Contents

APPENDIX C3

All projects must meet NYISO requirements for deliverability and permitting requirements, as well as other requirements that will enable CECONY and O&R to receive all market participation revenues as defined in relevant NYISO Tariffs[1].

Please provide the following Project information in the order requested. Indicate if a question is not applicable and do not leave responses blank. Please mark all confidential information accordingly.

Responses to these questions will be used to score project technical feasibility and reasonableness of the Project timeline.

Note: Items required for Phase Two response are indicated at each line item.

1. System Design

1. Please provide the following Project documents as attachments:
   - 1.1 Expected site layout with location of major equipment labeled[2]
   - 1.2 Single line diagram to the Interconnection Point[3]
   - 1.3 Communications equipment schematic (single line diagram) including connection to Owner NOC and CECONY's or O&R's system with key equipment labeled, expected communications protocols defined, and verification that any equipment adheres to 6-second or faster telemetry[4] and any Con Edison requirements
   - 1.4 List all UL certifications for key equipment including storage modules, power conversion system, and/or integrated product certifications
   - 1.5 OEM-provided reactive power curve (P-Q curve) for the proposed inverters at 35 degrees C and 1.0 pu voltage
   - 1.6 OEM-supplied data sheets for all key equipment, including:
     - 1.6.1 Storage modules
     - 1.6.2 Power converter
     - 1.6.3 Fire suppression system

[1] https://www.nyiso.com/regulatory-viewer
[2] Site layout should be consistent with Appendix C1 information
[3] Single line diagram should be consistent with Appendix C2 information
[4] https://www.nyiso.com/documents/20142/2549675/DER%20and%20NYISO%20Telemetry%20Requirement%20-%2020180928_MIWG.pdf

1.6.4 BESS enclosure and cooling system

1.6.5 Meters, and

1.6.6 Communications equipment

2. Please complete the "Project Information" tab in the Phase 1 section of Appendix B - Offer Form.

3. For distribution connected Projects only, please choose the reliability standard and thus whether or not a Project or Portfolio is matching the local reliability standard. Bidders cannot choose a reliability standard lower than the area's local reliability standard for Projects that are in preferred locations. Note that Bidders planning an interconnection design to match the area's local reliability standard will receive priority consideration. For example, if the service territory requires new load to be interconnected at an N-2 reliability standard, then the energy storage solution must be interconnected at the N-2 reliability standard to receive such priority consideration. Projects proposed at N-1 for N-2 areas are still subject to the same operational requirements and contractual obligations as projects proposed at the local reliability standard.

4. Provide a description of project Station Use and Auxiliary loads[5] indicated in the Project Information tab of Appendix B - Offer Form. This should include discussion of how HVAC, fire suppression, and data collection and control equipment are characterized between these two categories. Please specifically describe the power supply for each component and any backup power supply.

5. Provide information relating to the availability of and Bidder's access to the equipment[6] and components utilized/proposed for construction and operation of the project, including:

   5.1 Completed Letter of Engagement according to the template (Appendix G) provided for each supplier of key equipment included in the proposal. If key equipment will be supplied through an integrator who will be responsible for the availability and delivery schedule of all key equipment, a single Letter of Engagement will suffice. See Appendix G for a template.

   5.2 A list of indicative quantities and timelines for the following items:

      5.2.1 Equipment availability

      5.2.2 Purchase lead times

      5.2.3 Anticipated time to clear US customs if applicable

      5.2.4 Total shipping time

[5] Station Use and Auxiliary loads will be required to be separately metered.
[6] E.g. storage modules, BOS equipment, PCS, etc.

6. Will the storage system include any components from the following companies - Huawei, ZTE Corp, Hytera Communications Corp, Hangzhou Hikvision Digital Technology Co., Dahua Technology Co.? If yes, please specify the exact component and provide a short description of its intended use. All components must be listed.
7. Will the Project's energy management system be sourced from a supplier outside of the United States, if so, please state the country of origin for that energy management system.

2. Operational Parameters

1. [PHASE 1] Confirm this list of end points will be available at the required sampling and reporting rate for system monitoring and control. Please state that these requirements can be met and comment below with relevant context as necessary.

