

**STATE OF NEW YORK
PUBLIC SERVICE COMMISSION**

**Proceeding on Motion of the Commission to Implement)
Transmission Planning Pursuant to the Accelerated) Case No. 20-E-0197
Renewable Energy Growth and Community Benefit Act)**

**Comments of NextEra Energy Transmission New York, Inc. in Response to
SAPA I.D. No. PSC-19-22-00021-P – Petition of Consolidated Edison
Company of New York, Inc. for approval to recover costs of Brooklyn Clean
Energy Hub and the Public Service Commission’s Notice Seeking Comment
Issued May 13, 2022**

Pursuant to the Notice I.D. No. PSC-19-22-00021-P issued in the June 8, 2022 edition of the *New York State Register*, and the “Notice Seeking Comment” issued by the New York State Public Service Commission (“Commission”) on May 13, 2022, NextEra Energy Transmission New York, Inc. (“NEETNY”) submits comments on the “Petition of Consolidated Edison Company of New York, Inc. for approval to recover costs of Brooklyn Clean Energy Hub” filed by Consolidated Edison Company of New York, Inc. (“Con Edison”) in this proceeding on April 15, 2022 (“Petition”).¹

I. NEETNY’s Comments

NEETNY commends the Commission and Department of Public Service Staff for advancing the assessment of the New York transmission system to support the objectives of the Climate Leadership and Community Protection Act (“CLCPA”).² The CLCPA established ambitious statewide goals including a minimum of 70 percent of statewide electricity being

¹ Con Edison filed the Petition in response to the “Order on Power Grid Study Recommendations” issued by the Commission in this proceeding on January 20, 2022. The proposed Brooklyn Clean Energy Hub project consists of a new 345 kV transmission substation located adjacent to Con Edison’s Farragut substation on Con Edison-owned property in Brooklyn, New York (“Hub Project”).

² Chapter 106 of the New York State Laws of 2019.

generated from renewable sources by 2030, the installment of at least 9 GW of offshore wind (“OSW”) capacity by 2035, and ultimately reducing 100 percent of the emissions from the electricity sector by 2040. In order to reach these goals, significant investment in New York’s transmission system is required to ensure renewable energy can be efficiently and cost-effectively delivered to customers. However, Con Edison fails to establish that the Hub Project, which Con Edison estimates will cost at least \$1 billion, is the most efficient or cost-effective solution for injection of OSW generation into New York. In particular, as proposed in the Petition, Con Edison: (i) fails to demonstrate the practical feasibility of routing the 12-15 AC cables required to interconnect to the Hub Project;³ (ii) fails to establish that the Hub Project, which is an incomplete design, can reliably deliver 6,000 MW of OSW; and, (iii) does not evaluate the impacts of the New York Independent System Operator’s (“NYISO”) on-going Long Island Offshore Wind Export Public Policy Transmission Need (“LI PPTN”) including any contingency plans if the selected project(s) pursuant to the LI PPTN process can accommodate more than 6,000 MW of injections into New York and thereby reduce or avoid the need for the Hub Project. Moreover, the Hub Project is not a local transmission project,⁴ but rather, is a regional transmission hub to integrate New York’s OSW goals.

Accordingly, because the Petition fails to establish that the Hub Project is the most efficient, cost-effective or needed solution for injection of OSW generation into New York, the Commission should reject the Petition. Utilizing the PPTN process conducted by the NYISO to develop competitive bulk power solutions can produce a more cost effective and efficient expansion of headroom for the renewable capacity required under CLCPA. In this case, the need

³ Con Edison’s proposal includes the installation of HVDC converter stations in New Jersey, Staten Island, and/or Brooklyn thereby requiring the installation of multiple submarine AC cables across the New York Upper Bay from these converter stations to the Hub Project.

⁴ Petition at page 13, footnote 35.

for the Hub Project cannot be determined until after the selection of the LI PPTN. Following LI PPTN project selection, if it is determined by the Commission that additional transmission is necessary to integrate OSW, it may issue a separate PPTN to address a specific need. New York has proven success in utilizing the competitive PPTN process to address public policy transmission needs. As such, the NYISO is well positioned to conduct a subsequent and complementary PPTN.

