

Consolidated Edison Company of New York, Inc.

***Preventative and Corrective Maintenance and
NYISO Market operations of the
Ozone Park Battery Storage Station
Request for Information***

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INQUIRIES

All correspondence, questions, clarifications or comments concerning this RFI or any of the information contained herein shall be directed to

DistributionEnergyStorage@coned.com

1 Company Information and Background

1.1 Company Information

Consolidated Edison Company of New York, Inc. (Con Edison) is a subsidiary of Consolidated Edison, Inc. - one of the nation's largest investor-owned energy companies with \$14 billion in annual revenues and \$34 billion in assets. Con Edison is a regulated utility that provides electric, gas and steam service in New York City and Westchester County.

2 Purpose

Con Edison is seeking information from qualified and experienced Respondents on how to manage and provide maintenance (preventative and corrective) and warranty (full lifecycle) to the Company's existing 98th Street Energy Storage Station ("Ozone Park") located at 106-51 98th Street Ozone Park, NY, 11417.

Con Edison is currently expanding the Ozone Park's functionalities from Summer Load Relief support to also include New York Independent System Operator (NYISO) market participation. Therefore, Con Edison is also seeking information on how to monitor, dispatch and control the Ozone Park station during (NYISO) market operations. In addition, the purpose of this Request for Information (RFI) is to gain an understanding of potential market solutions that can be utilized and/or implemented with the Ozone Park system.

The terms "Respondent", "Vendor" and "Supplier" shall be considered synonymous to mean the firm, organization or entity submitting a Proposal in response to this RFI.

Information that any interested party wishes to submit will be done so voluntarily with the understanding that this RFI is for information gathering purposes only, and it is not a formal solicitation. There will not be a contract executed as a result of this RFI. A formal Request for Proposal ("RFP") may be issued as a result of, and subsequent to this RFI. If an RFP is issued, the information provided may assist Con Edison in developing the RFP and those Respondents who successfully pass both the RFI written response and product demonstration evaluations will be invited to participate in the RFP process. This RFI does not obligate Con Edison to issue an RFP, or to include any RFI provisions provided by Respondents in any RFP.

Similarly, cost information, which may be submitted, will be used solely for the purposes of performing a market analysis and establishing a budget for the initiative. Cost information presented during this information gathering process will not be considered as a response to any solicitation subsequently issued by Con Edison.

It is the sole responsibility of the Respondent to read and understand all of the terms and conditions, components and other requirements of this RFI. Failure to comply with these instructions may disqualify a respondent from further consideration.

3 Project Background

The Ozone park system was placed into service in January 2019 with a total system capacity of 2MW/11.418MWh. It is electrically connected at the end of a 4.33kV feeder and primarily designed to provide load relief to the network/load area. The Ozone Park's Lithium Iron Phosphate batteries were manufactured by BYD and installed by a system integrator. The system is currently under warranty until January 2022 and it is currently being modified to accommodate NYISO signals over Con Edison's SCADA network. The goal is to enhance the system to participate in NYISO markets and provide load relief to the distribution grid.

3.1 Objectives

Through this RFI, Con Edison is seeking to answer to the following questions.

- 1) What are the current options for battery systems maintenance available in the market?
- 2) What warranty coverage options are suggested to maintain 2 MW/5hrs. for at least seven years given the intended dual use?
- 3) What is the cost associated with maintaining the system for the next seven years (upon maturity of the existing warranty)?
- 4) How do we maintain a constant 2MW dispatch for at least five hours while minimizing degradation?

ConEdison is expecting Respondents to provide information addressing the following interest areas:

- 3.1.1 Station Equipment maintenance (Preventive and Corrective)
- 3.1.2 Battery System capacity
- 3.1.3 Remote monitoring services
- 3.1.4 NYISO market participation
- 3.1.5 End of life – Decommissioning/Recycling

3.1.1 Station Equipment Maintenance

Selected Respondent shall be responsible to provide a plan to perform maintenance, diagnostics, repair and replacement services on all station equipment at a monthly, quarterly, annual and/or bi-annually intervals depending on the type of equipment.

Station equipment includes but not limited to the following.

