



Michael J. Sheehan, Esq.
Director, Legal Services
Phone: 603-724-2135
Email: Michael.Sheehan@libertyutilities.com

February 1, 2023

Via Electronic Mail Only

New Hampshire Department of Energy
21 South Fruit Street, Suite 10
Concord, New Hampshire 03301-2429

**Re: IP 2022-001; Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty
Investigative Proceeding Relative to Customer-Generator Interconnection**

To Whom It May Concern:

On behalf of Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty, attached please find Liberty's responses to the Department of Energy's Request for Comments – Set 1.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Sheehan', written in a cursive style.

Michael J. Sheehan

Enclosure

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty

IP 2022-001

Investigative Proceeding Relative to Customer-Generator Interconnection

NH Department of Energy Request for Comments – Set 1

Date Received: 12/5/23
Request No. RFC 1-1

Date of Response: 2/1/23
Respondent: Michael Cooper

REQUEST:

Please examine and make specific recommendations regarding the following:

How to create transparent, consistent, and reasonable engineering standards for interconnection, with special consideration given to established best practices used by other states as set forth in the Interstate Renewable Energy Council's (IREC) 2019 Model Interconnection Procedures.

- a. Please identify the applicable existing, and pending, interconnection codes, statutes, standards, and procedures that apply to the interconnection kW thresholds for various Distributed Energy Resource (DER) technologies (Batten', Wind, Solar, etc.). Include Federal, State, and Local requirements.
- b. Please provide feedback on the IREC 2019 Model Interconnection Procedures. Include responses to the following questions:
 - i. Have any entities adopted this model?
 - ii. Is there interest in adopting this model in the future?
 - iii. If there is interest, are there any procedures that need to be addressed to respond to directives or goals of SB 262?
 - iv. Are there other preferred model interconnection procedures and, if so, what are they?

RESPONSE:

- a. Liberty follows the Interconnection Standards for Inverters sized up to 100kVA per each distribution company's filed tariff. In addition, for technical requirements, *IEEE 1547: Standard for Interconnection and Interoperability of Distributed Energy Resources with Associated Electric Power Systems Interfaces* is referenced by most states and utilities. UL 1741, UL 1741 SA, and UL 1741 SB testing procedures are also used to certify DER compliance with IEEE 1547. Liberty is unaware of any entity that has adopted this model.

b. Regarding IREC 2019 Model Interconnection Procedures:

- i. Liberty is not aware of any states that have implemented the IREC 2019 Model Interconnection Procedures.
- ii. Liberty is open to investigating the IREC 2019 Interconnection model and other state processes and best practices in creating a New Hampshire state-wide process.
- iii. Liberty is open to investigating SB 262.
- iv. Liberty has started to meet to discuss creating a state-wide standard interconnection process. After creating a pre-application report and procedure, the utilities worked with Clean Energy New Hampshire to adopt a consistent process and report. Liberty recommends allowing the NH utilities to continue to meet together to create a draft standard procedure before working with Clean Energy NH and other stakeholders.

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty

IP 2022-001

Investigative Proceeding Relative to Customer-Generator Interconnection

NH Department of Energy Request for Comments – Set 1

Date Received: 12/5/23
Request No. RFC 1-2

Date of Response: 2/1/23
Respondent: Michael Cooper

REQUEST:

Please examine and make specific recommendations regarding the following:

How to ensure timely, consistent, and reasonably-priced interconnection studies.

- a. Please identify issues, concerns, and impediments to completing timely interconnection evaluations/studies.
- b. To the extent possible, please identify the issues and kW thresholds that impact the level of effort, and therefore the schedule and cost of completing interconnection evaluations/studies.

