

The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 19-55-E

February 9, 2022

Inquiry by the Department of Public Utilities on its own Motion into Distributed Generation Interconnection.

ORDER ESTABSHING THE ENERGY STORAGE INERCONNECTION REVIEW GROUP

I. INTRODUCTION & PROCEDURAL HISTORY

On May 22, 2019, the Department of Public Utilities (“Department”) opened an investigation to review the current standards and procedures by which distributed generation (“DG”) facilities are interconnected to the electric power system (“EPS”) under the Standards for Interconnection of Distributed Generation tariff (“DG Interconnection Tariff”). Distributed Generation Interconnection, D.P.U. 19-55, Vote and Order Opening Inquiry (2019). The Department identified the interconnection of energy storage systems (“ESS”) as a topic for this inquiry. D.P.U. 19-55, at 4. On July 18, 2019, the Department held a technical conference and facilitated ESS breakout sessions that included the following establishing (i) standards for reviewing applications for ESS, and (ii) procedures for adding ESS to existing applications (D.P.U. 19-55 Technical Conference, Power Point Presentation at 12, 13 (July 18, 2019)).¹ On August 19, 2019, the Department invited comments on (1) a proposed uniform questionnaire developed by the Technical Standards Review Group (“TSRG”)² to be applied to all interconnection applications and (2) a tiered review system for

¹ On July 22, 2019, the Department circulated to the distribution list in D.P.U. 19-55 the following documents from the July 18, 2019 Technical Conference: (a) opening statement of National Grid regarding cluster study; (b) Power Point Presentation; and (c) notes from the breakout sessions.

² On January 23, 2012, the Department convened a working group and tasked it with (1) determining what issues should be resolved regarding the current DG interconnection standards and application procedure to ensure an efficient and effective interconnection process and (2) deliberating with the goal, to the extent possible, of reaching consensus on a resolution of those issues for Department review and approval (“DG Working Group”). Distributed Generation Interconnection, D.P.U. 11-75-A at 4, 7 (2012). Later, the Department approved the DG Working Group’s formation of the TSRG. D.P.U. 11-75-E at 2. 29-30 (2013). The TSRG is

existing interconnection applications that seek to add ESS (Hearing Officer Memorandum, August 19, 2019).³ Stakeholders provided recommended revisions to the proposed uniform questionnaire in written comments through October 29, 2019.

The Department continued its consideration of the management of ESS at the November 21, 2019 technical conference where a proposed stakeholder process was discussed to develop consensus DG Interconnection Tariff revisions related to interconnection of ESS (“First Collaborative Process”). On December 3, 2019, the Department approved the procedural schedule that was jointly proposed by stakeholders representing the Department of Energy Resources (“DOER”), the Attorney General of the Commonwealth (“Attorney General”), the electric distribution companies (singularly “Distribution Company”, collectively “Distribution Companies”),⁴ the Interstate Renewable Energy Council (“IREC”),

composed of seven members: (i) one representative from each of the four Distribution Companies; and (ii) three non-utility representatives who are engineers with electric supply systems experience with DG interconnection experience. DG Working Group Final Report, “Proposed Changes to Standards For Interconnecting Distributed Generation in Massachusetts”, at 30 (D.P.U. 11-75, September 14, 2012). The key function of the TSRG is to develop and propose updates and modifications to the Technical Standards Manual, which common standards for DG interconnection. DG Working Group Final Report, “Proposed Changes to Standards For Interconnecting Distributed Generation in Massachusetts”, at 30 (D.P.U. 11-75, September 14, 2012).

³ The questionnaire and the tiered review system were developed at breakout sessions during the July 18, 2019, Technical Conference.

⁴ The Distribution Companies are Fitchburg Gas and Electric Light Company d/b/a Unitil, Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid (“National Grid”), and NSTAR Electric Company d/b/a Eversource Energy (“Eversource”).