- a. 4kV Padmount, manually operated, load interrupter fused disconnect with visible break contacts
- b. Padmount wye-grounded 2250 kVA transformer
- c. 480V MDP Switchboard
- d. 3000A/2700AT Draw-out breaker
- e. Power Distribution panels
- f. Lighting system
- g. Auxiliary power
- h. BYD Power Conversion System
- i. BYD Batteries
- j. HVAC system
- k. SCADA system
- l. Computer controls
- m. Miscellaneous electronics
- n. All components related to the fire protection system and Central Monitoring system
- o. Security system equipment including gates, fences, and cameras
- p. Revenue meter cabinet and related components
- q. And any other component required for the safe and reliable operation of the Station

Plan for Equipment maintenance shall include at minimum the inspection, repair and compliance of the following items:

3.1.1.1 Annual inspection, repair and compliance

- a. Operating Parameters; Annually verify all IEEE 1547 setpoints, and other commissioned settings stored in programmable devices (This includes but it is not limited to: HMI panels and PLCs) are intact and updated with most recent software version
- b. Surge Protective Device; annually confirm they are functional. Replace immediately if they are not. Maintain four spares onsite at all times.
- c. Annually run a diagnostic check of all inverters, record alarms logged since last checked, address all alarms, and provide detailed report of issues and solutions to the client.
- d. Reports shall be submitted for review within two weeks of finding an issue. All issues shall be addressed and corrected immediately. Report shall also include acceptable

ranges for all alarms. Prior to starting warranty period, selected Respondent shall be responsible for providing a detailed breakdown of all critical alarm definitions.

- e. Switch States: Annually operate all disconnects, circuit breakers, and control switches as practical. Exercise their mechanical linkage and visually checking local and remote annunciation for their change of position indications (where applicable).
- f. Container and Cabinet Locks, Container and Cabinet doors – annually lubricate locks, door latches, and hinges with manufactures' recommended lubricant or with white lithium grease for weather-exposed and pure silicon grease for interiors. Or manufacture approved methods/materials to lubricate equipment.

3.1.1.2 Bi-annual inspection, repair and compliance

- a. Observe and report any leakage or spillage; bi-annual visual inspection.
- b. Auxiliary circuit: bi-annually inspect fuses and circuit breakers; confirm all AC and DC auxiliary power sources are working
- c. Safety and Warning Signs; bi-annually inspect safety and warning signs, including container Exit signs. Repair, reattach, or replace as needed.
- d. Bi-annually check report and correct any corrosion on any metal surface, interior and exterior of containers, including railings, stairs, platforms, and enclosures for all electrical equipment currently onsite.
- e. Fire Alarm Panel and subpanels; bi-annually use built-in test modes or manufacturer's recommended inspection technique.
- f. Fire Fighting Equipment: bi-annually maintain proper FM-200 stored volume and pressure and perform a visual check of the tank's pressure gauge. Use manufacturer's recommended inspection technique.
- g. Grounding wires tightly connected; Biannually perform visual checks for small gauge control wires. Tighten or replace any that appear loose.
- h. Assure no debris, flammable or explosive substances; bi-annual visual inspection.
- i. Report and resolve any abnormal lights, sounds, or smells; bi-annual inspection.

3.1.1.3 Quarterly inspection, repair, and compliance

- a. Lighting Controls: Quarterly confirm all lights interior to containers and mounted outside are working as designed.
- b. Air Conditioner PLD Temperature Screen; Quarterly confirm that each container's HVAC heating and cooling modes are working as designed.
- c. Room temperature monitoring devices; Quarterly check for accuracy Report real-time temperatures on applicable HMI screens.
- d. Ventilation Fans and Louver position control for all 9 containers; Quarterly confirm system is working as designed.

- e. For all existing firefighting equipment perform all Authority Having Jurisdiction (“AHJ”) required inspections including weekly, monthly, bi-annual and annual inspections and all necessary record keeping, corrections and reporting.
- f. Provide and install software and firmware updates and patches to maintain the security and operation of the ESS SCADA system.
 - Verify all SCADA set points are working and accommodate request to add/alter new/existing set-points.
- g. Selected Respondent will be required to comply with Con Edison’s cybersecurity and data security requirements.

Respondents are expected to provide a detailed plan for both preventive and corrective maintenance. Respondents are also encouraged to input their ideas based on their experiences.

3.1.2 Battery system capacity

Selected Respondent shall propose a plan to accomplish the following.

