

Bulk Energy Storage Scheduling and Dispatch Rights Request for Proposals

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Overview

Central Hudson Gas & Electric (“CHGE”) is seeking to procure dispatch rights contracts for a total of at least 10 MW of bulk energy storage projects for interconnection into the CHGE electric system. As part of the qualitative evaluation of the Bidders’ proposals, CHGE will evaluate the location of proposed projects, which will include a high-level identification and cost estimate for System Upgrade Facilities (“SUF”) to provide proper and safe interconnection into the CHGE electric system.

CHGE is receptive to considering locations anywhere on the CHGE electric system for siting the energy storage facility. Usually, sites located closer to an electric substation may result in lower interconnection costs, even though additional costs and issues may arise when routing for interconnection (e.g., Right of Ways, electric line construction, etc.). Bidders may submit offers to interconnect energy storage facilities that can provide greater than 5 MW of Dispatchable Capacity for a sustained period of at least 2 continuous hours of electric energy generation capability at rated Dispatchable Capacity at any location (longer continuous hours of electric energy generation capability at rated Dispatchable Capacity would be preferred).

The developer must explore potential sites independently. It is suggested that the developer review associated local permitting laws and regulations and ensure State Environmental Quality Review Act (“SEQRA”) requirements can be met. The developer will be responsible for all monetary improvements (point of interconnect) associated with all new equipment as needed, which will be developed and provided to the successful Bidder(s) by CHGE.

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Preferred Locations

CHGE has identified one preferred location within its electric service territory, which is described in the following section. Bidders are not required to submit bid proposals for this one preferred location if there are other locations within CHGE electric service territory that are of more interest to the bidders. CHGE is receptive to considering energy storage system interconnections located anywhere within the CHGE electric system.

Location 1 – Saugerties Substation area (Saugerties, New York)

CHGE Saugerties Substation uses 13.8 kV (nominal) electric distribution circuits to serve the nearby electric customer load. As shown in the Google map below, CHGE Saugerties Substation is located approximately 0.5 miles from the intersection of the New York State Thruway (I-87) and New York State Route 212 in the Town of Saugerties, New York ¹.



¹ CHGE electric substation load and operating voltage information can be found using this public website link "[Central Hudson - Electric System Hourly Load Data App](#)".

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A. Dual Participation Use Case:

1) NYISO Wholesale Market:

- a) Collect Operating Reserve revenue (preferably 10-minute Spinning Reserve).
- b) Collect Energy Arbitrage revenue by maximizing electric energy generation revenue and minimizing Charging Cost.
- c) Collect Electric Capacity revenue.

2) Local CHGE electric system support:

- a) As needed, during the extremely hot summer, very high electric load days in the year (on certain days from June 1 through September 30, typically from noon time to 10 PM [EPT]), the energy storage system may be used to reduce the electric load on CHGE 69 kV system that serves the northwest portion of CHGE electric service territory, which includes CHGE Saugerties Substation.

For example, for a 5.5 MW/22 MWH/4-hour Storage Duration energy storage system being used on a very hot summer day for local CHGE electric system support, this energy storage system may be operated to discharge (generate) its 22 MWH of energy storage capability over a 10-hour period at less than its 5.5 MW Dispatchable Capacity generation level, instead of over a 4-hour period at its 5.5 MW Dispatchable Capacity generation level for NYISO Wholesale market use.

B. Additional Specifications:

The following energy storage system specifications are in addition to the specifications mentioned in the rest of CHGE Bulk Energy Storage Request for Proposal ("RFP") documents.

	Additional Specifications
Minimum Dispatchable Capacity MW Requirement	5.5 MW
Maximum Dispatchable Capacity MW Requirement	12.0 MW
Minimum Storage Duration (continuous hours of electric energy generation capability at rated Dispatchable Capacity)	4 hours
Maximum Storage Duration	no upper limit
Minimum MWH Storage Requirement	22 MWH
Maximum MWH Storage Requirement	no upper limit
Interconnection Voltage	13.8 kV (nominal)

Because existing CHGE 13.8 kV (nominal) electric distribution circuits are typically designed to serve up to a total of 6 MVA of electric customer load during normal operating conditions, bidders should consider including the cost of having a dedicated 13.8 kV (nominal) electric circuit constructed to interconnect their proposed energy storage system from their site location to CHGE Saugerties Substation instead of assuming that such a large MW size (at least 5.5 MW) energy storage system could be interconnected to the existing CHGE 13.8 kV (nominal) electric distribution circuits in the Saugerties Substation area.

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The minimum Dispatchable Capacity requirement of greater than 5.0 MW (e.g., 5.1 MW) is applicable across the entire CHGE electric system for this RFP, including the Saugerties Substation area. The suggested minimum Dispatchable Capacity requirement of 5.5 MW is specific to the Preferred Location to interconnect directly to the 13.8 kV bus at Saugerties Substation. There is no maximum Dispatchable Capacity requirement for an energy storage system submitted in response to this RFP. The 12 MW maximum Dispatchable Capacity requirement for the Preferred Location to interconnect directly to the 13.8 kV bus at Saugerties Substation is to reduce the likelihood of expensive substation upgrades to be paid for by the developer based on the present Saugerties Substation infrastructure.