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VIA ELECTRONIC FILING

Honorable Michelle L. Phillips
Secretary
New York State Public Service Commission
3 Empire State Plaza
Albany NY 12223-1350

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

Dear Secretary Phillips:

Attached please find comments of LS Power Grid New York Corporation I in response to the May 13, 2022 Notice Soliciting Comments in the above captioned proceeding.

Sincerely,

/s Tim Lundin

Tim Lundin
Regulatory Policy Manager

**COMMENTS OF LS POWER GRID NEW YORK CORPORATION I ON
PETITION OF CONSOLIDATED EDISON COMPANY OF NEW YORK, INC. FOR
APPROVAL TO RECOVER COSTS OF BROOKLYN CLEAN ENERGY HUB**

I. Introduction

LS Power Grid New York Corporation I (“LS Power”) respectfully submits these Comments on the April 15, 2022 Petition of Consolidated Edison Company of New York, Inc. (“ConEd”) For Approval To Recover Costs Of Brooklyn Clean Energy Hub in Case 20-E-0197 (the “Petition”). The Petition seeks approval including cost recovery for the Brooklyn Clean Energy Hub (“ConEd Hub”), proposed to be cost allocated to all New York ratepayers on a load ratio share.

The Petition contains unsupported assumptions. There is no evidence that the ConEd Hub can deliver Off-Shore Wind (“OSW”) without further upgrades, and there is insufficient evidence related to the physical feasibility of the proposal. Further, it is likely that alternatives to the proposed ConEd Hub could be less expensive, more efficient, and provide additional benefits. Finally, granting the petition will prejudice other bidders in the upcoming NYSERDA request for proposals for offshore wind procurement. The Commission should deny the Petition.

II. Background

This proceeding stems from the April 2020 passage of the *Accelerated Renewable Energy Growth and Community Benefit Act* (the “Act”), which required the following from the Commission:

- “...a comprehensive study for the purpose of identifying distribution upgrades, local transmission upgrades and bulk transmission investments that are necessary or appropriate to facilitate the timely achievement of the CLCPA targets”¹;

¹ Accelerated Renewable Energy Growth and Community Benefit Act, at 116.

- “...a distribution and local transmission capital plan for each utility in whose service territory the power grid study identified distribution upgrades and local transmission upgrades that the department determines are necessary or appropriate to achieve the CLCPA targets”²; and
- “... implementation of the state bulk transmission investment plan and, in particular identification of projects which shall be completed expeditiously to meet the CLCPA targets. The state bulk transmission investment plan shall be submitted by the commission to the state grid operator for appropriate incorporation into the state grid operator's studies and plans. The commission shall utilize the state grid operator's public policy transmission planning process to select a project necessary for implementation of the state bulk transmission investment plan...”³

As a result of the Act, DPS Staff completed the *Initial Report on the Power Grid Study* (“Power Grid Study”), which included as Appendix D the *Offshore Wind Integration Study*.⁴ The main objective of the Power Grid Study was the:

- “...*Development of feasible OSW transmission strategies to collect and deliver up to 9 GW of wind energy from offshore locations to New York City and Long Island requires detailed consideration of various technical aspects and practical limitations, including but not limited to, technology availability, scalability, cost-effectiveness, grid reliability and compliance, energy market fundamentals, as well as environmental, physical, and geographical limitations associated with the offshore seabed, narrows, shorelines and landing points. To achieve the Study’s main objectives while accounting for the previously mentioned technical aspects, a Study methodology was developed that included three main tasks, namely onshore grid assessment; offshore transmission assessments; and environmental constraint analysis. Given the intrinsic dependency and relations that exist among the technical aspects and practical limitations, these three tasks were performed partially in parallel and partially in sequence to more effectively inform and guide one another.*”⁵

ConEd proposed two hubs to accept offshore wind as Phase 2 projects in the Power Grid Study. The Offshore Wind Integration Study included detailed electrical and environmental analysis of offshore wind connections to Long Island and New York City.

² Id. at 117.

³ Id.

⁴ Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, *Order on Power Grid Study Recommendations, Appendix D Offshore Wind Integration Study*.

