (15 feet authorized depth plus 15 feet below authorized depth = 30 feet) in most areas of the Harlem River and 33 feet below MLT (18 feet authorized depth plus 15 feet below authorized depth = 33 feet) at the rock shelf near Marble Hill.
35. The adoption of the Harlem River installation constraint in Certificate Condition 95(a) resulted from the Applicants not yet having resolved the terms of the Corps Permit at the time the JP was finalized in 2012. In fact, the Corps Permit was not issued until three years later. In 2012, the then-available guidance provided by the USACE in the Article VII process was a July 5, 2011 letter from the USACE office in NYC, which stated that requiring the cables to be installed at no less than fifteen feet below the authorized depth of an MFNC would ensure “minimal impact to navigation and future dredging.” A copy of this letter is attached hereto and identified as Exhibit “C”.¹⁹ In developing the JP, the Applicants needed an MFNC “placeholder” pending final review and permitting by the USACE. The 15-feet below authorized depth constraint served that precise purpose—a placeholder.
36. In late 2013 and early 2014, the Applicants, the USACE, and the New York State Department of State (“NYSDOS”) performed an intensive review of the situation presented by the Harlem River. On March 3, 2014, NYSDOS amended its June 8, 2011 Coastal Zone Management Act Consistency Concurrence Determination to facilitate the USACE’s establishment of an appropriate design regime for the portion of the Project located in the Harlem River (the “Amended Determination”). A copy of this determination is attached hereto and identified as Exhibit “D.” Based on the Amended Determination, the USACE issued its Permit on April 20, 2015.

¹⁹ It should be noted that many of the positions taken and policies discussed by the USACE in this letter were later superseded or deemed inapplicable to the Project’s design after extensive consultation with stakeholders, experts, and other governmental agencies, including the NYSDOS and the U.S. Coast Guard.

37. The key section of the Amended Determination, appearing on its first page, reads as follows:

The proposed modification involves modifying burial depths of the proposed cable within federal navigation channels from 15 feet below authorized depth to: 8 feet in soft sediments and 6 feet in rock below the authorized depth in the Harlem River...

The Department of State has determined that this modification of the activity previously reviewed by this Department would not result in coastal zone effects that would be substantially different than those originally reviewed by the Department and that the modified proposal meets the Department's general consistency concurrence criteria. Therefore, further Department of State review of this modification to the previously reviewed activity, and the Department's concurrence with an individual consistency certification for the proposed activity, are not required.

Read together, the description of the "work" to be performed in the Harlem River that appears in the Corps Permit and the above-quoted language from the Amended Determination allow for and effectively prescribe a straightforward revision to Condition 95(a)(i) that will conform it to the final federal requirements.

38. The 15-foot placeholder now can and should give way to a revision that ensures the essential and beneficial consistency between state and federal requirements, and Applicants respectfully request that Condition 95(a)(i) be revised to read as follows (the language of Condition 95 preceding subsection (a)(i) is also shown to provide context and redlined changes shown):

95. The Certificate Holders shall use installation techniques for underwater cable installation activities that are appropriate for the prevailing substrate conditions.

a. Cable Installation in the Hudson, Harlem, and East Rivers shall be designed and installed to meet the following criteria:

(i) Where the cables shall be located within the limits of the maintained Federal Navigation Channels (a) in the ~~Harlem~~, Hudson and East Rivers, the Certificate Holders shall install the cables to a depth of at least fifteen (15) feet below the federally-authorized depth of the Federal Navigation Channel and (b) in the Harlem River, the Certificate Holders shall install the cables to those elevations below the federally-authorized

depth of such Channel that have been specified by the USACE in Permit NAN-2009-0189 and by the New York State Department of State in its determination of March 3, 2014 made pursuant to the federal Coastal Zone Management Act.

It should be noted that no changes to the installation depths as detailed in the Certificate are proposed for Lake Champlain and the Hudson and East Rivers. In fact, except in the case of the Harlem River installation depth requirement, the state requirements regarding installation depth of the cables in MFNCs remain stricter than those established by the Corps Permit.

39. In view of the fact that the requested changes to the Certificate are of a minor nature, the Project's prospects for success are enhanced by the achievement of regulatory milestones, and all of the 2019 Initiatives are time sensitive, expeditious and positive action on this application for amendment by the Commission is very important, and the Applicants respectfully request that a decision be rendered as soon as reasonably possible.

WHEREFORE, for the above-stated reasons, Champlain Hudson Power Express, Inc. and CHPE Properties Inc. respectfully request that the Commission:

1. Accept the Application for filing; and
2. At the conclusion of these proceedings, issue an order authorizing an Amendment to the Certificate, with the effect of supplementing the Project Documentation and superseding anything therein that is inconsistent with the terms of the Amendment; and
3. Grant the Applicants such other authorizations, consents, permissions and approvals as may be necessary or convenient for the construction, operation, and maintenance of the Project.

Respectfully submitted,

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EXHIBIT A
ADDENDUM



Champlain Hudson Power Express Inc.