- a. Minimize energy degradation by either shuffling batteries, replacing existing modules or by implementing other industry-approved methods for the next seven years.
- b. Maintain a constant discharge of 2MW for at least five hours.
- c. For parts, service, warranty, and system upgrades related to the system capacity, Respondents are encouraged to either establish a contract with BYD (the manufacture of the batteries) or to find another industry acceptable method to maintain the capacity of the battery system.

This plan must ensure ConEdison’s safe and reliable operation of the system for load relief, system contingencies and market participation.

3.1.2.1 Minimal battery capacity test requirements

Annually, complete 1 cycle of deep (98 - 100%) discharge and charge of all batteries in a normal mode of operation at the nominal charge power and nominal discharge power to determine the measured energy capacity of the whole energy storage system.

Selected Respondent shall provide detailed plan on how they plan to perform the capacity test. During the annual deep charge and discharge testing, selected Respondent shall allow for the Con Edison’s inspection of DC and AC conductor terminations and bundles using infrared thermography techniques to determine any imminent or present dangerous hotspots and/or overloading. Selected Respondent shall be responsible of correction any or all deficiencies.

3.1.3 Remote monitoring Services

Selected Respondent shall provide a detailed plan for Remote Monitoring Services, this includes but not limited to:

- a. Monitor the facility 24 hour per day, seven days a week
- b. Report/alert system issues to Con Edison by email and phone in the case of any system alarms arising from the battery system and/or fire suppression causing a decrease in availability of power generation or energy capacity
- c. Correct soft faults that can be reset remotely as deemed safe and in the interest of protecting the long-term integrity of the system and subsystem equipment
- d. Supply Con Edison with a distribution list for all individuals that will need to be alerted by email for all changes in availability based on alarms.
- e. Respondent must be able to work within ConEdison's cyber and firewall requirements to ensure remote operation of the battery
- f. Send qualified employees to site to address warranty issues related to any equipment onsite or any critical alarm within 48 hours from the moment an alarm is raised.
- g. Retain a FDNY/ConEdison approved Central Monitoring Station Respondent that shall monitor all alarms related to the station's fire protection system while providing notification to the appropriate parties

3.1.4 NYISO Market Participation

Respondents are expected to provide a solution that supports successful market participation and the necessary monitoring, dispatching and maintenance necessary to meet NYISO and Con Edison requirements.

Respondents must be able to support participation in all markets which includes Capacity, Energy, Ancillary Services, and any other products or benefits, including, without limitation, Installed Capacity (ICAP), Energy, Operating Reserve Service (including both Non-Synchronized and Spinning Reserves), Voltage Support Service and Regulation Service, each as defined in the NYISO Tariff, and products associated with uses of the battery for the benefit of CECONY's distribution system unrelated to sales into NYISO or any other market.

Respondents must be able to support SCADA controlled charging and discharging operation as per NYISO market needs and/or ConEdison's needs. Respondent must also be able to support the ability to override NYISO dispatch signals remotely from ConEdison's control systems should it the battery needed for local distribution emergency load need relief needs.

3.1.5 End of life – Decommissioning/Recycling

Selected Respondent is expected to provide a detailed plan on how to safely dispose of all batteries at the end of their functional life or in the event of a catastrophic failure.

Plan should include but not limited to:

- a. Removal procedure,
- b. Approve facilities that will take Lithium batteries,
- c. Means of transportation,
- d. Disposal reporting, and
- e. Covid-19 plan to address pandemic.

4 Instructions to Respondents

DISCLAIMER

All the information set out in this document is provided to the Respondents by Con Ed in good faith based on information compiled by Con Ed and provided by Third Parties and/or otherwise generally available or known to Con Ed at the time of writing. Under no circumstances shall the contents of this document constitute or deem to constitute a warranty by Con Ed as to the accuracy or completeness of any information. Con Ed shall not be liable for any loss, expense, damage or claim arising out of or in connection with, the information in this document or for any omission from it.

TERMS AND CONDITIONS

The Respondents will not make (or cause to be made) any public announcement relating to this RFI, its content or process, or Con Ed's evaluation process (including any client reference interviews and site visits), and shall not otherwise publicize this RFI, the Respondent's response to this RFI or parts of either of them in any manner, unless it first obtains Con Ed's written consent.

