ISO NEW ENGLAND PLANNING PROCEDURE NO. 12

DATA COLLECTION FOR DISTRIBUTED ENERGY RESOURCES

EFFECTIVE DATE: August 14, 2024

REFERENCES: ISO New England Transmission, Markets and Services Tariff (the "Tariff")

Contents

1.0 Purpose

This document outlines a data collection process by which Distribution Providers (which, for the purposes of this Planning Procedure, are defined as the entities to which DERs connect) and/or Transmission Owners submit data on installed Distributed Energy Resources (DER) to ISO New England. For the purposes of this Planning Procedure, DER refers any generator or energy storage facility located on the distribution system, any subsystem thereof, or behind a customer meter that is capable of providing energy injection, energy withdrawal, regulation or demand reduction.[1] Examples of these DER facilities are: solar photovoltaic generation (either behind a retail customer's meter or as a stand-alone facility connecting directly to the distribution system), wind, hydroelectric, combined heat and power, fuel cells, battery energy storage systems, or hybrid facilities containing multiple technologies at a single location. The boundary of a DER facility is considered the point of common coupling between the facility's equipment and the Distribution Provider.

In light of the large number and cumulative capacity of these resources on New England's power system, ISO New England collects basic data on these facilities (size, physical location, electrical location, type, in-service date, and other characteristics) for use in many applications. This data is used as an input to both long- and short-term load forecasts, power system modeling, transmission planning and transmission service studies, operational studies, and the Energy Management System, among other uses. Availability of this data leads to more accuracy in planning and operating the transmission system, as well as more efficient outcomes of these processes.

2.0 Applicable Entities

This Planning Procedure is applicable to the following types of entities:

- **ISO New England:** As the Planning Coordinator and Reliability Coordinator for the New England area, ISO New England leads the process for DER data collection. ISO New England distributes the initial request three times per year, screens submissions for conformance with the data format, and sends inquiries to Distribution Providers and Transmission Owners as necessary to resolve any missing or conflicting data.
- **Distribution Providers:**[2] As the entities to which DERs connect, Distribution Providers are responsible for providing facility-level data to ISO New England for all DERs connected to their system.
- **Transmission Owners:** Transmission Owners are responsible for providing data used to translate feeders in the Distribution Providers' data into locations identified in various frameworks used by ISO

[1] Generation or storage facilities that are used solely to provide backup power when a customer is disconnected from the distribution system, and do not inject or discharge power when synchronized with the distribution system, are not considered DER for the purposes of this Planning Procedure. Data does not need to be submitted to ISO-NE for these facilities.

[2] For the purposes of this planning procedure, a "Distribution Provider" is defined as operating the "wires" between the transmission system and the end-use customer. The term is not defined by a specific voltage, but rather as performing the distribution function at any voltage. Note that while this definition is similar to NERC's definition of the same term (*see* NERC Glossary of Terms, https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf), the definition of Distribution Provider for the purposes of this Planning Procedure is not dependent on the Distribution Provider's peak load served, in contrast to NERC's use of a minimum size threshold for NERC registration purposes.

New England, including PSS®E bus numbers and substation identifiers used in the Energy Management System and market applications.

Upon mutual agreement between a Distribution Provider and a Transmission Owner, either party may submit the data required in this procedure on behalf of the other.

3.0 Data Collection Timeline

The collection of DER data shall occur three times per year, according to the following approximate dates. Dates may be adjusted as needed to avoid conflicts such as weekends and holidays. Data shall reflect all DER connected to the Distribution Provider's system on the date listed in the second row of the table below, as well as any proposed facilities in the Distribution Provider's interconnection queue or equivalent list of interconnection requests on that date.

Procedure Step	December Data Collection	April Data Collection	August Data Collection
ISO-NE distributes data request to Distribution Providers and Transmission Owners	December 15	April 15	August 15
Submit all DER interconnected and proposed as of:	December 31	April 30	August 31
Distribution Providers and Transmission Owners respond to ISO-NE data request	January 21	May 21	September 21

The first data collection under this procedure will occur in January 2025, and Distribution Providers and Transmission Owners shall submit data by the January 21 due date. As part of that collection, ISO New England shall work with data submitters after this date to identify any data quality and data formatting issues, and these issues may be remedied after the January 21 date. For all subsequent data collections under this procedure, Distribution Providers and Transmission Owners shall submit data in the proper format by the dates listed in last row of the table above.

