BEFORE THE STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act	**CASE 20-E-0197**

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
PETITION SUPPLEMENT TO
PROPOSE AN ALTERNATIVE BROOKLYN CLEAN ENERGY HUB

CONSOLIDATED EDISON
COMPANY OF NEW YORK, INC.

By its Attorney

Susan J. LoFrumento
Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, NY 10003
Tel: 212.460.1137
E-mail: lofrumentos@coned.com

BEFORE THE STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

Proceeding on Motion of the Commission to Implement Transmission Planning Pursuant to the Accelerated Renewable Energy Growth and Community Benefit Act	**CASE 20-E-0197**

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
PETITION SUPPLEMENT TO
PROPOSE AN ALTERNATIVE BROOKLYN CLEAN ENERGY HUB

Con Edison hereby supplements the petition it filed on April 15, 2022,[1] to request that the Commission issue an Order by no later than March 16, 2023, for the additional reason that the Brooklyn Clean Energy Hub is needed to meet specific reliability needs that start in summer 2028.[2] Con Edison also supplements the petition to present the Commission with an additional

[1] The petition that Con Edison filed with the Commission on April 15, 2022 pursuant to its *Order on Power Grid Study Recommendations* issued in this proceeding on January 20, 2022 (the "OSW Order") sought, among other things, an Order approving and authorizing cost recovery for the Brooklyn Clean Energy Hub because the project is necessary to achieve the requirements of the Climate Leadership and Community Protection Act ("CLCPA"). The petition remains pending and is neither modified nor withdrawn except as expressly provided herein.

[2] The Company stated in fn. 8 and on p. 26 of the petition, and in subsequent technical conference presentations and Q&A submittals in this proceeding, that it had requested in its recently filed rate case (*see* Case No. 22-E-0064, *Proceedings on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Consolidated Edison Company of New York, Inc. for Electric Service*) (the "2022 Electric Rate Case Filing") capital funding for a new distribution area substation (*i.e.*, load serving) in Brooklyn, known as the Gateway Park Area Substation, to meet forecasted electric demand in parts of Brooklyn and Queens, including disadvantaged communities, beginning in 2028, and that the Brooklyn Clean Energy Hub would be the supply source for such Substation.

recommended alternative, i.e., a project designed to meet the 2028 reliability need that still provides a cost-effective opportunity to scale the project up to the Company's original Hub design that provides interconnection for offshore wind (and potentially other clean energy uses).

Indeed, it is for this reason that – notwithstanding the additional basis for the project's approval provided herein and regardless of which proposal is approved – the Company reiterates its request that the Commission acknowledge that the Hub is a CLCPA project because it will provide statewide benefits that accrue from connecting offshore wind and potentially other clean resources to the New York transmission system.[3] We accordingly maintain our request for a Commission determination that the project's costs be recovered statewide pursuant to the voluntary cost sharing and recovery agreement that the FERC approved.[4] If, however, the Commission were to determine that FERC recovery is not available for the Hub's cost recovery, then it should direct cost recovery initially from Con Edison's customers as requested by the petition (which can be through surcharge or base rates, depending upon the timing of the project coming into service).[5]

Con Edison plans to make a filing, no later than one year prior to the project's in-service date, to inform the Commission whether offshore wind or potentially other clean energy project developers have expressed interest in connecting at the Hub and to request cost recovery in accordance with those requests, including for any additional project work that Con Edison seeks

[3] Accordingly, Con Edison did not include the cost of this project in its current rate case when it filed the original petition and files this petition supplement in this proceeding, consistent with the OSW Order's direction. *See* OSW Order at p. 22. Even if the Commission were to approve the Scalable Reliability Proposal described herein for recovery from Con Edison's customers, this supplement is appropriately filed in this proceeding because the project is scalable to the original Hub design to establish multiple interconnection points for offshore wind and materially advance achievement of the State's CLCPA goals.

[4] 180 FERC ¶ 61,106 (August 19, 2022).

[5] The Company notes that it requested surcharge recovery from Con Edison customers in the original petition if the FERC-approved agreement is unavailable "for whatever reason." Petition at p. 34.

to perform due to developer requests.[6] Con Edison accordingly also requests herein that the Commission acknowledge the need for this additional filing to finalize cost recovery.