The Respondents shall not refer to or use any name, trademark, logo, service mark, trade name or other proprietary-type marks of Con Ed in any advertisement, reference list, promotional or sales marketing literature, audio visual presentation or any other publication or similar activities, unless it first obtains Con Ed's written consent.

The Company reserves the right to disqualify any and all proposals submitted after the designated deadline or not in the requested format. The Company also retains the right to cancel this RFI.

Respondents are instructed to prepare the RFI response in accordance with the instructions outlined in this section. Any limitation regarding the Respondent's ability to supply information requested in this RFI (or to support or perform a particular function or service) should be explicitly stated in the proposal response. Any partnering with third-party Respondents to support or perform a particular function or service must be explicitly stated.

Con Edison shall not be liable for any fees, costs, or expenses incurred for this Proposal as a result of the Response to this RFI, including but not limited to attendance at the Respondent Day(s), Demonstration Day or preparation of Proposals.

4.1 Questions and Contact Information

All correspondence, questions, clarifications or comments concerning this RFI or any of the information contained herein shall only be directed to Con Edison.

The contact for this action shall be: DistributionEnergyStorage@coned.com

4.2 Respondent Day

In addition, there will be two **(2)** Respondent Days – one to discuss the RFI and the other for the demonstrations. Con Edison has set aside these Respondent days to answer questions and provide clarification on items related to the proposal and demonstrations. All other correspondence will occur via electronic or printed mail. Respondents can attend via conference call and will be limited to a total of three **(3)** participants per Respondent.

Both Respondent Day meetings will be held via Teams conference call. All Respondents are required to attend. We will be webcasting materials (drawings, site pictures, etc.).

Due to the current Covid-19 restrictions, we will not be accommodating site visits to all respondent. Site visits will only be available to short listed Respondents. Proposal Response and Submittal Instructions

Respondents must provide the following no later than 05/01/2021

- An uploaded softcopy of the proposal to: DistributionEnergyStorage@coned.com

4.3 Plan Demonstration

Respondents who best meet the requirements in the written response will be invited to demonstrate functional requirements through plan demonstrations. Respondent shall demonstrate through case scenarios their proposed response to:

1. System emergencies,
2. Preventive and corrective maintenance, and
3. Market participation.

Responses should illustrate the key features. Estimated timeframe for product demonstration is 04/xx/2020 – xx/xx/2021. Respondents are encouraged to find creative ways to showcase their solutions.

4.4 RFI Response Format

Your response should include a **separate proposal** without pricing information and should not exceed 100 pages (excluding appendices). The written proposal response should be organized as follows:

Proposal Section	Proposal Section Title	RFI Description of Proposal Section Title
n/a	Cover Letter	
n/a	Table of Contents	
1	Executive Summary	
2	Proposed Solution	
3	Budgetary Pricing Proposal	
4	Assumptions Summary	
Appendices	Glossary of Terms	
	Respondent Brochures	

4.5 Cover Letter

The cover letter should have a maximum length of two (2) pages and must contain:

- The legal name and address of Respondent
- The name, title and telephone number of the individual authorized to negotiate and execute the Agreement
- A signature of a person authorized to contractually bind the Respondent’s organization
- A statement that the Respondent has read, understands, and agrees to all provisions of the RFI
- A summary of any alterations to the terms and conditions in the RFI

4.6 Table of Contents

Include a clear identification of the response by section and by page number as identified above.

4.7 Executive Summary

This section is for the Respondent to provide an executive overview and summary of your general description of the key features of your solution. In addition, you should provide the following:

- Company profile information
- Highlight where you have performed industry specific work in the past that is relevant to the Con Edison requirements

4.8 Proposed Solution

This is a response to the functional and technical requirements as outlined in this document.

4.9 Budgetary Pricing Proposal

Your budgetary pricing proposal should be included with the written proposal response. Budgetary itemized pricing for both goods and services must be provided.

All Respondents are encouraged to provide innovative pricing strategies that reflect shared ownership of the work and which have potential benefits to Con Edison. Please describe any alternative pricing strategies that we may take into consideration when budgeting for this effort.

4.10 Assumptions Summary

Respondents should provide a list of assumptions used in developing the response to this RFI that are not part of the solution requirements provided.

4.11 5.4 Glossary of Terms

Respondents will provide a glossary of terms that is specific to the Respondent solution.

4.12 Respondent Brochures

Respondents should provide product brochures specific to the solution and products that have been identified in the RFI response.