Best Management Practices

General Information Regarding Application

**(Revised Section 7)
September 26, 2019**

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7.0 OVERLAND CABLE INSTALLATION

The objective of the overland trenching operations for the Facility is to safely and efficiently install the HVDC cable within the available right-of-way, minimize the use of land outside of the available right-of-way and avoid and/or minimize environmental impacts. Over the length of the overland portion of the Facility the available right-of-way varies in width, grade, which will require variation of the installation methods. The three primary installation methods will be traditional trench and spoil method, series trenching method and trenchless installation method. Variation among these three installation methods will be prescribed based on site specific evaluations with the EPC Contractor selected by the Certificate Holders and then identified on the EM&CP Plan and Profile drawings. General descriptions of traditional trench and spoil installation and series installation are provided in the following sections and trenchless installation is described in Section 8.0. The installation construction method for each segment of the Facility will be identified on the EM&CP Plan and Profile drawings.

7.1 PRECONSTRUCTION STUDIES

Preconstruction studies will include identifying available right-of-way construction areas, identifying structural crossings and verification of landforms along the cable route, including geotechnical investigations where needed, to determine the geology in the area to be trenched. These preconstruction studies will be used to identify the areas where various installation methods will be effective. In addition to preconstruction studies, agreements with the railroads will be completed to determine protection measures to be utilized to assure the Facility does not interfere with operations or safety of railroads and highways and the Facility will comply with New York State's Dig Safely Program ("One-Call") notification system, 16 NYCRR Part 753. The construction work area, specific installation method and site specific details for installation of the Facility will be identified on the EM&CP Plan and Profile drawings.

7.2 CORRIDOR PREPARATION

A linear work corridor ranging from twenty (20) feet to in excess of fifty (50) feet where right-of-way permits, will first be cleared, grubbed and graded to establish an access path for subsequent steps. The width of the work corridor prepared will vary based on the selected installation method for a given section of the overland cable route. Multiple installation methods and variations of each method will be developed to facilitate installation of the Facility in areas with limited right-of-way widths. Further description of clearing and grubbing to prepare the work area is provided in Sections 5.0 and 6.0, respectively.

7.3 TRADITIONAL TRENCH AND SPOIL METHOD

Traditional trench and spoil procedures are typically the most efficient for underground cable installation. The trench and spoil method involves excavation of the trench by traditional back hoe or bulldozer from an access road established adjacent to the trench area, segregating and stockpiling the excavated trench material next to the trench (Figure 7-1). Although typically the most efficient, this method requires the widest construction corridor.

Trenching will be conducted in accordance with OSHA's Technical Manual for open trenching (i.e., Section V, Chapter 2) and Section 10.1.2.1. The excavated trench will be between 2'6" and 4' wide and four (4) or five (5) feet deep (depending upon site specific requirements). Figure 7-2 provides a typical trench cross section when the cable is directly buried while Figure 7-2A provides the typical trench cross section when the cable is encased in conduit. In all agricultural areas a minimum depth of forty-eight inches of cover over the Facility is required. In areas where the depth of soil over bedrock ranges from zero to forty-eight inches, the cable shall be buried entirely below the top of the bedrock. Material removed from the trench will be stockpiled next to the trench and segregated as ballast, cinders, topsoil, and subsoil, as appropriate. Geotextile fabric or similar material may be used where space constraints require layering of various materials. In locations where the right-of-way limits stockpiling next to the trench, trench material may be removed from the immediate construction area and stockpiled in an approved location until backfilling and restoration. Excavated materials stockpiled away from the immediate excavation will be set back at least one hundred (100) feet from streambanks and wetlands and will be protected with appropriate erosion and sedimentation controls.

7.3.1 Cable Pulling

Cables of the size and voltage design used on the Facility are supplied spooled on a steel reel. A suitable trailer or rail car will be used for transporting the cable reel to the pulling sites. The cable is pulled into the trench or into the conduit off the trailer. If the cable is not to be laid directly off the trailer, it will be unloaded as close as possible to where it is to be pulled out along the right-of-way and lowered into the trench at a later time.

For a direct burial installation, the cable corridor is prepared with cable rollers along the ground surface. The cable reels will be placed on stable ground, firmed up by rock fill and steel plates if necessary. The cables are pulled by pulling machines placed evenly along the cable route. Alternatively, for a cable in conduit installation, a nose pull by a winch or continuous bond pull may be applied. The cable will not be pulled over hard and pointed obstacles, as these could damage the corrosion protection and/or insulation, nor will the cable be bent more than the minimum bending radius. An appropriate communication system will be established and tested for all operators.

During wet weather, operations will be suspended in areas with unstable soil conditions to prevent potential rutting, erosion, and other site hazards. Any erosion control devices that are moved or damaged by construction equipment will be replaced or repaired by the end of the work day or sooner during wet weather.

7.3.2 Length of Open Trench

The length of the open trench for direct burial installation will be determined by the maximum length of cable that can be transported in a single piece or by the maximum length of cable that can be pulled, whichever is the least. For land installation, typical segment lengths range from three tenths (0.3) to six tenths (0.6) miles. For cable in conduit installation typical open trench lengths are expected between one tenth (0.1) and two tenths (0.2) miles.

7.3.3 Splicing/Jointing

The number of splices required will be determined either by the maximum length of cable that can be transported in a single piece or by the maximum length of cable that can be pulled; whichever is the least. Joints may also be required where trenching methods change and where there are transitions from underwater to overland cable. Although electrically identical to the underground cable, underwater cable is armored, has an overall larger diameter, is heavier and has a larger minimum bend radius. These properties make it more difficult and expensive to install than underground cable.