Finally, the Company seeks expedited review. Con Edison had initially sought such expedition consistent with the Commission's findings in the OSW Order that "time is of the essence"[7] to create viable locations to connect offshore wind in time to facilitate effective responses to the State's 2022 OSW solicitation.[8] Now, the local system reliability needs the Hub also addresses have become imperative and the project simply cannot be delayed any further. Con Edison must immediately commence procurement of project-specific, long-lead-time components and needs approval with assurance of cost recovery as soon as possible and asks for approval by the Commission's March session at the latest.

I. ACCELERATED RELIABILITY NEED FOR THE BROOKLYN CLEAN ENERGY HUB

Based on the Company's most recent forecasts, electric customer demand in the areas currently served by Con Edison's distribution area substations in Brownsville, Brooklyn (providing energy supply to the Crown Heights, Ridgewood, and Richmond Hill networks and certain radial supply feeders in the Brownsville supply area) is now expected to increase significantly over the next several years due to factors such as increased electrification from electric vehicles. As explained below, by summer 2028, the Brownsville substations will no longer be able to reliably serve customer demand and there will be no additional transfers of customer demand available. The Company accordingly must complete the new Gateway Park Distribution Area Substation ("Gateway") by summer 2028. Because there is no existing facility available on

[6] Con Edison reserves its right to request at a future date that the full cost of the Hub be recovered through the FERC-approved agreement.

[7] Petition at p. 3, quoting OSW Order at p. 21.

[8] *Id.* *See also* Petition at fn. 7.

the Con Edison transmission system to supply the new Gateway facility, the Brooklyn Clean Energy Hub is needed to supply that new distribution area substation by its need date.[9]

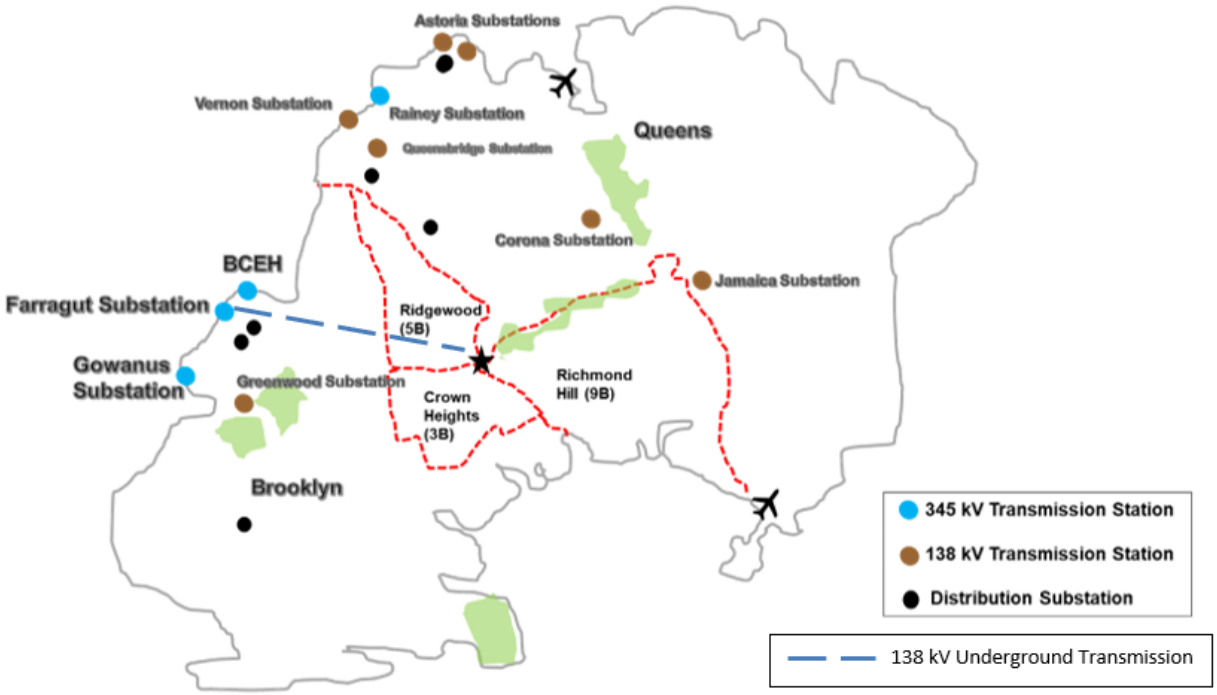
The Company issues summer peak demand forecasts for the electric system and for independent electric networks, radial supply feeders, and certain load areas within its system. These independent summer peak demand forecasts are 10-year outlooks of the net customer demand growth of specific electric demand areas that comprise the electric system's grid and consider the factors that affect summer peak hour demand at design weather criteria for each individual electric demand area.