A. The Hub Project is infeasible as proposed by Con Edison and presents significant challenges for OSW developers to permit and construct the necessary transmission lines

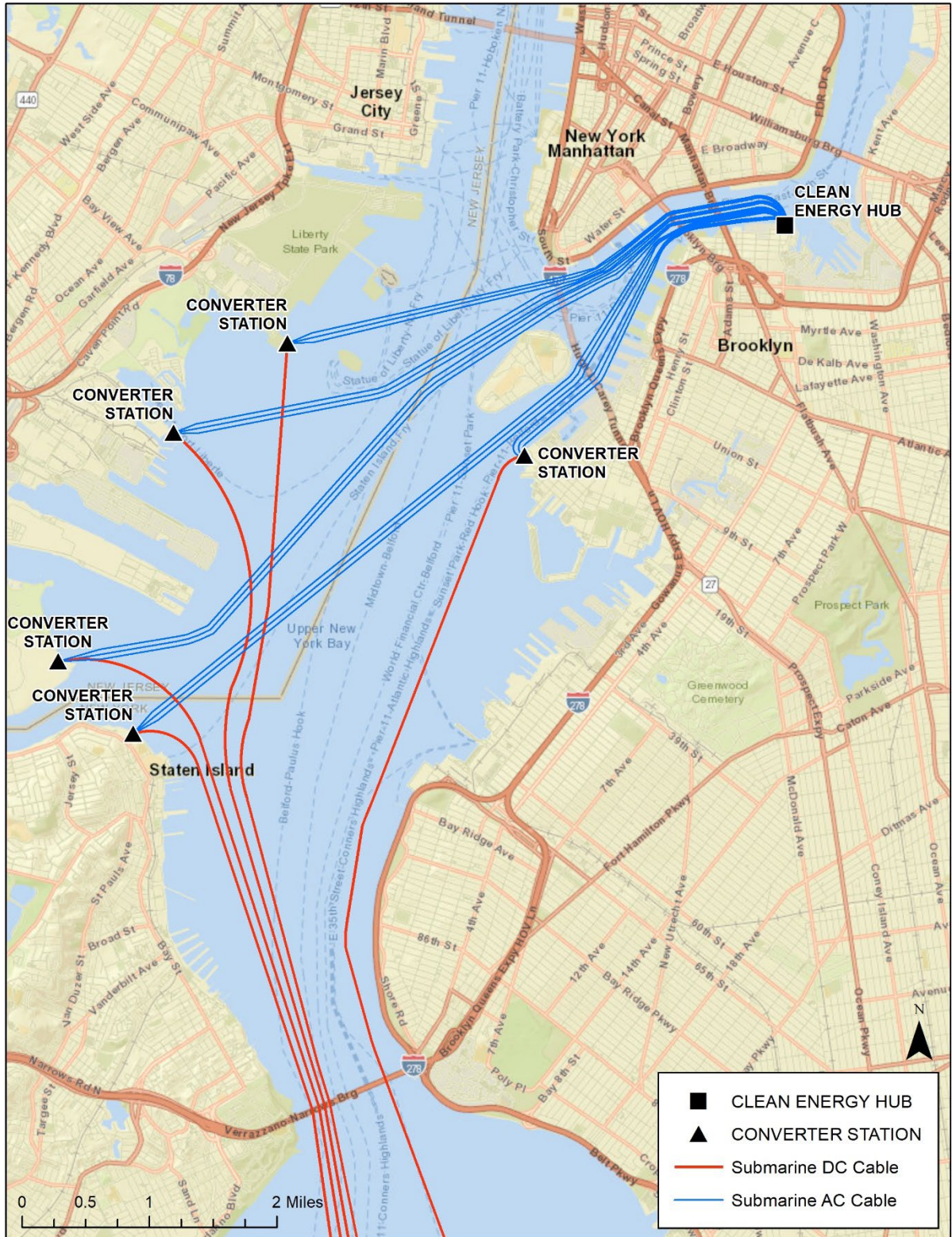
In the Petition, Con Edison assumes that OSW developers would utilize HVDC cables to reduce the number of cables required under the Verrazzano-Narrows Bridge and will site multiple converter stations near the water in New Jersey, Staten Island, and/or Brooklyn.⁵ However, under Con Edison's assumed scenario, the OSW developers would be required to install up to three HVAC cables from each converter station to connect to the Hub Project. Moreover, Con Edison assumes that the HVAC cables will connect to the Hub Project by water.⁶ To accommodate 6,000 MW of OSW generation, five (5) HVDC and fifteen (15) HVAC cables will need to be installed in the Upper Bay as illustrated in Figure 2. This large number of required cables, as well as the requirement to site and install converter stations near the water as ConEdison has proposed, presents significant coordination, permitting, and construction challenges.⁷