4.0 Data Collection Process

4.1 Initial Request from ISO New England

ISO New England shall request data from Distribution Providers and Transmission Owners according to the schedule above. Along with the issuance of the data request, ISO New England shall provide a copy of the most recent version of the feeder information table in Appendix B to this Planning Procedure to each Transmission Owner, as a starting point for their submission(s).

4.2 Distribution Provider Submissions

Each Distribution Provider shall submit the best available[3] data for each DER facility connected to its system. This data shall be submitted in the format given in Appendix A to this Planning Procedure. Data shall be submitted for existing DER as well as any proposed facilities in the Distribution Provider's interconnection queue or equivalent list of interconnection requests. When a DER has been disconnected from the distribution system or retired, the Distribution Provider shall include the facility in the following data submission, with a status of "Retired." Inclusion of retired DERs in subsequent submissions is at the discretion of the Distribution Provider.

All DERs shall be included in this data submission, regardless of size, type, or other characteristics. Facilities that are already modeled generator assets in ISO-NE systems need not be included, but may be included at the discretion of the Distribution Provider. These modeled generator assets are explicitly modeled in ISO New England's Energy Management System and market systems. ISO New England shall account for any overlap between DER data submissions and modeled generators when processing Distribution Providers' data submissions.

4.3 Transmission Owner Submissions

Each Transmission Owner shall submit data describing the electrical location of each feeder listed in the Distribution Provider's submission, according to the format given in Appendix B of this Planning Procedure.

4.4 ISO New England Receipt and Validation of Data

Following the submission of data from each Distribution Provider and Transmission Owner, ISO New England shall review the data, and return any data determined to be invalid, conflicting, or unclear to the appropriate party for review and revision if necessary. In addition, any new feeders listed in the Distribution Provider's data shall be submitted to the Transmission Owner, so that data can be provided to ISO-NE for the new feeder according to Appendix B of this Planning Procedure.

5.0 Revision History

Rev. 0 Approved: RC – 7/16/24; NPC – 8/1/24; ISO-NE – 8/14/24

[3] The data request as part of this procedure may be compiled from Distribution Providers' interconnection queues or similar records, and it is understood that some details (such as in-service dates, maximum DC generation for solar facilities, or installed energy capacity for storage facilities) may change as a project is developed and constructed. ISO New England's expectation is that distribution providers will provide the most up-to-date information available to them, and there is no requirement for distribution providers to conduct field verification of these quantities, or to retroactively provide unavailable data for previously interconnected facilities.

6.0 Appendix A: Submission Format for Facility Data

Appendix A is provided in a separate Excel workbook. Instructions for data submission are contained in that workbook.

7.0 Appendix B: Submission Format for Feeder Data

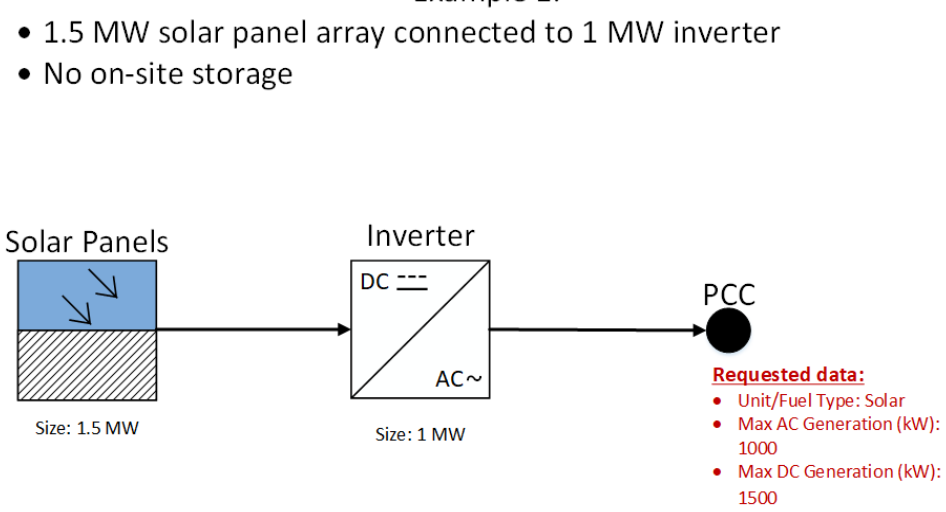
Appendix B is provided in a separate Excel workbook. Instructions for data submission are contained in that workbook.