Jointing and termination will be performed by skilled jointers according to detailed installation instructions. The work is performed in a jointing enclosure (“house”) supported on a stable work base of crushed stone, concrete or suitable native soil. The jointing house controls the ambient conditions during the splicing operation, including controlled levels of humidity, temperature, and airborne dust. The jointing house is assembled from pre-constructed modular units that can be modified in terms of length and width. The units include heating, air conditioners, dehumidifiers, and lifting equipment such as traverse carriers. Where necessary, the jointing house and splicing location (“bay”) may include a concrete base and side walls for mechanical protection and separation from parallel utilities.

7.3.4 Padding and Thermal Cover

To protect the cables, imported or screened on-site material may be used to pad the cables. Subsequent to cable laying, the trenches will be backfilled with low thermal resistivity uniformly graded sand or excavatable, low density concrete. In some locations where the risk of dig-in or damage is higher, a protective concrete layer or steel plate may be installed over the thermal sand or flowable fill cover above the low thermal resistive backfill material. Excavated material with boulders and large cobbles removed will then be placed in the trench. Stockpiled trench material will be replaced in the trench in reverse order and stabilized in accordance with SDESC as described in Section 4.0. Unsuitable native material (wet clay, silt, organic matter or material having large cobbles) will be replaced with appropriate backfill. The whole assembly will have a marker tape placed one (1) to two (2) feet above the cables.

7.3.5 Backfilling

Following cable installation, and placement of thermal cover and top protection, the trench will be backfilled with screened native material or material imported to the site. These materials will be tested to ensure they possess the proper thermal characteristics to meet engineering specifications. The upper portion of the trench will use the native spoil as backfill free of boulders, large cobbles, foreign matter, or other deleterious materials. Where it is permissible to open cut roadways, the upper portions of the trench will be backfilled with roadway base material meeting NYSDOT standard specifications. Any excess natural material, except shot rock will be spread over the cable trench area or in upland areas within the right-of-way, in a

manner that does not detrimentally affect pre-existing surface drainage. Excess unnatural road base material must be disposed of in compliance with all applicable environmental regulations. Backfilling in agricultural lands in conformance with the agricultural mitigation standards in the guidance developed by Ag & Mkts (1997) (Section 20.0).

All granular backfill material will be placed when conditions are dry and compacted to the density required by the cable design. Backfill or fill material will not be placed on surfaces that are muddy, frozen, or contain frost or ice. Excavated areas will be dewatered pursuant to Section 4.2.3 as required to perform the work and in such a manner as to preserve the undisturbed state of the approved subgrade material. Flowable fill may be placed by tremie where dewatering is unsuccessful to create a dry situation. Backfill, fill and site topsoil will either be compacted to match the surrounding grade or a crown will be left over the trench to accommodate settling.

Railroad ballast and cinder materials will be replaced and spread where it had been removed.

Any contaminated soils removed from a work site may not be used as backfill and shall be analyzed and disposed of in accordance with the applicable regulations.

After rough grading, the topsoil will be York-raked and seeded, or similarly prepared for an acceptable vegetative cover. Crowned trenches will be periodically inspected following restoration, and necessary measures will be taken to restore grade and stabilize the right-of-way. Backfill will be completed within two (2) days of lowering-in the cable.

7.4 SERIES INSTALLATION METHOD

Series installation involves specialized equipment that excavates and lays the cable in one step. The series installation method utilizes the trench area as the access for installation equipment, minimizing the construction work space needed. Following preparation of the work corridor, the cable would be unreeled and laid along the surface of the corridor by equipment moving along the corridor, or pulled over blocks along the ground surface. A specialized excavator straddles the cable and lifts and passes it overhead while excavating the trench; placing the excavated material on one or both sides of the trench. The cable is then lowered into the trench in one pass. Series operations can also backfill the trench as the work progresses, but this is most readily accomplished in areas where the native soil does not have to be replaced with thermal fill.

7.4.1 Cable Pulling

With the series installation method the cable pulling is very similar to the traditional method described in Section 7.3.1 except that the cable is laid on the surface and not in a trench.

7.4.2 Length of Open Trench

When utilizing the series installation method, the linear length of the open trench will be very short because backfilling occurs quickly after the cable laying. It is expected that by the end of each day the trench will be backfilled to a point very close to the excavator. Any excavations

left open overnight will be marked as a safety precaution. Open excavations at locations such as roadsides, access roads, or in villages shall be marked with lighting and barricades.

Another alternative installation method includes a process of directly laying the cable and immediately backfilling it. Use of this method will be limited to locations where thermal backfill will not be necessary, the soil is stable enough not to require shoring, and the right-of-way width will allow installation at the required depth without violation of established railroad construction criteria (theoretical embankment boundaries).

7.4.3 Splicing/Jointing

Jointing and splicing may be performed using two different approaches. The first and most likely method would use a procedure similar to that of the traditional installation method. The second approach would leave a short section of trench open, with the ends of the cable exposed within the open excavation. After the installation operation has moved forward, the splice area will be prepared to receive the splice house. The splice operation itself is identical to that previously described. When complete, the splice house and related equipment will be removed and the pit backfilled.