The Company's most recent electric summer peak demand forecast for the Brownsville 1&2 distribution area substations demonstrate the need for the new Gateway facility, and the Brooklyn Clean Energy Hub to supply it, by summer 2028. Specifically, the Company forecasts that the base summer peak customer demand for the Brownsville 1&2 distribution area substations will increase substantially above the substations' capacity limit absent any demand side measures or load transfers. The Company will reduce that peak customer electric demand by implementing both utility-sided and customer-sided load relief measures (including but not limited to non-wires solutions, energy efficiency, demand response and storage) and customer electric demand transfers (a total of 6 MW from Brownsville to the Flatbush and Maspeth Networks in 2023 and 60 MW to the Glendale Network in 2026). After Con Edison implements all such measures, starting in summer 2028 the Brownsville substations will be at their capacity limit of 771 MW, whereas the

[9] Con Edison made it clear in its original petition that the Hub was also needed for this purpose and that there were no other stations available to provide this supply (*see* whitepaper attached as Exhibit A). The petition stated (at p. 16, fn. 36)"[a]s noted elsewhere herein, the Company intends to rely on the Brooklyn Clean Energy Hub, for example, to provide crucial electric supply to the Gateway Park Area Substation, a new area substation needed in 2028."

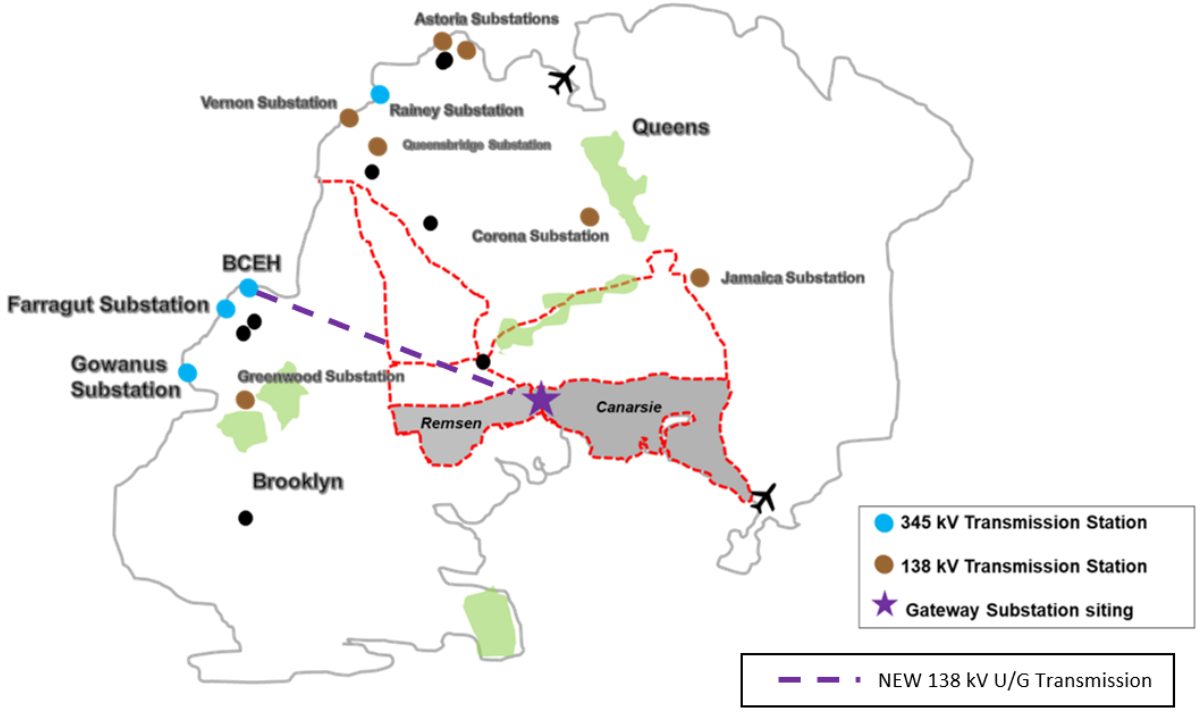
capability should exceed the forecasted demand by some margin. Gateway must accordingly be constructed by summer 2028.

The map immediately below shows the current configuration of the Networks supplied by Brownsville 1&2 in Brooklyn and Queens. The two co-located 27 kV Brownsville 1&2 Substations (represented by the black star) currently serve load in the Ridgewood and Crown Heights Networks in Brooklyn and the Richmond Hill Network in Queens. Each Brownsville Substation has five transformers and is supplied from the Farragut Transmission Substation through five common 138 kV underground transmission lines.