8.0 Appendix C: Sample Data Submissions for Various Unit Configurations

This Appendix demonstrates the expected data submission format for various configurations of generation and storage resources that may be combined into a single facility.

Example 1: 1.5 MW photovoltaic resource connected to 1 MW inverter, no on-site storage

- Unit/Fuel Type: Solar
- Max AC generation (kW): 1,000
- Max DC generation (kW): 1,500
- Facility includes energy storage?: N

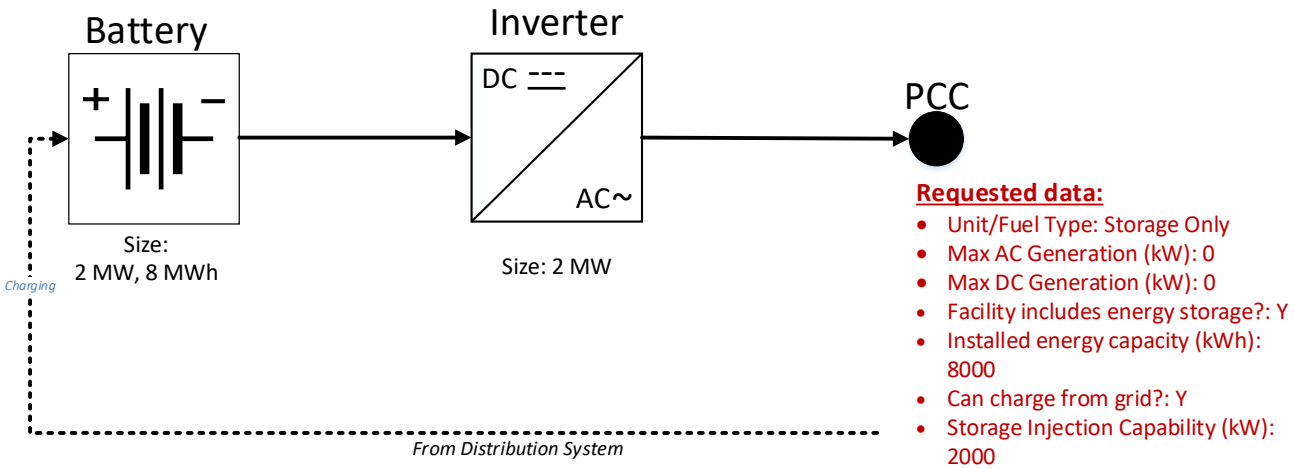


Example 2: 2 MW, 8 MWh battery connected to 2 MW inverter, no other on-site generation

- Unit/Fuel Type: Storage Only
- Max AC generation (kW): 0
- Max DC generation (kW): 0
- Facility includes energy storage?: Y
- Installed energy capacity (kWh): 8,000
- Can charge from grid?: Y
- Storage Injection Capability (kW): 2,000
- Facility Import Limit (kW): 2,000
- Facility Export Limit (kW): 2,000

Example 2:

- 2 MW, 8 MWh battery connected to 2 MW inverter
- No other on-site generation – battery charges from distribution system



Requested data:

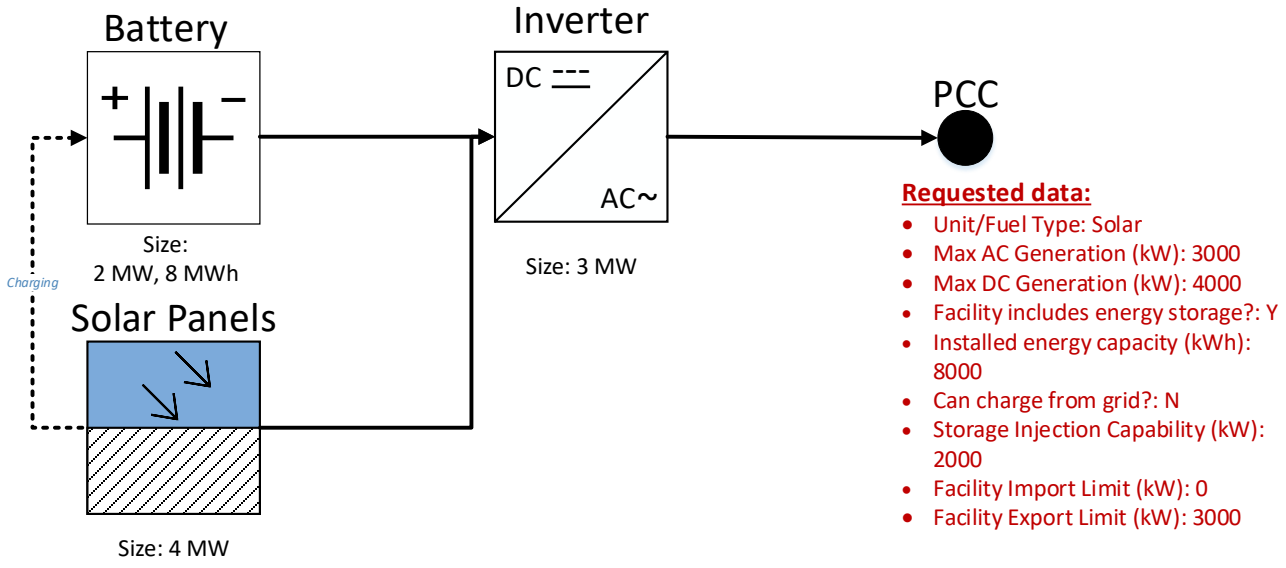
- Unit/Fuel Type: Storage Only
- Max AC Generation (kW): 0
- Max DC Generation (kW): 0
- Facility includes energy storage?: Y
- Installed energy capacity (kWh): 8000
- Can charge from grid?: Y
- Storage Injection Capability (kW): 2000
- Facility Import Limit (kW): 2000
- Facility Export Limit (kW): 2000

Example 3: 4 MW photovoltaic resource and 2 MW, 8 MWh battery sharing a 3 MW inverter. Facility only injects power into the distribution system, and batteries are charged only from on-site solar generation.

- Unit/Fuel Type: Solar
- Max AC generation (kW): 3,000
- Max DC generation (kW): 4,000
- Facility includes energy storage?: Y
- Installed energy capacity (kWh): 8,000
- DC/AC coupled: DC
- Can charge from grid?: N
- Storage Injection Capability (kW): 2,000
- Facility Import Limit (kW): 0
- Facility Export Limit (kW): 3,000

Example 3:

- 4 MW solar panel and 2 MW, 8 MWh battery sharing a 3 MW inverter
- Facility only *injects* power into the distribution system, and batteries are charged only from on-site solar generation



Example 4: 4 MW photovoltaic resource connected to a 3 MW inverter; co-located with a 2 MW, 8 MWh battery connected to a 2 MW inverter. Batteries are permitted to charge from either on-site generation or from the distribution system. Due to distribution system limitations, the facility is prohibited from consuming more than 1.5 MW of power from the distribution system, but can inject its full capability into the distribution system.

- Unit/Fuel Type: Solar
- Max AC generation (kW): 3,000
- Max DC generation (kW): 4,000
- Facility includes energy storage?: Y
- Installed energy capacity (kWh): 8,000
- DC/AC coupled: AC
- Can charge from grid?: Y
- Storage Injection Capability (kW): 2,000
- Facility Import Limit (kW): 1,500
- Facility Export Limit (kW): 5,000

Example 4:

- 4 MW solar panel connected to a 3 MW inverter; co-located with a 2 MW, 8 MWh battery connected to a 2 MW inverter.
- Batteries allowed to charge from either on-site generation or from the distribution system.
- Due to distribution system limitations, facility prohibited from consuming >1.5 MW of power from the distribution system, but can inject its full capability into the distribution system.