⁵ Id. D-ES-1

The January Order on Power Grid Study Recommendations⁶ authorized ConEd to file a “comprehensive petition”⁷ related to the ConEd Hub, and specifically required:

Thus, Con Edison’s petition must provide the Commission with a fuller understanding of the project need, why it needs to be approved in short order, and why it is superior to alternatives, including upgrades to existing substations, from a cost effectiveness and feasibility perspective. With respect to alternatives, Con Edison should provide specific information regarding why its existing substations cannot accommodate future offshore wind projects. The supportive information associated with the issues in this paragraph include:

- An engineering cost estimate associated with the Con Edison Hub proposal;
- An understanding of the project’s ability to both accommodate energy from offshore wind and inject such energy into the NYCA;
- Information related to the areas of New York City that would be provided with energy from the Con Edison Hub and whether energy use would be limited to Con Edison’s service area;
- Information related to whether the Con Edison Hub would provide co-benefits, including those related to reliability, redundancies, and resiliency, and the monetization of such benefits, if feasible;
- Alternatives to the Con Edison Hub that have been explored (from size, feasibility, and cost perspectives); and
- Any information on Con Edison-owned real estate and rights-of-way that could facilitate the siting of converter stations and approach routes to the Con Edison Hub.

Additionally, given that most, if not all, of the remaining offshore wind generation to be solicited in the future may be injected into New York City through an HVDC line, Con Edison should give due consideration to where the converter stations associated with such lines would be located and whether or not the proximity of such converter stations to the Con Edison Hub has logistical and/or cost impacts that may make interconnecting into the Con Edison Hub infeasible or cost prohibitive. In this respect, the petition must also present (1) a reasonable forecast of the location of on-shore HVDC converter station(s), which generally require 5+ acres for a 1,200 MW generation tie-line, and (2) an understanding of the feasibility and estimated costs of routing an AC transmission line from the converter station to the Con Edison Hub. With respect to this second issue, the petition needs to explain what Con Edison or other rights-of-way are available for the AC transmission route.⁸

On April 15, 2022, ConEd filed the Petition requesting approval of the Brooklyn Clean Energy Hub.

⁶ Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act, *Order on Power Grid Study Recommendations* 22

⁷ Id. 22

⁸ Id. At 23-24.

III. Comments

A. The Petition Contains Many Unsupported Claims

Throughout the Petition, ConEd identifies the ConEd Hub as providing “Up to 6,000 MW of offshore wind energy”⁹. This assertion is at best misleading, and it is possible that the ConEd Hub might only accept a single OSW connection on the order of 1,000 MW¹⁰. However, the Petition lacks any evidence that the ConEd Hub/Farragut can even accept a minimum of 1,000 MW or up to 6,000 MW of injection without significant curtailment and/or significant additional upgrades. The Petition lacks any evidence regarding the feasibility to physically route 1,000 MW to 6,000 MW of cables to the ConEd Hub/Farragut from OSW generators. There is no evidence that injecting 6,000 MW at the ConEd Hub/Farragut would be consistent with a long-term plan, and in fact doing so could have adverse impacts on New York relative to alternatives.

The Petition lacks any electrical studies related to the ability of the ConEd Hub, with POIs at Rainey and Farragut, to accept 6,000 MW. The Petition seems to rely on the analysis of the Offshore Wind Integration Study, which assumed 1,400 MW of OSW delivered to Farragut and 1,200 MW of OSW delivered to Rainey, which are electrically similar to the ConEd Hub. However, that study did not include the 1,250 MW Champlain Hudson HVDC terminal at Astoria Annex, with a new transmission line to Rainey, and the 1,310 MW Clean Path New York terminal at Rainey, which have been approved and represent significant new injections in the area. The Petition entirely lacks any independent study analysis of any kind to support the claims that the ConEd Hub/Farragut can accept 6,000 MW of generation. This is a significant deficiency in the

⁹Petition at 5, 12, 17, 18, 19, 22, 213, 24, 25, 27. This 6,000 MW is more specifically identified as 4,500 MW at the ConEd Hub and 1,500 MW at the adjacent Farragut Substation, p. 17. For the purposes of injection and physical constraint analysis, the proposed ConEd Hub and Farragut are very similar.

¹⁰An AC circuit to the ConEd hub consisting of 2 tri-core submarine cables would have a rating of approximately 1,000 MW

Petition. Further, the Petition concludes the ConEd Hub “provides a deliverable outlet path for 6,000 MW of OSW without additional transmission upgrades” while “the current approach of separately planning for each individual OSW project’s interconnection, connecting a considerable amount of new energy to the New York City grid is likely to require costly upgrades to make that energy deliverable”¹¹. This assertion is fundamentally flawed. The proposed ConEd Hub would not allow an OSW generator to by-pass the interconnection process, including a Class Year study. ConEd does not know that project(s) requesting interconnection to the new POIs established by the proposal would require any less upgrades to make the energy deliverable than any alternative. This is certainly true for 6,000 MW, and also highly possible for 1,000 MW. It is unlikely that 6,000 MW can be injected into the Rainey and Farragut substations, in addition to the existing generation as well as the 2,500 MW of new HVDC terminals in the area, without significant additional upgrades.