Because the two co-located substations at Brownsville cannot meet customer electric demand beginning in 2028, the new Gateway facility is needed. Gateway will allow the Company to reduce electric demand at Brownsville by dividing both the Crowns Heights and Richmond Hill Networks, such that the southern portions in each (i.e., the Remsen and Canarsie neighborhoods

shaded in grey in the map below) will instead be served by the new Gateway facility. Because the five feeders from Farragut that currently serve Brownsville are operating at full capacity, and no space is available at Farragut to add additional feeders there, the Brooklyn Clean Energy Hub is needed to supply the new Gateway facility. This is illustrated in the map immediately below. The Company intends to install four (4), 138 kV transmission -feeders connecting the Brooklyn Clean Energy Hub to the Gateway facility. As discussed above, Con Edison must complete this work by summer 2028.



II. CON EDISON'S SCALABLE RELIABILTY PROPOSAL

Con Edison continues to believe that the original Hub design[10] provides the best long-term solution for providing offshore wind interconnection points, integrating the wind energy into the Con Edison system, and meeting local reliability needs. But, given the current uncertainty concerning whether the Commission would approve the original design, Con Edison proposes herein an alternative that will meet the reliability need, while still being scalable during construction to provide interconnection points. More specifically, this alternative results in a lower initial cost while still providing a reliable transmission source for Gateway. And this alternative allows for a staged construction to the original Hub design that provides the much-needed offshore wind interconnection points in New York City. While the original scope for the Hub provided for a double ring bus already equipped with "make ready" interconnection points for offshore wind, this new proposal omits those "make ready" elements but is scalable to add them during construction.[11] The Company also considered a design alternative that starts with a single ring bus that can be expanded in the future to create a second ring and add interconnection points for offshore wind. The Company, however, eliminated this alternative due to the impossibility of performing the single to double ring conversion prior to the Hub's connection to Gateway to meet the reliability need and the significant increase in complexity and cost for doing so after energization.

The Company continues to believe that the original scope for the Hub will be the most cost-effective investment for customers. The original scope provides customers with the greatest

[10] As it does with all projects, the Company is continuing to examine minor adjustments to the Hub's originally proposed design based on currently available system information.

[11] These elements may also be added after energization, but at a significant additional expense, as shown in the Table below.

benefit at the least total cost, considering both meeting the near-term reliability need while providing new points of interconnection on the Company's in-city 345 kV system where currently few, if any, open bus positions are electrically suitable to connect new, large resources. The original "make ready" Hub provides OSW developers with a solution that avoids the incurrence of significant system upgrade costs and prolonged construction schedules due to outage scheduling timeframes.

Con Edison's new proposed alternative is the Hub as a double-ring bus substation with fourteen 345kV circuit breakers and six transmission connections to the existing system (see whitepaper attached as Exhibit A for more detail). But, unlike the original Hub, this alternative does not include the re-routing of existing 345 kV feeders B47 and 48 or the additional 345 kV circuit breakers necessary for the "make ready" interconnections of new supplies, including offshore wind. For this alternative, Con Edison could still add *during the base project's construction* the 345 kV circuit breakers and other ancillary equipment that will be required for offshore wind developers to connect to the Hub. Once the Hub is approved, if OSW developers elect it as their interconnection point early enough in the construction process, Con Edison could construct modifications without affecting the Hub's in-service date to meet reliability. This configuration also does not include a fifth transformer to supply planned distribution substations currently projected to be required just outside the 10-year planning horizon. Con Edison could still add the fifth transformer to the Hub at a future date to accommodate distribution substation supply needs. Nevertheless, all these changes would be at an incremental cost relative to the

original scope (as shown in the Table below) and would require longer and more complex construction and scheduled outage sequencing.

The additional alternative the Company considered and rejected is a single ring bus substation with twelve 345 kV circuit breakers. While the design is the minimum scope needed to meet the reliability needs for supplying Gateway, expanding it to a double ring bus that would create the same interconnection points as the recommended alternative *would not be feasible prior to Gateway's energization*, and after energization would be at a significant incremental cost ($400 million more than the original design) and duration (delaying, by several years, the ability for offshore wind or potentially other clean energy projects to connect there). The key driver for the increased cost and complexity of this configuration is the physical splitting of one ring into two while maintaining the continuity of power supply to Gateway (and potentially other distribution substations) and balanced flows to the rest of the 345 kV transmission system.