7.4.4 Padding and Thermal Cover

Padding and thermal cover will be installed in the same manner as in the traditional method discussed in Section 7.3.4, unless native material is suitable for this use. If native material is used the trench would be backfilled in the same process as the trench excavation and cable laying.

7.4.5 Backfilling

Backfilling will occur immediately following placement of low thermal resistive fill and follow the same procedures as used in the traditional method.

7.5 MECHANICAL ROCK REMOVAL AND BLASTING

During preconstruction studies, areas where rock or ledge may be encountered during construction will be identified. Rock and ledge encountered above the minimum cable installation depth will be removed by mechanical equipment if possible. Often the rock surface has been weathered enough that mechanical removal is possible. Where it is not, three options exist: evaluation of a more shallow cable installation with enhanced concrete or steel cover protection, an increase in the amount of cover (if the changed topography is not problematic), or blasting to achieve the standard depth.

Mechanical removal would be the preferred method of achieving the required burial depth; however if any blasting is required it will be performed by licensed professionals pursuant to New York State Department of Labor's regulations 12 NYCRR Part 39, Possession, Handling, Storage and Transportation of Explosives, and in strict accordance with guidelines designed to

control energy release. DPS will be provided with a copy of the blaster's license prior to any blasting that might be necessary.

In areas where blasting is anticipated, pre-blast surveys of foundations, underground wells, and other susceptible in ground and above ground structures will be performed to determine pre-blasting condition of the structures.

Proper safeguards will be taken to protect personnel and property in the area. Charges will be kept to the minimum required to break up the rock. Where appropriate, mats made of heavy steel mesh or other comparable material will be utilized to prevent the scattering of rock and debris. Blasting will strictly adhere to all industry standards applying to controlled blasting and blast vibration limits with regard to structures and underground utilities. No fly rock will be allowed to leave the right-of-way. Blasting in the vicinity of nearby utilities will be coordinated with the owner, as necessary. Blasted rock will be hauled off-site and disposed of in an appropriate manner. Details of blasting controls and safety procedures will be specified in the site-specific EM&CP documents.

In agricultural areas of till over bedrock where blasting is required, the Certificate Holders will use matting or controlled blasting to limit the dispersion of rock fragments. All blasted rock not used as backfill will be removed from croplands, haylands, and improved pastures. The till and topsoil shall be returned in natural sequence to restore the soil profile. Farm owners/operators will be given timely notice prior to blasting on farm property.

7.5.1 Monitoring and Inspection

A Safety Inspector and Construction Inspector will be present for areas that require blasting. In addition, an independent consultant will be hired to monitor blasting and the effects of the blasting on structures, wells and other infrastructure and to investigate claims of damage.

7.5.2 Time Constraints and Notification

Explosives use will be limited to the hours of 9:00 am to one hour before sunset on non-holiday weekdays, unless otherwise approved by DPS. Fly rock or other airborne debris will be controlled by heavy steel mesh or other comparable material. DPS staff, NYSDOT, and local and state public safety officials will be notified at least forty eight (48) hours prior to the initiation of blasting, and each morning with planned blasting locations. Inhabitants of occupied structures and farm operators within one-quarter (0.25) mile of the blasting area will be notified at least forty eight (48) hours before blasting in that area.

7.5.3 Remediation

Any claims of damage from blasting that are documented and verified as having been caused by such blasting by an independent consultant will be assessed for remediation by the Certificate Holders.

7.6 TRENCH PLUGS

After cable installation, permanent sand bag trench plugs will be installed before backfilling (Figure 7-3). Trench plugs will be installed at the locations shown on the EM&CP Plan and Profile drawings or as determined by the Environmental Inspector. If not specified, the following spacing will be used:

Table 7.1 Trench Plug Slope and Spacing Specifications	
Slope (%)	Spacing (feet)
<5	No Structure
5-15	300
>15 – 30	200
>30	100

Trench plugs will be installed at the base of slopes adjacent to waterbodies and wetlands and where needed to avoid draining of a resource area.