RESPONSE:

- a. The number of DER interconnection applications received by Liberty in 2021 increased by 250% in 2022, which proportionally increases the time spent conducting evaluations. Also, as more DER is interconnected, the evaluations become more complicated. Some interconnections may involve a review from our transmission provider, which may extend this evaluation process.
- b. Currently there is a New Hampshire Standard for interconnection of inverter-based DER 100kVA and smaller. For inverter-based systems 10kW or smaller, a screening process is implemented that performs the needed analysis. This screening process requires approximately 20 business days (from the date the application is received) to complete and the installation is approved, or the required system modifications identified. If the application does not pass the stipulated screens (or is larger than 10 kW), a supplemental study is required.

Currently, Liberty charges the following costs for the supplemental study of inverter-based DER 100 kW or smaller. The supplemental study is performed within 40 business days after the application is deemed complete.

Project Size (Max AC Rating of Inverters)	Supplemental Review Fee
>10 kW to 30 kW	\$125
>30 kW to 50 kW	\$500
>50 kW to 100 kW	\$1000

For systems larger than 100 kW, the estimated study cost is generated on a case-by-case basis. Most applications 300 kW or larger require a System Impact Study. The System Impact Study is normally completed within 60 business days provided the customer has submitted all documentation needed for the Impact study to be completed.

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty

IP 2022-001

Investigative Proceeding Relative to Customer-Generator Interconnection

NH Department of Energy Request for Comments – Set 1

Date Received: 12/5/23
Request No. RFC 1-3

Date of Response: 2/1/23
Respondent: Michael Cooper

REQUEST:

Please examine and make specific recommendations regarding the following:

How to ensure just and reasonable pricing of grid modernization upgrades mandated by the distribution utility for interconnection of distributed energy resources, including transparency and consistency in pricing guidelines and appropriate cost-sharing among parties benefitting from such upgrades.

- a. Please identify issues and concerns, if any, regarding the transparency of interconnection cost estimates and schedules.
- b. Please identify options for appropriate cost-sharing as well as issues and concerns.

RESPONSE:

- a. Liberty is not aware of any issue regarding the transparency of interconnection cost estimates. There is an interconnection agreement regardless of whether or not system modifications are required. When an application is analyzed, and it is determined that a system modification is required, there is a contribution in aid of construction (CIAC) agreement provided to the applicant. The cost estimate generated is specific to the required system modification. The interconnection agreement details the required system modifications and the estimated cost with an estimated schedule.
- b. Liberty is not aware of any cost-sharing options that have been fully implemented but would be willing to discuss with a working group to develop a process.

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty

IP 2022-001

Investigative Proceeding Relative to Customer-Generator Interconnection

NH Department of Energy Request for Comments – Set 1

Date Received: 12/5/23
Request No. RFC 1-4

Date of Response: 2/1/23
Respondent: Michael Cooper

REQUEST:

Please examine and make specific recommendations regarding the following:

How to ensure distribution system upgrades paid for by customer-generators are not claimed as part of the utility rate-base.

- a. Identify methods for ensuring transparency of how system upgrade costs are applied.

RESPONSE:

- a. Liberty ensures that distribution system upgrades paid for by the customer-generators are not claimed as part of the utility rate base by applying the CIAC received directly to the cost of the construction, reducing the cost of plant units installed.

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty

IP 2022-001

Investigative Proceeding Relative to Customer-Generator Interconnection

NH Department of Energy Request for Comments – Set 1

Date Received: 12/5/23
Request No. RFC 1-5

Date of Response: 2/1/23
Respondent: Michael Cooper

REQUEST:

Please examine and make specific recommendations regarding the following:

Whether it is appropriate to establish an “Interconnection Working Group” convened at the Department to regularly assess if interconnection standards need modification.

- a. Identify potential benefits, issues, and concerns on the concept of an “Interconnection Working Group.”

RESPONSE:

- a. Liberty has met with other New Hampshire electric distribution companies (EDC) in an effort to improve the interconnection process. We are in support of the formation of an “Interconnections Working Group” to meet regularly to create interconnection standards for the state of New Hampshire. We recommend that the NH utilities be asked to continue to meet to create a proposed standard that can be presented to the Interconnections Working Group as a proposed baseline for comment.