Con Edison summarizes the alternatives in the table below. The Company notes that it would construct the Hub on vacant land. Con Edison can therefore construct it without scheduled outages to existing equipment and complete it to provide supply to Gateway by summer 2028.

Project	**Initial Topology**	**Expandable**	**345 kV breakers**	**Resiliency Benefits**	**Interconnection points**	**Estimated Cost**
Original	Double Ring Bus	Not necessary	20	Yes, solves extreme contingency case	8 total, 6 at Hub and 2 at Farragut	$998M
Scalable Reliability Proposal	Double Ring Bus	Both during and after construction	14	No	Expandable to 8 (original Hub design)	$810M ($1.2B to Original Scope)
Reliability Alternative Considered	Single Ring Bus	After construction only	12	No	Expandable to 8 (original Hub design) but only after construction	$773M ($1.4B to Original Scope)

In sum, the Company believes the Commission should approve the original Hub scope, but, if the Commission believes that it needs more time to evaluate the Hub's suitability for offshore wind needs, the Scalable Reliability Proposal is the best choice to meet reliability needs and State policy goals.

III. APPROVAL, COST RECOVERY AND COST ALLOCATION

A. The Commission Should Approve the Original Hub or the Alternative Scalable Reliability Proposal for Cost Recovery Now

The needs described in this supplement underscores the Hub as the "multi-benefit" cost-effective project described in the petition that would provide interconnection points for offshore wind. There is a near-term CLCPA need to create viable, favorable locations to connect offshore wind generation to New York's electric grid. Con Edison accordingly requested in the petition that the Commission issue an order authorizing cost recovery for the development and construction of the Brooklyn Clean Energy Hub as soon as possible. Con Edison continues to believe that the Hub is the best solution for connecting offshore wind and that recovery under the utilities' FERC-approved cost sharing agreement is the appropriate cost recovery mechanism. Given, however, the uncertainty regarding the timing of the Commission's decision, Con Edison considered alternatives for meeting the reliability need that is now more pressing.

As Con Edison has explained, the Commission should approve the Scalable Reliability Proposal if it is not prepared to approve the Original Hub scope. Con Edison believes that the Scalable Reliability Proposal should be approved under the utilities' cost sharing agreement. While it addresses the identified reliability needs, this project continues to provide CLCPA benefits and

the Commission has recognized that Phase 2 projects could be multi-value projects.[12] Con Edison understands, however, that because the project's only certain use at this juncture is to meet local reliability needs, the Commission may determine that its costs should initially be paid by Con Edison customers only.

Con Edison plans to make a filing, however, no later than one year prior to the project's in-service date, to inform the Commission whether offshore wind project developers (or potentially other projects that will help the State achieve its CLCPA goals) have expressed interest in the project and to request Statewide load-ratio-share cost recovery in accordance with those requests, including (but not limited to) potentially for any additional project work that Con Edison seeks to implement due to developer requests.[13] Con Edison also requests herein that the Commission acknowledge the need for this additional filing to finalize cost recovery.

B. Additional Considerations for Cost Allocation

It is important to recognize that this Commission authorized the cost sharing and recovery agreement into which the State's utilities entered, because it agreed that a volumetric load share-based statewide allocation of CLCPA costs is just and reasonable.[14] The Utilities entered into the cost sharing agreement with the understanding that projects that this Commission approved for its

[12] The Commission recognized in the Phase 2 Order that projects that support CLCPA objectives may simultaneously provide reliability or resilience benefits. The Order stated: "There may be instances in which a utility finds incremental investment in a Phase 2 project will provide other benefits, such as reliability or improved load serving capability, that are specific to the sponsoring utility.") (*See* Phase 2 Order, fn. 37.)

[13] Con Edison in this petition is reserving its right to request at a later date that the full cost of the Hub be recovered through the FERC approved agreement.