7.7 TRENCH DEWATERING

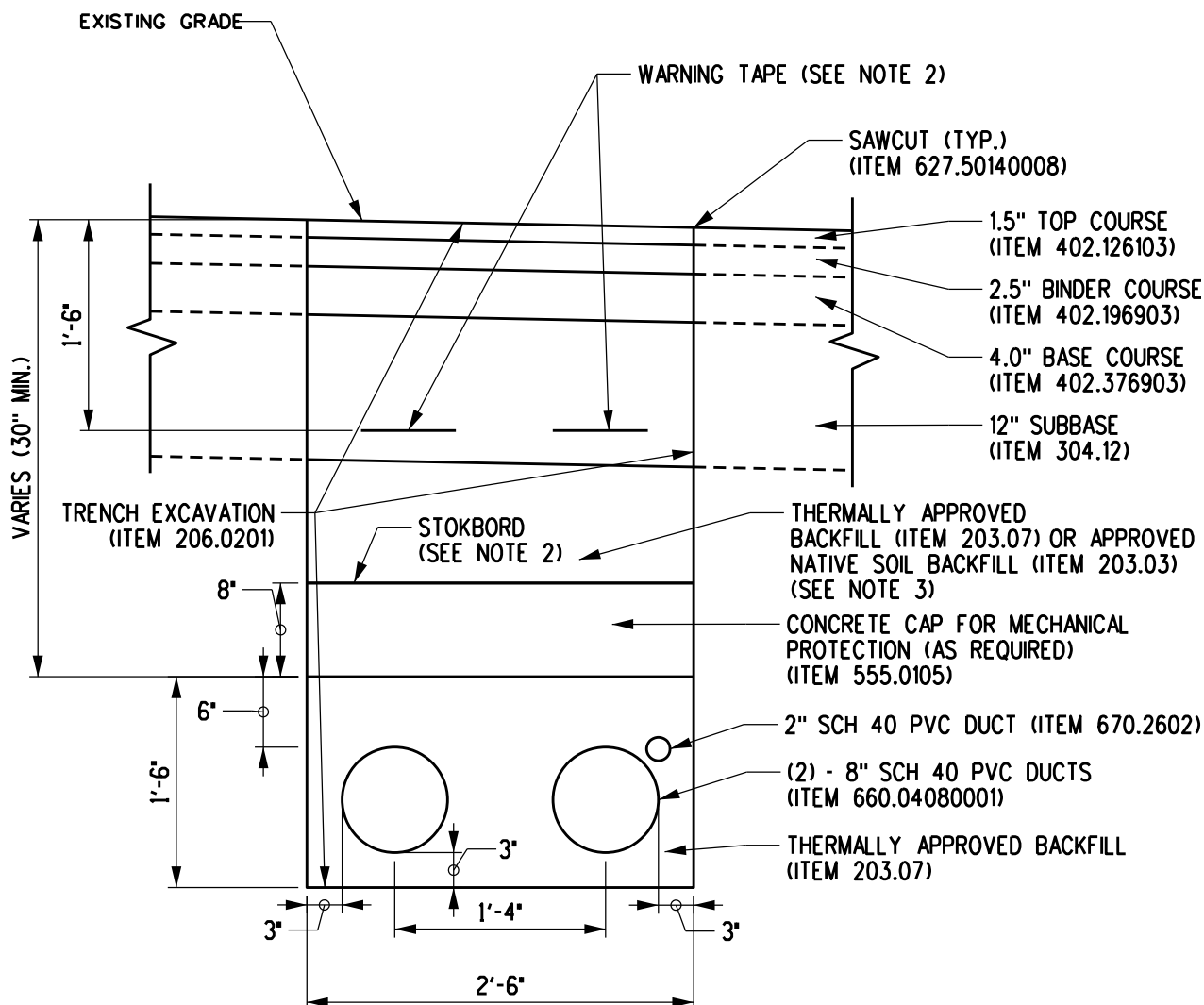
Dewatering of the trench may be required in areas with a high water table or after a heavy rain. All trench water will be discharged into well-vegetated upland areas or properly constructed dewatering structures to allow the water to infiltrate back into the ground, thereby minimizing any long-term impacts on the water table. If trench dewatering is necessary in or near a waterbody or wetland, the trench water will be discharged into a portable sediment tank or sediment filter bags (see Section 4.2.4.3 and Figure 7-4) located away from the waterbody to prevent silt-laden water from flowing into the waterbody (Section 4.2.4.1).

Any contaminated waters removed from a work site may not be discharged without a SPDES permit or must be discharged at a waste water treatment plant following chemical analysis.

References - Section 7.0

[OSHA] Occupational Safety and Health Administration. January 20, 1999. OSHA Technical Manual.

EXHIBIT B
SUPPLEMENTARY DESIGN DRAWING



TYPICAL CABLE ROUTE TRENCH CROSS SECTION

NOT TO SCALE

NOTES:

1. FILL MATERIAL SHALL HAVE THERMAL RESISTIVITY OF 1.0 K·m/W OR LESS.
2. FITTINGS, CONNECTIONS, WARNING TAPE, AND STOKBORD WILL BE INCLUDED UNDER ITEM 660.04080001.
3. FOR INSTALLATION NOT LOCATED IN ROADWAYS, APPROVED NATIVE SOIL BACKFILL WILL EXTEND TO EXISTING GRADE.

ITEM	DESCRIPTION
203.03	EMBANKMENT IN PLACE
203.07	SELECT GRANULAR FILL
206.0201	TRENCH AND CULVERT EXCAVATION
304.12	SUBBASE COURSE, TYPE 2
402.126103	12.5 F1 TOP COURSE HMA, 60 SERIES COMPACTION
402.196903	19 F9 BINDER COURSE HMA, 60 SERIES COMPACTION
402.376903	37.5 F9 BASE COURSE HMA, 60 SERIES COMPACTION
555.0105	CONCRETE FOR STRUCTURES, CLASS A
627.50140008*	CUTTING PAVEMENT
660.04080001**	FURNISH AND INSTALL PVC UTILITY CONDUIT - 8 INCH
670.2602	RIGID PLASTIC CONDUIT, 2"

*SPECIAL SPEC
**SPECIAL NOTE

PROJECT TITLE CHAMPLAIN HUDSON POWER EXPRESS TRANSMISSION DEVELOPERS, INC.	LOCATIONS	
AECOM	DRAWING TITLE TYPICAL TRENCH CROSS SECTION WITH PVC CONDUIT	DATE: 9/26/2019
		DRAWING NUMBER: FIG 7.2A