Group	Variable Type	Variable Name	Units
NYISO	Control-AO	NYISO_GN_6S_BP	MW
	Control-AO	NYISO_GN_5M_BP	MW
	Analog	Resource 1 Gen MW	MW
	Analog	Resource 1 Gen MVAR	MVAR
	Analog	Battery Remaining Energy	MWh
	Indication	Main Breaker Status	Open/Close/Indetermined
CECONY	Analog	FDR A-Phase Voltage	kV
	Analog	FDR B-Phase Voltage	kV
	Analog	FDR C-Phase Voltage	kV
	Analog	FDR A-Phase Current	A
	Analog	FDR B-Phase Current	A
	Analog	FDR C-Phase Current	A
	Analog	FDR Instantaneous MW	MW
	Analog	FDR Instantaneous MVAR	MVAR

	Analog	FDR Power Factor	PF
	Analog	ESS Plant Auxiliary Power	MW
	Analog	ESS Plant Main Bus Voltage	kV
	Analog	ESS Plant Main Bus Frequency	Hz
	Indication	ESS Plant Aux Breaker Status	Contact (On/Off)
	Indication	ESS Plant Main Breaker Status	Contact (On/Off)
	Analog	ESS Plant Status	Contact (Charging/Injecting/Idle/Off)
	Analog	ESS Plant Available Power	MW
	Analog	ESS Plant Full Charge Energy	MWh

2. [PHASE 2] Please Complete the Operational Information tab of Appendix B- Offer Form.
3. [PHASE 2] Describe seasonal changes, if any, to the Dispatchable Capacity at the delivery point. If applicable, provide an example calculation of any changes in Dispatchable Capacity at the delivery point and transformer losses for both a typical winter and summer day.
4. [PHASE 2] List all Bidder or OEM-defined exclusions, assumptions, or restrictions for system operations. This should include any operating parameters that could impact the facility's ability to respond to the use cases defined in the RFP narrative.

3. Operations & Maintenance Practices

1. Provide a description of the intended day-to-day operational plan for the site. This should include discussion of how the site is to be 24-hour monitoring and include any onsite staffing resources. This should clearly indicate whether the Bidder intends to subcontract any operations and maintenance functions.
2. Please provide a copy of the following documents from the original equipment manufacturers of all key equipment, as attachments:

   2.2 suggested maintenance schedules

   2.3 maintenance manual

3. For the energy storage and power conversion system, provide an estimated average number of off-line maintenance hours per month. Please also detail any maintenance hours expected to be performed while the system is not offline or is derated.

4. [Phase 2] Provide an example Spare Parts list that includes part description, recommended quantity, and any special storage requirements, for parts to be stored on-site. Please also indicate replacement part lead times for any spares not stored on-site.

4. Capacity Maintenance

1. Narrative - Provide a description of the intended plan to maintain the system's guaranteed storage capacity. This should clearly indicate whether the Bidder intends to perform capacity augmentation during the project term. The description should include the following information:
   1.1. Size of augmentation,
   1.2. Proposed augmentation schedule,
   1.3. Duration of expected system downtime during augmentation activities.
2. [Phase 2] Please provide an OEM-supplied degradation curve according to guidance in Appendix C9 Warranty, Performance Guarantees, and Maintenance Services.

5. Decommissioning Plan

1. Narrative - Please provide a Decommissioning Plan to be followed at end-of-life or post-fire event which includes the following details:
   1.1. Decommissioning procedures,
   1.2. Transportation requirements,
   1.3. Recycling or disposal of the system (in accordance with all applicable environmental laws/regulations, rules, and regulatory guidance, including US DOT hazmat regulations).
   1.4. Cost allocations among project parties for decommissioning activities.

6. Safety

1. [Phase 2] Provide the following documentation from the Bidder and associated contractors for the previous three years as attachments.