[14] *See* Phase 2 Order at p. 22. "The Commission agrees with the Utilities that, in this context, the statewide allocation to all customers of the Phase 2 investment costs is appropriate – both for new projects and incremental investments to "business as usual" projects that capture CLCPA benefits. Allocating these costs pursuant to a volumetric load ratio share is consistent with the funding principles underlying the existing REC, OREC and ZEC purchase obligations." See also *Order Accepting Compliance Filings* (issued May 12, 2022) in this proceeding in which the Commission accepted the utilities' cost sharing and recovery agreement as compliant with the Phase 2 Order.

use would be equitably distributed throughout the State. Con Edison identified the Brooklyn Clean Energy Hub to help support the integration of offshore wind and other clean energy resources. While the Commission may believe that it should allocate to local customers CLCPA projects' costs that also satisfy reliability needs, *all* projects that facilitate CLCPA's achievement will almost certainly also provide local customers with reliability and resilience benefits. The Commission should encourage such multi-benefit projects wherever possible, as they will be the most cost-effective projects that bring the greatest customer value. The Commission should accordingly approve them as eligible for statewide cost allocation – as a contrary result would undermine the equity that the cost sharing agreement sought to achieve. We ask that the Commission be mindful of these considerations as it evaluates, and ultimately decides, how the Brooklyn Clean Energy Hub's costs should be allocated.

IV. NEED FOR EXPEDITED REVIEW

The Company seeks the Commission's expedited review and approval for the Hub or the Scalable Reliability Alternative by its March 16th session. The Company needs to commence as soon as possible the procurement of long-lead-time specialized equipment related to the Brooklyn Clean Energy Hub to ensure that a connection to the transmission system is available to supply Gateway that must be in service by summer 2028 to meet forecasted electric demand in parts of Brooklyn and Queens. To aid the Commission's determination in this regard, the Company has included in its whitepaper in Exhibit A a chart showing the construction schedule.

VI. CONCLUSION

For the reasons set forth herein, Con Edison respectfully requests that the Commission review this supplemented petition on an expedited basis, and issue an Order no later than March 16, 2023, that:

1. Approves and authorizes cost recovery for either the Original Hub or the Scalable Reliability Proposal because the project is necessary to: (a) meet specific reliability needs that start in 2028 and (b) achieve the requirements of the CLCPA;
2. Determines it is appropriate, in light of the statewide benefits the Brooklyn Clean Energy Hub realizes and consistent with the Commission's Phase 2 Order, that the cost Hub be allocated statewide on a volumetrically calculated load ratio share basis, and approves the costs of the project to be subject to the terms of the utilities' cost sharing and recovery agreement; and
3. If, in the alternative, the Commission were to determine that FERC tariff recovery is not available for the Hub's cost recovery at this time, then Con Edison requests the Commission approve the project and grant it cost recovery, initially from Con Edison's customers, pending appropriate Commission action on a further filing Con Edison would make no later than one year prior to the project's in-service date (as described herein), seeking approval to use the FERC tariff recovery mechanism.

Dated: December 13, 2022

Respectfully submitted,

/s/ Susan J. LoFrumento
Susan J. LoFrumento
Consolidated Edison Company of New York, Inc.
Associate Counsel
4 Irving Place
New York, N.Y. 10003
(212) 460-1137
lofrumentos@coned.com

Exhibit A
Brooklyn Clean Energy Hub
Scalable Reliability Proposal Whitepaper

Exhibit A to
Petition Supplement

Central Operations / Substation Operations 2023

1. Project / Program Summary

Type: ☒ Project ☐ Program	**Category: ☒ Capital ☐ O&M**
Work Plan Category: ☐ Regulatory Mandated ☒ Operationally Required ☐ Strategic	
Project/Program Title: Brooklyn Clean Energy Hub Scalable Reliability Proposal	
Project/Program Manager: Various	**Project/Program Number (Level 1):**
Status: ☒ Planning ☐ Design ☐ Engineering ☐ Construction ☐ Ongoing ☐ Other: _____	
Estimated Start Date: January 2023	**Estimated Date In Service: May 2028**
A. Total Funding Request ($000) **Capital: $810,000** **O&M:** **Retirement:**	**B.** **☐ 5-Year Gross Cost Savings ($000)** **☐ 5-Year Gross Cost Avoidance ($000)** **O&M:** **Capital:**
C. 5-Year Ongoing Maintenance Expense ($000) **O&M:** **Capital:**	**D. Investment Payback Period: (Years/months)**

Work Description:

The Brooklyn Clean Energy Hub (BCEH) is a new 345kV transmission substation needed for reliability and to facilitate interconnecting clean energy to Con Edison's system.

The BCEH will have four 345kV/138kV autotransformers to supply the new Gateway Park Distribution Substation and will supply planned future distribution substations as required to meet reliability needs that will arise due to load growth and electrification. The BCEH will also be scalable during construction to be able to create Points of Interconnection (POI) for large scale renewable resources, such as Offshore Wind Generation (OSW) and potentially other clean resources. The project will require demolition of retired facilities.