EXHIBIT C
2011 USACE LETTER



DEPARTMENT OF THE ARMY
NEW YORK DISTRICT, CORPS OF ENGINEERS
JACOB K. JAVITS FEDERAL BUILDING
NEW YORK, N.Y. 10278-0090

JUL 05 2011

REPLY TO
ATTENTION OF:

Regulatory Branch-Eastern Permits Section

SUBJECT: USACE File Number 2009-01089-EHA, Transmission Developers Inc,
Champlain Hudson Power Express Project

Donald Jessome, President and CEO
Transmission Developers Inc.
Pieter Schuyler Building
600 Broadway
Albany, New York 12207-2283

Dear Mr. Jessome:

We have reviewed your above referenced application for the proposed underwater and underground, high-voltage direct current transmission cables connecting converter stations in Canada to a converter station in Yonkers, New York and a substation connection in Queens, New York and have determined that, before processing of your application may proceed, you must respond to the following comments and provide the following information:

Impacts to Federal Navigation Channels:

The Corps of Engineers does not permit permanent structures within the length of the right of way, including side slopes, of a Federal navigation channel (perpendicular crossings are permitted). Installation may be accomplished by directional drilling from parts of state tracts that are outside the Federal right of way. For this project to be deemed acceptable from a navigation perspective, the cable alignment must remain outside the Federal channel right of way. Minimal utility crossings perpendicular to the Federal navigation channel will be evaluated on a case by case basis in consultation with regional harbor operations committees for navigation impacts when such crossings are unavoidable.

For your reference, definitions of the federal navigation channels for the East River, Harlem River, Hudson River, and Narrows of Lake Champlain are included as an attachment to this letter.

For those cases where utility crossings in a Federal channel are necessary, the following guidance applies:

With the implementation of burial depths of four (4) feet below

water body bed in areas outside of the Federal navigation channels and fifteen (15) feet below authorized depths when crossing a federally maintained navigation channel, the proposed project would have minimal impact to navigation and future dredging of the Federal Channels. However, in areas where the channel's existing bottom is already deeper than, or almost as deep as, the required installation depth below authorized project depth, as determined by the USACE guidance: Minimum bottom cover for utility crossings under Federal navigation channels shall be 7 feet below existing bottom. Both the "minimum bottom cover below authorized project depth" requirement, and the requirement of sufficient bottom cover of existing channel bottom over the installed utility must be satisfied.

Laying the cables on lake/river bed in limited areas with protective coverings would not be acceptable. All cables must be buried. Outside of channel areas, the burial depth requirement is four feet. Where existing utilities are crossed, other depths will be considered. All crossings must be identified.

Narrows of Lake Champlain (NLC) Federal Navigation Channel: As the Corps of Engineers does not permit permanent structures within the length of the right of way of a Federal navigation channel (crossings are permitted), the cables must be moved outside the NLC Federal navigation channel limits. A minimal number of cable crossings may be considered provided they meet burial requirements.

Hudson River-Houghtaling Island: The Corps of Engineers owns in fee title an active upland dredged material placement site called Houghtaling Island on the east side of the Hudson River opposite New Baltimore, New York. Spud barges are used for dredge and attendant plant mooring(s) and to provide equipment and pipeline access to the site. In addition, considerable future marine activity is anticipated along the Houghtaling Island shoreline associated with the excavation and transport of previously placed sediments for beneficial uses. The proposed cable routing may have an unacceptable adverse impact upon Corps of Engineers operations in this area. The proposed cables must be re-routed to the upland or along the west side of the river for the entire length of the federally owned lands.

Alternatives Analysis:

Be advised that as per 40 CFR 230.10(a) except as provided under Section 404(b)(2), no discharge of dredged or fill material shall

be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences. As per 40 CFR 230.10(a)(1) practicable alternatives include activities which do not involve a discharge of dredged or fill material into waters of the United States. 40 CFR 230.10(a)(2) states that an alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. The following alternatives should be fully evaluated: a) overland transmission line using existing highway corridors and/or utility corridors; b) railroad right-of-way (ROW) underground transmission line route; c) any New York State Department of Public Service proposed alternatives; d) any combination of route alternatives that would have less impact to the aquatic environment than the proposed route.

Appendix D, Page 9: Buried HVDC Transmission System Collocated along Freeway Corridor-this alternative was previously rejected in part due to the project development timeline. Now that the timeline has changed, this alternative can be fully evaluated.

HDR August 25, 2010 Supplement to Least Environmentally Damaging Practical Alternative Analysis: recalculate proposed route impacts based on the above listed in-water installation requirements; provide the additional proprietary and confidential information related to the cost/benefit analysis; if there have there been changes in the DOE funding situation that would impact the cost/benefit analysis, readjust the calculations; if the impacts listed in Table 2 do not include submarine anchor drag/anchor sweep impacts, add those impacts to the table; provide quantitative information for the amount of material to be deposited outside the proposed submarine route for all installation methods (jetting, plowing, dredging); in Table 2, specify temporary and permanent impacts.

General Comments:

All project plans must be black and white and legible.

Submit a completed Environmental Questionnaire (copy attached).