⁵ Petition at pages 27-29.

⁶ Petition at page 30.

⁷ Con Edison admits that it has not “investigated the cost to acquire any such properties, potential environmental conditions or constraints that may be associated with such properties, nor property owners’ willingness to sell or lease nor considered any unique siting considerations.” Petition at page 30.

Figure 2. Illustrative example of cable routing to Hub

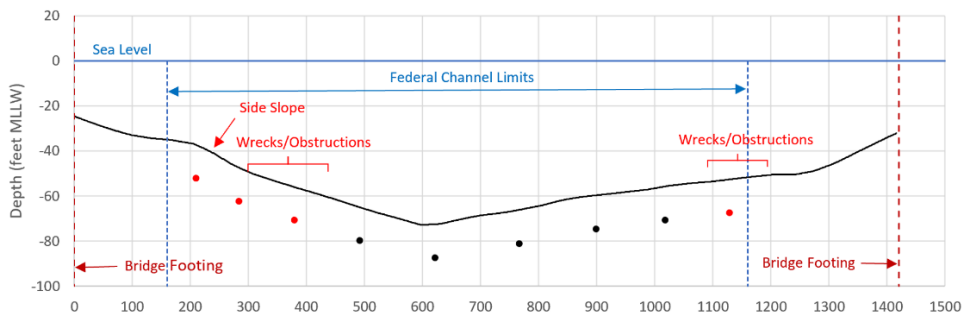
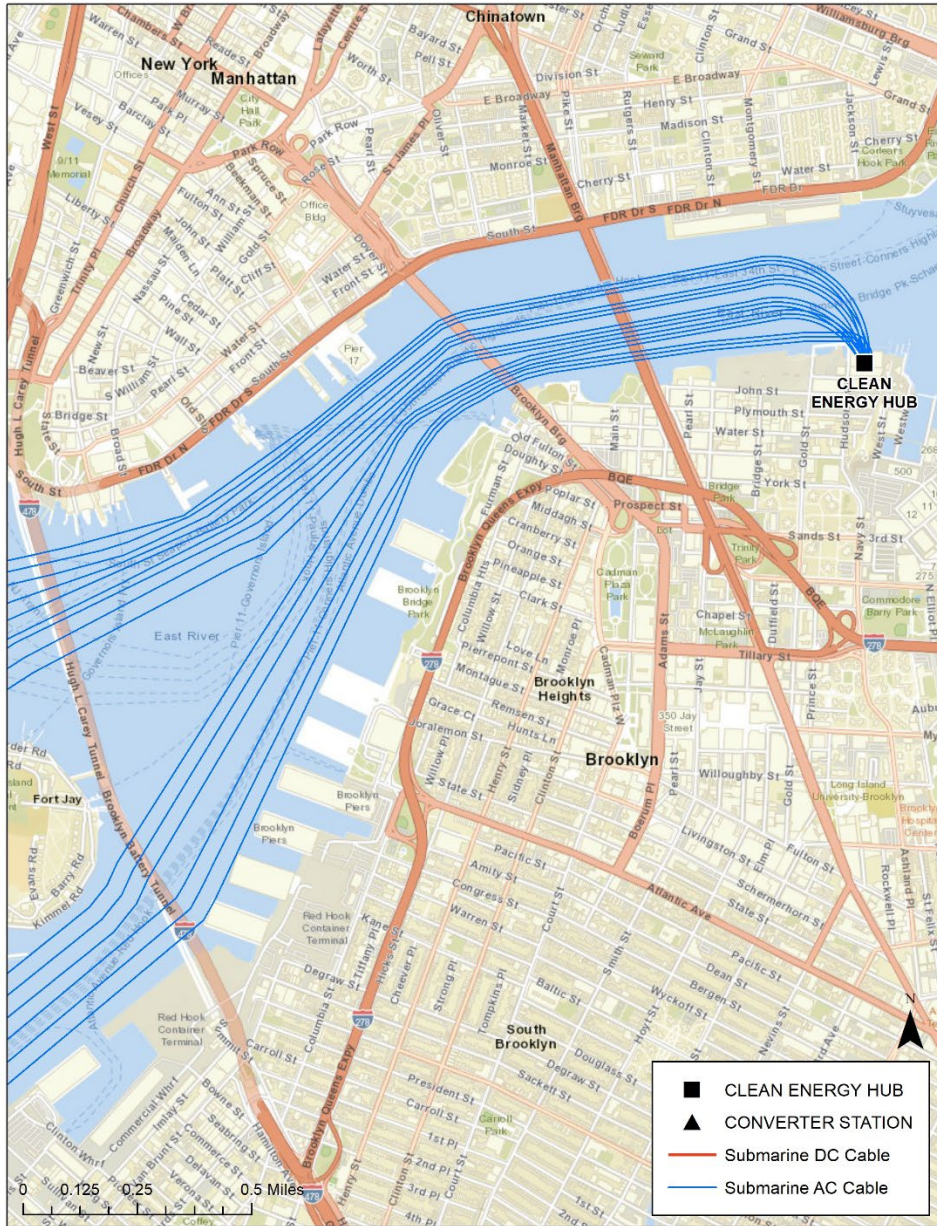