The Petition lacks any support for the physical feasibility to connect 6,000 MW to the ConEd Hub. The January Order requires “*an understanding of the feasibility and estimated costs of routing an AC transmission line from the converter station to the Con Edison Hub.*” The Power Grid Study identified significant routing constraints for OSW generation connections in New York City, including navigation, existing infrastructure, and physical constraints such as the Narrows.¹² The Petition identifies potential HVDC converter sites upstream of the narrows in New Jersey and New York, but does not identify any HVDC converter sites at the ConEd Hub. Presumably this is an admission that the ConEd Hub property does not have sufficient space for even a single HVDC convertor, and implies that each alternative HVDC converter site will require an HVAC connection to the ConEd Hub. ConEd estimates the cost of such connections, but is silent on the

¹¹ Petition at 20.

¹² Initial Report on the New York Power Grid Study, January 19, 2021) at 71

feasibility of such connections. The Petition does not include any analysis of the ability to construct the critical links from the HVDC convertor sites to the proposed ConEd Hub/Farragut location. By necessity, each HVAC connection will require at least two (2) HVAC cables¹³ from each HVDC converter site to ConEd Hub/Farragut. These cables will need to be routed through the very congested area of the East River, which is significantly more constrained than the Narrows.¹⁴ The Petition lacks any evidence of the physical feasibility of delivering 6,000 MW to the identified location, and it is not likely to be able to accommodate 6,000 MW of submarine cable into the ConEd Hub. The petition doesn't even identify the physical feasibility of 1,000 MWs to the identified location. This fails to meet the directive to consider the feasibility of HVDC connections to the ConEd Hub.

Even if it were electrically and physically possible to inject 6,000 MW at the ConEd Hub/Farragut, doing so would violate the requirements of the January Order to preserve flexibility in planning for a mesh-ready system. A key benefit of a mesh-ready system is the ability to redirect power offshore to different points of injection on-shore. This allows an ability to relieve on-shore congestion through redistributing power from the off-shore network. However, if all of the offshore connections deliver to the same on-shore point of interconnection at the ConEd Hub/Farragut, this moots any actions taken to preserve the optionality of a mesh-ready system.

ConEd presents an “avoided cost analysis” claiming to show the ConEd Hub is cost effective relative to other proposed projects, with a cost of \$1 billion, capacity of 6,000 MW, and Cost (\$/MW) of \$166,667/MW.¹⁵ Both sides of this calculation are falsely presented. As stated

¹³ 345 kV tri-core cables have a rating of approximately 500 MW each, so 2 would be required for 1,000 MW or 3 would be required for 1,000 MW to 1,500 MW. Alternately, larger 345 kV cables could be used with 1 cable per phase, for a total of three cables, but such an approach would have a lower rating than tri-core cables, likely requiring six cables to achieve a rating of 1,000 MW or 1,500 MW.

¹⁴ For example, the Narrows at the narrowest point is approximately 5,000 feet wide, while the East River at the ConEd Hub is only 1,400 feet wide.

¹⁵ Petition at 23.

above, the additional upgrades necessary to deliver 6,000 MW are unknown, and likely to be significant. The additional upgrades necessary to deliver even 1,000 MW are unknown. At best, this calculation could be that the cost of the project is \$1 billion plus an unknown amount, with a capacity of 1,000 MW, or a Cost (\$/MW) of \$1,000,000/MW plus an unknown additional amount, making the proposal on the high end of identified costs.

B. The Petition Does Not Properly Consider Alternatives

The Petition does not include an adequate analysis of potential alternatives to the ConEd Hub. ConEd supports its proposal as the best that it was able to come up with, but in no way does that mean it is the best proposal when compared to all other potential alternatives.