Provide the names and addresses of property owners adjacent to your work site in the attached Excel spreadsheet. If the file becomes too large to email, please submit the data on a CD.

Provide a list of latitudes and longitudes at each mile marker of the proposed route.

As requested in our July 7, 2010 letter (copy attached), provide copies of any modeling, videos, or other supporting information to verify the level of sediment disturbance. Your August 25, 2010 letter indicated these materials would be available in the 3rd quarter of 2010.

Provide a mitigation plan, as per 33 CFR 332. The mitigation plan must include an explanation of how temporary and permanent impacts will be mitigated. It must also include sequencing of avoidance, minimization, and compensation for temporary and permanent impacts.

Provide more detailed, close-in plan and cross-section views of the three specific land-to-water or water-to-land proposed project locations.

Does the proposed cable route impact Anchorage Areas 18 and 19?

Cumulative Impacts:

Are any other transmission lines or other projects proposed from Canada to New York along the same route? Should the proposed transmission line be constructed, how many other transmission lines could be located along the same route? Discuss impacts to navigation during construction, temporary and permanent impacts to anchorage areas, and temporary and permanent impacts to existing and proposed utility lines that cross the Hudson River.

Joint Application Form Supplemental Information Question 7
Comments:

Section 4

For proposed underwater installation methods, quantify the impacts to the lake/river bed from anchor drag caused by the anchor-positioned vessel and anchor mooring system.

Section 5

For proposed underwater installation methods, quantify the volume of material to be dredged, method of dredging, type of material, and material placement area. For fill proposed, provide the volume

for each source and type of fill proposed.

Section 6

This section states that there is only one location, Haverstraw Bay, where the cable is proposed to be installed within the federal navigation channel or along the side slopes. However, the project plans in Attachment C indicate in addition to Haverstraw Bay, the proposed cable is located in the federal navigation channel or side slopes from mile marker 99 through 225, 233, and 324 through 333. Please correct.

Section 8

Mitigation Plan-mitigation is required for the conversion of forested wetlands.

Project Plans-Submarine Route

The submarine route plans are overlaid on NOAA navigation charts. There are numerous symbols on these charts that are not explained- instead the reviewer is referred to an unspecified NOAA website for details on chart symbology. To clarify the plans and avoid directing reviewers to other unspecified sources, insert a sheet to explain all symbology used on plan views.

Show direction of ebb and flood of tide, datum (reference elevation).

The plans do not clearly depict the details of the proposed project. The plans should clearly show that there is more than one trench. The dimensions of each trench and separation distance between trenches should be shown, including the conversion at the Yonkers Converter Station. Note, representational drawings are acceptable.

Specify the distance between the proposed cable and the Federal navigation channel. Provide the state plane coordinates of the proposed route whenever it is within two hundred feet of the Federal navigation channel.

Provide a sheet with the dimensions of all proposed filling in the waterways, including backfill, temporary fills, and identify the fill information in square feet. Include non-burial protection methods such as concrete mats, grout filled mattresses and protective ducts.

Provide the total area of impact to the lake and river beds, measured in square feet. Include trenching impacts, anchor sweep impacts, etc.

For dredging, specify the location and dimensions of the area to be dredged, method, type of material, location of fill and placement areas.

Specify proposed cable crossing locations and other non-burial locations. Note corresponding cross-views.

What is the difference between Sheet 15 and Sheet 16?

Project Plans-"Upland" Route

These plans should be renamed "Overland Route" as the proposed route does impact wetlands and waters of the United States and is therefore not an entirely "upland" route.

Specify trench dimensions.

Specify the dimensions of all proposed filling in wetlands and waters, including backfill and temporary fill, including cofferdams and access roads. Specify temporary and permanent impacts. Specify type of fill material (for example, thermal sand, concrete plates). Specify placement location of any excavated material that will not be replaced after the proposed cable installation.

Provide the total area of impact to the wetlands and waters, measured in square feet.

Provide an index sheet that lists where impacts to wetlands and waters are found throughout the set of Sheets 1-237. Specify the purpose of the proposed culverts. Where are the permanent culverts located? Note corresponding cross-views.

Some of the above requested information may be provided by modifying Table 4-1 and 4-2 of Attachment F and then including the tables in the drawing set.

Project Cross-section Views-Submarine Route

Cross-views should correlate to plan views.

Sheet 3 shows a 6 foot separation between cables. Sheet 4 shows no

separation between cables. Clarify the proposed separation distance between the two cables. Indicate location that each cross-view represents in relation to the plan view drawings.

For dredging, specify location and depth of dredging and volume of material to be dredged. Specify dimensions of area to be dredged. Provide approximate side slope.

Show cable dimensions, trench dimensions, sidecasting dimensions, dimensions of all fills, including proposed grout bags, pillows and mattresses. Provide information for HVDC and HVAC cables.

Project Cross-section Views-Overland Route

Provide water depths for in-stream work. Provide dimensions for proposed activities. Correlate cross-views to plan view drawings.

Attachment E 2010 Marine Survey Summary Report

This report states that there are several areas along the proposed underwater transmission cable route that will need to be investigated further for potential re-rerouting. When will this process be completed? When do you anticipate the submittal of a revised route?

This report states that a benthic survey was not performed for the Hudson River because existing data is sufficient. Clarify which data will be used and whether this existing data is current.