Significantly, NEETNY has performed a constructability analysis and has determined it is not possible to implement Con Edison's proposal. First, the narrow portion of the East River near the Manhattan Bridge and Brooklyn Bridge presents a physical constraint for all cables entering the East River from the south towards the proposed Hub Project location. Shoreline structures, including piers and bulkheads, extend nearly to the federal channel boundary, thus, cables would need to be installed entirely within the federal channel in this area.⁸ Siting of potential cable corridors is limited in several areas by charted wrecks and obstructions, as well as by channel side slopes approaching 20 degrees in certain areas. The standard industry practice (for maintenance reasons) is to install submarine cables in separate trenches separated by a distance equal to twice the water depth. In this area of the East River, the water depth is approximately 60 to 70 feet, meaning a cable separation of approximately 120 feet. At this recommended cable spacing, it is likely that only a maximum of five cables could be installed in the approximately 650-foot wide portion of the East River near the Manhattan Bridge.

Figure 3 below shows the relevant portion of the East River and includes a cross sectional sketch of the East River in this location to provide a visual illustration of NEETNY's analysis of the physical constraints. In this sketch, the black dots represent potential locations for cable installations.

⁸ The preferred approach is to locate sub-sea facilities outside of the federal channel.

Figure 3. East River Constraints



B. As proposed, the Hub Project does not permit the delivery of 6,000 MW of OSW generation

The Hub Project fails to identify the necessary upgrades to the existing system to reliably deliver 6,000 MW of OSW. Based upon an analysis conducted by NEETNY, absent upgrades to the existing system, the injection capability of the Hub Project will be 3,750 MWs.⁹ NEETNY's analysis also indicates that the Hub Project is likely to result in curtailment of up to 1,200 MWs of Tier 4 projects selected by NYSERDA. Based on the thermal overloads identified, to reliably inject 6,000 MW of OSW into the Hub Project, as well as accommodate the Tier 4 injections, NEETNY estimates that approximately \$500 MM of additional upgrades are required. Finally, additional upgrades may be needed to accommodate an N-1-1 thermal analysis, as well as voltage, short circuit, and stability needs. As such, NEETNY recommends that, at minimum, the Commission require Con Edison to quantify the scope and cost of potential upgrades required to the existing system before any approval on the Hub Project is considered.