This project will use the (retired) Hudson Avenue Generating Station property in the Vinegar Hill neighborhood of Brooklyn. Various buildings on this property will be demolished to provide space for the construction of the BCEH. On-site demolition started in 2022.

The project will include the design and construction of a double ring bus substation with fourteen 345kV circuit breakers, six feeder positions for existing transmission lines and four 345/138kV transformer banks. The four transformer banks will provide sources for four 138kV underground transmission lines that will be included in the scope for a separate project to establish the Gateway Park Distribution Substation. The BCEH can be expanded to include a fifth transformer bank and all banks will also be capable of supplying additional distribution substations in the future. Establishing the BCEH will include intercepting three existing 345kV feeders (61, 62 and 63) between the Farragut and Rainey 345kV Substations and diverting them into the Brooklyn Clean Energy Hub.

Engineering and long lead equipment procurement began in 2022 and construction is expected to begin in 2023. The in-service date for this project is December 2027.

Justification Summary:

Based on the current electric forecast, the 138kV supply feeders for Brownsville Substation Nos. 1 and 2 are overloaded. The Company will implement various measures to alleviate the overloads, including small customer transfers, higher operational voltages and power factors, and a 60MW network transfer to an adjacent substation. Even with all these measures, the Brownsville supply feeders will be at their rated capacity again in 2028, at which time the only remaining load relief measure is to perform additional network transfers to the new Gateway Park Distribution Substation (Gateway). Gateway will be a separate project, but it requires a new transmission substation as a supply source. The BCEH will be constructed to provide a reliable source for Gateway and future distribution substations and is scalable during construction to also provide future POIs for OSW.

The existing transmission substations in Brooklyn and Queens either do not have the physical space or the necessary equipment to supply an additional distribution substation. Gowanus Substation is an existing transmission substation that could be expanded to include the equipment needed to supply a distribution substation, but not in time to meet the reliability needs for Gateway in 2028. As a greenfield project, the BCEH can largely be constructed without scheduled outages to existing equipment and can be completed to provide supply to Gateway by summer 2028. The BCEH will also have the equipment and capacity necessary to supply additional distribution substations that will be required beyond 2028.

Gateway is needed to maintain reliability to customers in southeast Brooklyn and southwest Queens. Gateway cannot be placed into service without a transmission substation supply. The BCEH will establish a transmission supply to Gateway and can be completed by summer 2028.

In 2019, New York State passed the nation-leading Climate Leadership and Community Protection Act (CLCPA). CLCPA's targets are among the most rigorous of any major economy in the world and include goals of 70% renewable energy by 2030 with 100% emanating from zero-emission electricity by 2040. The Accelerated Renewable Energy Growth and Community Benefit Act established the requirement to interconnect 9,000 MW of Offshore Wind (OSW) by 2035. The BCEH Scalable Reliability Option can be scaled to help achieve this goal by creating POIs for up to 4,500 MW of OSW. If additional re-configurations are completed, specifically re-routing 345kV feeders 46 and 48 to the BCEH, two more POIs can be created at Farragut Substation and could provide up to 1,500 MW more of OSW.

In summary, upon completion of all re-configurations, POIs for injection of up to 6,000 MW of OSW can be created: 4,500 MW at the Brooklyn Clean Energy Hub, and 1,500MW at its adjacent Farragut Substation.

Relationship to 5-Year and Long-Range Plans and Enterprise Risk Management Strategy

The system improvements implemented with this project would be sufficient in managing constraints that limit renewable energy delivery within the system and in satisfying reliability, resiliency, safety, and compliance regulations.

2. Supplemental Information

Alternatives

There are two alternatives to this project.

The first alternative is to build the BCEH to its original scope, including "make-ready" POIs for OSW developers. This alternative can be completed in time to provide a source of Gateway but at an additional cost.

The second alternative is to build the BCEH to a reduced scope. This reduced scope would include construction of the BCEH as a single ring bus with twelve 345kV breakers, six 345kV transmission feeder positions and 4 345kV/138kV autotransformers. This alternative can be completed in time to provide a transmission source for Gateway but would require extensive equipment outages and greater cost to expand in the future. Most importantly, it is not scalable during construction.

Risk of No Action

If this project is not completed by summer 2028, Gateway will not have a transmission supply. If Gateway does not have a transmission supply, there will not be adequate capacity to supply the networks of southeast Brooklyn or southwest Queens during peak conditions and this could lead to widespread customer outages.