This report states that it is likely that the benthic community along the proposed route would recover quickly following disturbance. What is this assumption based on?

Attachment F July 2010 Wetlands Delineation Report

Table 2 includes forested wetlands under temporary impacts. However, the forested wetlands will undergo conversion, which is a permanent impact. Please correct in this section and throughout the project description.

Attachment G Wetlands Functions and Values Assessment

This section states that there will be no new fill in wetlands. However, the project plans indicate that thermal sand and concrete plates will be used during the installation of the proposed cable. Please correct.

Appendix B

Page 27 of this section refers to "Section 4.8.4.3 of the Application." Please clarify as there is no section with this designation in the materials provided.

Provide Exhibit 4 of the Article VII Application.

If you have any questions, please contact Naomi Handell at (917) 790-8523.

Sincerely,

A handwritten signature in black ink, appearing to read "Stacey M. Jensen", is written over the typed name.

Stacey M. Jensen
Section Chief
Eastern Permits Section

Attachments: CORRESPONDENCE, CHANNEL DESCRIPTIONS via email, ENVIRONMENTAL QUESTIONNAIRE, and EXCEL MAILING LIST via email

Cc: HDR, Sean Murphy
NY District, Western Permits Section
NY District Upstate Field Office
NY District Operations Support Branch
NY District Albany Field Office
United States Department of Energy
United States Coast Guard
New York State Department of State
New York State Public Service Commission
National Marine Fisheries Service
United States Environmental Protection Agency
United States Fish and Wildlife Service

EXHIBIT D
2014 NYSDOS LETTER



STATE OF NEW YORK
DEPARTMENT OF STATE
ONE COMMERCE PLAZA
99 WASHINGTON AVENUE
ALBANY, NY 12231-0001

ANDREW M. CUOMO
GOVERNOR

CESAR A. PERALES
SECRETARY OF STATE

March 03, 2014

Mr. William Helmer
Champlain Hudson
Power Express Inc. and
CHPE Properties, Inc.
Pieter Schuyler Building
600 Broadway
Albany, NY 12207-2283

Re: F-2010-1162
U.S. Dept. of Energy #: PP-362
U.S. Army Corps of Engineers Application #: 2009-01089-EHA
NYS Public Service Commission Application #: 10-T-0139
Champlain-Hudson Power Express
1,000 megawatt HVDC electric transmission system
from Canada to New York City
**General Concurrence - Modification To
Previously Reviewed Activity**

Dear Mr. Helmer:

The Department of State received your proposed modification of the above-referenced activity by copy of a US Army Corps of Engineer NY District Public Notice dated October 02, 2013. You have stated in correspondence to us dated February 24, 2014 that this modification was due to consultations with the Army Corps of Engineers. The Department previously reviewed the original proposal and conditionally concurred with a consistency certification for it by letter dated June 08, 2011.

The proposed modification involves modifying burial depths of the proposed cable within federal navigation channels from 15 feet below authorized depth to: 8 feet in soft sediments and 6 feet in rock below authorized depth in the Harlem River and 11 feet in soft sediments and 6 feet in rock below authorized depth in the East River.

The Department of State has determined that this modification of the activity previously reviewed by this Department would not result in coastal zone effects that would be substantially different than those originally reviewed by the Department, and that the modified proposal meets the Department's general consistency concurrence criteria. Therefore, further Department of State review of this modification to the previously reviewed activity, and the Department's concurrence with an individual consistency certification for the proposed activity, are not required.

This General Concurrence is without prejudice to and does not obviate the need to obtain all other applicable licenses, permits, or other forms of authorization or approval that may be required pursuant to existing State statutes.

Additionally, in your February 24, 2014 correspondence, you have requested an interpretation of our conditional concurrence broadly regarding burial depths and concrete mattress coverings within federally maintained navigation channels to address bedrock or utility crossings.

The Department's conditional concurrence does not provide for burial depth less than 15 feet below authorized depth within federally maintained navigation channels except for those circumstances where you have requested a modification and the Department has determined that it would not result in substantially different coastal effects than those originally reviewed, such as the Department has done above regarding the Harlem and East Rivers. The Department anticipates that these types of modifications may be necessary following site survey and preparation activities and will make itself available to quickly review such modification requests. Regarding concrete mattress coverings, the Department's conditional concurrence recognizes that they may be necessary for utility crossings and bedrock installation but makes no mention of their use in navigation channels. Consequently, in navigation channels, so long as burial depth requirements are otherwise met and the concrete mattresses are used only for utility crossings or bedrock installations, no modification to the project would be necessary, however, if burial depth requirements would not be met, a modification would be required. Again, the Department anticipates that these may be necessary and will make itself available to quickly review these modifications.

When communicating with us regarding this matter, please contact Matthew Maraglio at (518) 474-5290 (e-mail: matthew.maraglio@dos.ny.gov) and refer to our file #F-2010-1162.

Sincerely,

A handwritten signature in blue ink, appearing to read 'J. Zappieri'.

Jeffrey Zappieri
Supervisor, Consistency Review Unit
Coastal Management Program

JZ/mm

c: COE/New York District – Jun Yang
DEC/Region 2 – John Cryan
NYS DPS – Steve Blow