C. The results of the LI PPTN may reduce or avoid the need for the Hub Project

The need for the Hub Project is currently uncertain. The NYISO received 16 qualifying transmission proposals to address the LI PPTN.¹⁰ NEETNY conducted analyses of these proposals and concludes that nearly all proposals are capable of delivering over 9,000 MW of OSW without the inclusion of the Hub Project.¹¹ If NEETNY's analysis is confirmed by the NYISO, the

⁹ See Confidential Attachment A.

¹⁰ The LI PPTN established the need for: 1) adding at least one bulk transmission inter-tie cable to increase the export capability of the LIPA-Con Edison interface, that connects NYISO's Zone K to Zones I and J to ensure the full output from at least 3,000 MW of offshore wind is deliverable from Long Island to the rest of the State; and 2) upgrading associated local transmission facilities to accompany the expansion of the proposed offshore export capability.

¹¹ NEETNY conducted powerflow analyses using various OSW buildout scenarios and, in all scenarios, 15 of 16 proposed LI PPTN solutions are capable of reliably dispatching over than 9,000 MW of OSW under N-1 conditions in a spring light-load ("SLL") case.

selection of a project in the LI PPTN could reduce or obviate the need for the Hub Project. Thus, pre-mature approval of the Hub Project would have the unintended result of creating unnecessary transmission capacity at a significant cost to customers.

D. The Hub Project is not “turn-key” or “make-ready”

In its Petition, Con Edison asserts that the Hub Project provides both: (1) early notice of where locations to integrate large-scale OSW generation will be made available; and (2) a turn-key or “make-ready” solution that will reduce or eliminate interconnection feasibility and cost uncertainty.¹² Con Edison’s assertions are without merit. As discussed above, the Hub Proposal is not a simple “plug and play” for any OSW generator. The Hub Project would impose several significant and costly challenges for OSW generation developers including routing the cables required to the converter station, siting the HVDC converter station, and routing cables to the Hub Project.

In fact, the timing and challenges posed by the Hub Project introduce uncertainty into the OSW market and the upcoming New York State Energy Research and Development Authority (“NYSERDA”) OSW solicitation, “ORECRFP22-1”. In a request for information issued May 13, 2022, NYSERDA probed the possibility of allowing OSW proposals to propose interconnection to the Hub Project, however, such proposals would be: 1) contingent upon approval by the Commission; and 2) evaluated at a potentially lower viability score if the scoring committee concludes that interconnection plans, cable routing and/or converter station siting in the Hub Project are less developed or certain.¹³ Uncertainty in the market means risk – in this case, an OSW developer has to evaluate several newly introduced risks: 1) whether the Hub Project is approved

¹² Petition at page 19.

¹³ ORECRFI22-2 (May 13, 2022)

by the Commission and moves successfully through the interconnection process; 2) that developers can site an HVDC converter station; 3) that developers can route the HVDC cables through the Verrazzano-Narrows to the HVDC converter station; and 4) whether developers can route the AC cables to the proposed Hub Project. Ultimately, these risks translate into both a risk premium or increased price and additional time – time for the OSW developers to now change course and incorporate an alternate bid based on speculative information, and time for NYSERDA to evaluate those speculative and less developed bids.

E. The Hub Project is a Regional Transmission Asset

Con Edison incorrectly asserts that the Hub Project is a local transmission asset¹⁴ primarily because it *generally serves local load*.¹⁵ However, contrary to Con Edison’s assertions, the Hub Project goes well beyond serving local load. The Hub Project is proposed to be a 345kV station to receive OSW energy to be transmitted throughout the state. More than half of the energy collected and transmitted through the Hub Project will be delivered to regions other than New York City.¹⁶ Up to fifteen HVAC transmission lines will deliver OSW generation to the Hub Project and Farragut substation with multiple ties into the 345kV transmission system to deliver the energy upstate and to other regions. In fact, Con Edison implicitly acknowledges the regional nature of this asset noting that the OSW will be “exported upstate and to other regions during on and off-peak conditions”¹⁷ and the “statewide benefits”¹⁸ provided by the Hub. Regional

¹⁴ Petition at page 13

¹⁵ Petition at 11-13; fn. 35.

¹⁶ NYISO projects Zone J load to peak at approximately 5.3GW in 2040. Much of this load will be served through existing AC ties with upstate New York and HVDC projects in development (*i.e.*, CHPE and Clean Path).