Non-Financial Benefits

This project will provide the necessary reliability and resiliency in an area of New York City that serves many critical loads (e.g., airports, transportation hubs, and hospitals) in a densely populated area where many buildings have elevators and various equipment loads. The project will also achieve environmental policy objectives and help to facilitate achievement of CLCPA goals.

Summary of Financial Benefits and Costs

N/A

Technical Evaluation / Analysis
Project Relationships (if applicable) N/A
Basis for Estimate The funding request is on an order of magnitude estimate that includes overheads, escalation and the standard 30% contingency.

3. Funding Detail

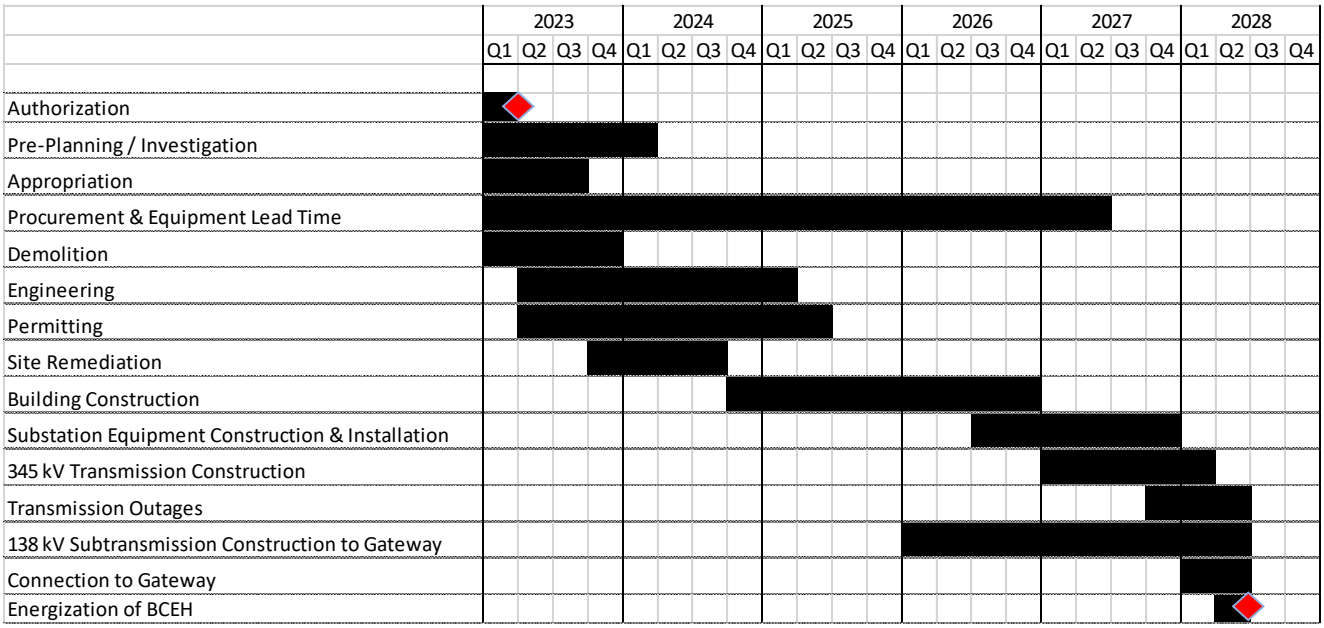
Historical Spend:

There has been $2.7M expended on this project to date.

Capital Request by Elements of Expense:

EOE	2023	2024	2025	2026	2027	2028
Labor	$5,221	$10,442	$15,663	$10,442	$7,832	$2,611
M&S	$14,507	$29,014	$43,521	$29,014	$21,760	$7,253
Contract Services	$19,042	$38,084	$57,126	$38,084	$28,563	$9,521
Other	$23,189	$46,377	$69,566	$46,377	$34,783	$11,594
Overheads	$19,041	$38,083	$57,124	$38,083	$28,562	$9,521
Total	$81,000	$162,000	$243,000	$162,000	$121,500	$40,500

4. Schedule


2023
2024
2025
2026
2027
2028
Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4
Authorization
Pre-Planning / Investigation
Appropriation
Procurement & Equipment Lead Time
Demolition
Engineering
Permitting
Site Remediation
Building Construction
Substation Equipment Construction & Installation
345 kV Transmission Construction
Transmission Outages
138 kV Subtransmission Construction to Gateway
Connection to Gateway
Energization of BCEH