The Petition has a short section discussing potential alternatives. The first part of the analysis is that existing interconnection points from fossil fuel-fired generating plants are “neither practical nor advisable,”¹⁶ due to the fact that these POIs are not under ConEd’s control. However, that does not mean such POIs are not practical in general; it just means that they are not practical *for ConEd*. This is also contrary to Governor Hochul’s stated policy directive directing NYSERDA in its 2022 OSW procurement to provide additional scoring credits for projects that propose to repurpose downstate fossil-based electric generation infrastructure.¹⁷ Second, ConEd identifies requirements such as “Con Edison specifications, procedures, and guidelines” which makes repurposing existing interconnection points uneconomic. It is unclear in the Petition how ConEd reached these conclusions. ConEd goes on to create a straw-man about the capacity of such POIs that is irrelevant. Finally, ConEd identifies that existing resources will need to be maintained for reliability. However, a coherent plan to phase out fossil generation as renewable generation comes on line would provide for such POIs to become available for OSW interconnection points. There

¹⁶ Petition at 22.

¹⁷ State of the State 2022: A new Era for New York, at 149.

very well may be alternatives that connect to existing generator POIs that are less expensive, more efficient, and have other benefits relative to the ConEd Hub proposal.

The Power Grid Study includes several other injection points with the same level of potential as Farragut and Rainey such as Mott Haven and West 49th Street. ConEd does not identify why such locations would not be superior alternatives to the ConEd Hub. Further, other developers could identify alternatives that could be lower cost due to having an ability to site an HVDC converter at the POI, having an ability to avoid the Narrows, or having other potential cost saving features. A fulsome review of all alternatives can only be identified through a transparent, competitive process.

Finally, ConEd creates a false sense of urgency to support an expedited approval of the Petition, stating the project is the only project that can be in service by 2027. Even if the ConHub could be completed by 2027, which is far from certain, there would not be anything to connect to it in 2027. Rather, an OSW generator selected in the upcoming NYSERDA solicitation will most likely not be in service until after 2030. This allows more than enough time for a competitive process to identify alternative projects that could be in service by 2030 or later. Taking expedited action to approval and fund construction of the ConEd Hub by 2027, to then sit idle for a number of years, would be a waste of resources.

Given the lack of a robust alternative analysis by ConEd, the only way to truly identify the best alternative is through a competitive process that can attract innovative solutions from the entire industry, and not rely solely on the incumbent.

C. Competition Could Identify Superior Alternatives and Provide Risk Mitigation

The problem of OSW generation interconnection is not unique to New York, and is being addressed through competition in other regions. New Jersey lacks sufficient existing POIs in proximity to the shore that do not require significant transmission system upgrades. To address this problem, New Jersey initiated the State Agreement Approach under the PJM tariff to apply a competitive process.¹⁸ New York currently has 8,848 MW of OSW projects in the NYISO interconnection queue attempting to identify suitable points of interconnection in New York City (Zone J).¹⁹ Adoption of a competitive process like the State Agreement Approach in PJM, or declaring a PPTN, would allow the Commission the optionality of selecting the most efficient and cost effective POIs.

Competitive transmission has been a success story in New York State. In each of the two processes completed to date, innovative solutions have been identified. In addition, ratepayers have been protected from cost overruns from by cost containment provisions offered via competition. In the Western New York Public Policy Transmission Need process, NextEra Energy Transmission New York's proposal was selected as it was distinguished from other proposals as uniquely including Phase Angle Regulators to control power.²⁰ A proposal from New York State Electric & Gas Corporation, jointly with the New York Power Authority, had a similar scope as the selected project, without the Phase Angle Regulators but with several other transmission elements, resulting in a total estimated cost of \$232 million (28% higher), while providing 1,482 MW of incremental transfer (8% lower).²¹ Niagara Mohawk Power Corporation d/b/a National

¹⁸ ConEd's competitive affiliate is actively participating in this competitive process in New Jersey as well as a competitive process being conducted by the Maine Public Utilities Commission.

¹⁹ NYISO Interconnection Queue 5/31/22, <https://www.nyiso.com/interconnections>

²⁰ Id. at 41.

²¹ Id.

Grid submitted two proposals, both of which consisted of rebuilds and reconductoring of existing facilities. One had an estimated cost of \$177 million but only provided 216 MW of incremental transfer, resulting in the highest cost per MW of any proposal. The second had an estimated cost of \$433 million (239% higher), and provided 1,431 MW (11% lower) of incremental transfer.²² In addition, the developer of the Western New York project agreed to cost containment provisions. An approach of having the utilities alone conduct the planning for the Western New York need would have clearly resulted in a solution that was either significantly higher cost, provided significantly lower benefits, or both, and without cost containment. The second NYISO competitive planning process for the AC Transmission Public Policy Transmission Need²³ similarly provided significant benefits for ratepayers. The LS Power and New York Power Authority joint proposal for Segment A was distinguished as the only double-circuit proposal, providing more than twice the transfer capacity of single-circuit alternatives at a low incremental cost. The New York Transco proposal for Segment B was distinguished through the use of series compensation, providing a higher level of transfer capacity at a low incremental cost. Both developers agreed to cost containment provisions.