   1.1 Occupational Safety and Health Administration ("OSHA") 300 Form

   1.2 Signed copies of the OSHA 300A Form

   1.3 Experience Modification Rate, preferably via a letter from the Bidder's insurance company

2. Provide a description of Bidder's experience and awareness of NFPA 855. Please identify the steps, design choices, and schedule Bidder will employ to ensure NFPA 855 compliance.

3. Provide a specific action plan of both automated and manual measures

3.1 to mitigate a thermal runaway event, if applicable.

3.2 to mitigate the loss of SCADA communication

3.3 to provide onsite staffing to help resolve emergent utility or NYISO conditions

4. [Phase 2] Please provide the following information for the proposed facility

4.1 A Health and Safety Plan

4.2 A site-specific Health and Safety Plan

4.3 A site-specific Emergency Response Plan

4.4 A site-specific approach to FDNY's Certificate of Fitness (B-28)[7] requirements.

4.5 Community outreach plan to educate local Governmental Authorities and emergency services including local Fire Departments. Please also include a description of any signage that may be utilized on site.

4.6 Education and outreach activities that have already been done with local Governmental Authorities and emergency services including local Fire Departments.

4.7 Response plans for first responders on the scene (in case of a battery failure).

4.8 Expected hazardous gas emissions and their approximate volumes per MW loss in a fire and smolder failure situation. A specific statement on HF, even if 0 volume is expected, in a failure situation should be made.

4.9 List all anticipated onsite chemical usage, including the product name, quantity to be used, container size/unit, storage considerations, location, the rationale for use, frequency of use, application method, and any other usage or storage considerations.

4.10 Provide a description of how waste generated during operation and maintenance will be managed.

4.11 A physical security plan for adequacy evaluation by the Company. This plan should include proposed physical security measures to secure the plant perimeter, monitor site and equipment, and prevent unauthorized entry.

7. Resiliency Considerations

1. In addition to all federal, state, local, and company design requirements, Bidders are required to satisfy the following resiliency considerations in the design of the Project:

1.1 **Coastal Floodplain Standards**: Developers must identify whether their asset(s) are in the future 1% annual chance floodplain map. If the asset is within the

[7] https://www.nyc.gov/site/fdny/business/all-certifications/cof-b28.page

future floodplain maps, coastal flood protection is required for the asset. Below is the minimum Design Flood Elevation ("DFE") for Bidders.

1.1.1 **Con Edison Coastal Floodplain Design Flood Elevation**: FEMA 1% + 4' Design Flood Elevation (DFE) applies. The exposure map represents the 100-year floodplain with 4(ft) of sea level rise.

1.1.2 **O&R Coastal Floodplain Design Flood Elevation**: HUDSON 1% + 18'' Design Flood Elevation (DFE) applies. The exposure map represents the 100-year floodplain with 18 (in) of sea level rise.

1.2 If the asset is not in the future 1% annual chance floodplain within the determined useful life of the asset, no coastal flood protection required for the asset. The most up-to-date FEMA Flood Insurance Rate Map (FIRM) map is the 2015 National Flood Hazard Layer (NFHL) for the State of New York, which reflects the FIRMs done by each county. https://www.fema.gov/flood-maps/national-flood-hazard-layer.

1.3 Temperature & Precipitation Projections

1.3.1 **Temperature:** Developers must ensure that energy storage systems can operate normally in line with the following projections. The following lower and upper bounds represent minimum parameters:

Variable	Unit	Con Edison	O&R
Days per year with ambient daily temperature at or over 95˚F	Days	1	1
Number of 3-day heat waves with daily ambient temperatures over 90˚F	Heat waves	1	1
Minimum and maximum annual operating temperature	˚F	10 – 104.1	14 – 104.3
Days per year with minimum daily temperature at or under 32˚F	Days	90	58
Days per year with minimum daily temperature at or Under 15˚F	Days	7	4

1.3.2 **Precipitation:** Developers must ensure that energy storage systems can operate normally in line with the following projections. The following lower and upper bounds represent minimum parameters:

Variable	Unit	Con Edison	O&R
Annual 3-day design precipitation	Inches	4.8	5
Annual 5-day design precipitation	Inches	5.5	5.6
95th percentile daily precipitation	Inches	1.6	1.7