¹⁷ Petition at pgs. 6 and 19

¹⁸ Petition at page 1, *et al.*

transmission projects seeking regional cost allocation, such as the Hub Project, should be subject to competition through the established NYSIO PPTN process.

F. The use of the PPTN process to solicit competitive solutions to achieve the CLCPA goals can result in reduced environmental impacts, community impacts, and costs

As stated above, the LI PPTN has yielded 16 eligible proposals that offer a wide range of solutions that could reduce or eliminate the need for the Hub Project. If additional interconnection capacity is needed beyond the LI PPTN, a complementary PPTN conducted by the NYISO to develop competitive bulk power solutions can produce a more cost effective and efficient expansion of headroom for the renewable capacity required under CLCPA. The NYISO competitive PPTN is a proven process that will provide New York State with a well-planned, cost-effective transmission solution to meet CLCPA goals.

The Hub Project proposes to be the single collection point for OSW generation and by 2040 the largest source of generation for New York City. Unfortunately, utilization of a single location increases the risk to energy supply through exposure to potential extreme weather events or man-made disruptions. The NYISO can evaluate the energy security of the system through the PPTN process, among other critical factors.

New York has proven success in utilizing the competitive PPTN process to address public policy transmission needs. Both the Western New York and AC PPTN processes presented the NYISO with a menu of innovative transmission solutions that resulted in the selection of cost-effective projects that increased system reliability while reducing congestion and emissions. The competitive PPTN process also encourages developers to minimize costs, optimize solutions, and bring forth innovation. The use of a competitive PPTN process also brings in new market entrants that can bring innovative solutions to old problems not previously considered. Some examples of innovation include novel approaches to deal with limited right-of-way using single monopole

double-circuit structures, power flow control through the utilization of phase angle regulator, and the installation of series compensation. PPTN projects also have included cost containment measures, which reduces the risk of potential cost overruns for consumers.

The PPTN process allows for the inclusion of cost containment provisions. The utilization of cost containment measures provides an incentive to developers to efficiently construct the project thereby reducing the risk of potential cost overruns. As discussed above, the Hub Project is projected to require a \$1 billion investment. While Con Edison does not disclose the Estimate Class upon which the estimate is based, NEETNY estimates that the cost bandwidth is -50%/+100%, given the limited information provided in the Petition.¹⁹ Thus, the total cost could be closer to \$2 billion as the Hub Project engineering and development advances. The utilization of cost containment provisions through a PPTN process has the potential to limit the magnitude of potential cost overruns.

Finally, the use of the PPTN to solicit competitive solutions can be achieved in a similar timeframe to the scheduled completion of the Hub Project. Con Edison estimates that the Hub Project would not be completed until 2032.²⁰ The projects submitted in the LI PPTN process have expected in-service dates ranging from 2027 – 2030, meaning that if another PPTN were initiated, projects can still meet or exceed the timeline proposed by the Hub Project, and meet the timeline required by the CLCPA. Additionally, the PPTN rate recovery mechanism is already in place, which eliminates any risk of delay or challenge to any newly proposed rate mechanisms.

¹⁹ Based on a Class 5 Estimate - “Cost Estimate Classification System – as applied in Engineering, Procurement, and Construction for the Power Transmission Line Infrastructure Industries”, Association for the Advancement of Cost Engineering International Recommended Practice No. 96R-18

Conclusion

For all the foregoing reasons, NEETNY recommends that the Commission reject Con Edison's Petition. As set forth above, the selection of a project in the LI PPTN could reduce or obviate the need for the proposed Hub Project. Thus, in order to avoid the unintended result of approving unnecessary transmission capacity at a significant cost, NEETNY recommends that the Commission reject the Petition. At minimum, the Commission should defer any decision until the LI PPTN results are known and subject to evaluation. This approach will help ensure that the most efficient cost effective transmission solutions are identified to meet the CLCPA goals.

Dated: July 11, 2022

Respectfully submitted,

/s/ Richard W. Allen

Richard W. Allen
President
NextEra Energy Transmission New York, Inc.
13 Executive Park Drive
Clifton Park, New York 12065
E-mail: Richard.Allen2@nexteraenergy.com