The third NYISO competitive planning process, the Long Island Offshore Wind Export Public Policy Transmission Need²⁴ is currently underway, with final results to be determined later this year. However, the scopes of the many proposals that have been submitted have been identified, and it is clear there is a wide variety of potential solutions, including multiple potential solutions identified by the incumbent proposals submitted jointly by New York Transco and the

²² Id.

²³ Case No. 12-T-0502 *Proceeding on Motion of the Commission to Examine Alternating Current Transmission Upgrades*, Order Finding Transmission Needs Driven by Public Policy Requirements (December 17, 2015).

²⁴ Case No. 20-E-0497 *In the Matter of New York Independent System Operator, Inc. Proposed Public Policy Transmission Needs for Consideration for 2020 et. al.*, Order Addressing Public Policy Requirements for Transmission Planning Purposes (March 19, 2021).

New York Power Authority. Further, this solicitation is the first one following revisions to the NYISO tariff that provide for cost containment potentially stronger than the 80/20 risk sharing adopted in this past. The variety of proposals received in response to this solicitation reinforces the fact that there is not a single potential solution for a transmission problem, and that in the case of very large projects soliciting solutions from the marketplace can identify innovative approaches with the potential for superior outcomes, and the potential for risk mitigating cost containment proposals.

In the January Order, the Commission rejected the suggestion of LS Power and NextEra to refer the ConEd Hub proposal to the NYISO competitive process, explaining that “the availability of the NYISO process should not interfere with our broad planning authority and review of the options for establishing cost-effective POIs in service of our overarching goal of meeting CLCPA mandates at the least cost to ratepayers.”²⁵ To be clear, it was not and is not LS Power’s intent to interfere with the Commission’s broad planning authority. LS Power agrees that the Commission has significant authority over planning and siting in New York State including a large role in the NYISO competitive process. However, the NYISO competitive process is a powerful tool to achieve the goal of meeting CLCPA mandates at the least cost to ratepayers, and LS Power maintains that the Commission should exercise its authority to refer the creation of POIs for offshore wind to the NYISO competitive process in order to achieve the goal of meeting the CLCPA mandates at the least cost to ratepayers.

As identified above, there is sufficient time to conduct a competitive process for a solution to be in-service prior to 2030.²⁶ Applying the collective efforts of all developers could identify a better solution, saving hundreds of millions of dollars, and could provide ratepayers with additional

²⁵ January Order at 25.

²⁶ For example, the AC Transmission projects, which include rebuilds of existing facilities, are on schedule to be in service in 4 years 8 months after selection. A competitive process completed by as late as mid-2025 with a similar schedule would still be in service prior to the summer of 2030.

benefits such as cost containment. If the ConEd Hub is the best proposal, it would be selected pursuant to a competitive process. However, there is no way to determine that it is the best option absent that competitive process.

D. Approving the Petition Will Prejudice NYSERDA's Procurement

From a policy perspective, a significant unintended consequence of an approval of the Petition would be prejudice to NYSERDA's OSW procurement process. Currently, all bidders are responsible for identifying their interconnection to the grid, including responsibility and risk for curtailment at the POI. This incentivizes bidders to develop innovative solutions for project interconnection. An approval of the ConEd Hub, at a cost of \$1 billion to ratepayers, would likely draw all bidders to the ConEd Hub even if it were not the most efficient or cost effective POI for the project. Alternatively, if the winning bidder does not utilize the ConEd Hub, the \$1 billion investment would be futile. If the Commission believes that a ratepayer-funded hub available for OSW generators is in the public interest, declaring a PPTN is the mechanism already established and proven to identify the best solution(s) and avoid prejudicing the NYSERDA process.

IV. Conclusion

The Petition is not fully supported as required by the January Order and therefore should be denied. OSW generators should be required to identify their own approach to interconnect to the system on a level playing field. If the Commission feels there is a benefit to a coordinated approach with rate-based transmission hubs, a PPTN should be declared and a competitive process conducted.