DG developers, and the Northeast Clean Energy Council (“NECEC”) (collectively “Joint Stakeholders”). On December 3, 2019, the Department also issued a modified uniform ESS Questionnaire⁵ based on the feedback the Department received.⁶ The Department directed the Distribution Companies to include the ESS Questionnaire with all applications for interconnection that include ESS, including those applications that were pending (D.P.U. 19-55, Hearing Officer Memorandum, December 3, 2019).

On February 26, 2020, at the conclusion of the First Collaborative Process, the Joint Stakeholders filed proposed consensus revisions to the DG Interconnection Tariff to address the interconnection of ESS. On February 28, 2020, the Department issued interim guidance related to ESS directing the implementation of the ESS Decision Tree (D.P.U. 19-55 Hearing Officer Memorandum, February 28, 2020).⁷ On March 11, 2020, the Distribution

⁵ The ESS Questionnaire gathers the following categories of information from ESS projects as part of the application process for interconnecting to a Distribution Company’s EPS: design documentation, system configuration, system technical details, inverter technical details, regulatory policy source, intended use, operating narrative, and proposed system operating parameters.

⁶ The ESS Questionnaire is a modified version of the proposed uniform questionnaire that had been developed by the TSRG, which incorporated stakeholder recommendations provided at the July 18, 2019, technical conference and through written comments. The Distribution Companies were given the discretion to set a deadline for pending interconnection applications to submit the ESS Questionnaire of no sooner than 30 days from the date of the memorandum, *i.e.*, January 2, 2020. The ESS Questionnaire interim guidance went into effect on December 3, 2019, with the directive that it remain effective until further resolution through this investigation, or as otherwise directed by the Department (D.P.U. 19-55 Hearing Officer Memorandum, December 3, 2019).

⁷ The ESS Decision Tree is used to process interconnection applications that seek to add ESS after the initial application for the paired DG facility has been submitted. The

Companies, the Joint Energy Storage Stakeholders (“JESS”),⁸ and DOER filed comments on non-consensus revisions to the DG Interconnection Tariff concerning the interconnection of ESS.

On May 14, 2020, in response to stakeholder comments, the Department issued a proposed stakeholder collaborative framework to address discrete issues related to ESS to be identified,⁹ and invited interested stakeholders to submit comments no later than May 29, 2020. On June 26, 2020, the Department announced the finalized collaboration framework, with DOER as facilitator, for revisions to the DG Interconnection Tariff concerning ESS and the standard process for interconnection (“Second Collaborative Process”). Participants in the Second Collaborative Process exchanged proposals and conducted video conference calls

ESS Decision Tree identifies the following: type of storage coupling, type of change requested, how to request a change, implications for a change (e.g., whether study required, effect on interconnection queue position, possible power export restrictions), and associated timelines. The ESS Decision Tree is a modified version of the decision tree proposed by the Department in its December 26, 2019, Hearing Officer Memorandum and incorporates stakeholder recommendations provided through comments received in writing and provided during the February 20, 2020, conference call. The interim guidance is in effect until further resolution is found through this investigation, or as otherwise directed by the Department.

⁸ JESS is composed of IREC, NECEC, Ameresco, Avid Solar, BlueWave Solar, Borrego Solar Systems, Clean Energy Collective, Cypress Creek Renewables, Enel X North America, ENGIE North America, Heartwood Group, Integrated Storage Technologies, Nexamp, Pope Energy, Solar Design Associates, Stem, SunPower, SunRaise Investments, Sunrun, Syncarpha Capital, and Zero-Point Development (JESS March 11, 2020 Comments at 1).

⁹ The Department expected that, at a minimum, the following topics would be appropriate for collaboration: project modifications, operational controls and power control system, and screening (beyond screens for ESS) (D.P.U. 19-55 Hearing Officer Memorandum at 5, May 14, 2020)

on numerous occasions from July 2020 to October 2020 to discuss possible revisions to the DG Interconnection Tariff. The Second Collaborative Process culminated in the submission of a consensus package of proposed revisions to the DG Interconnection Tariff concerning the interconnection of ESS on October 13, 2020. On October 27, 2020, the Distribution Companies, DOER, NECEC, and Zero-Point Development, Inc. filed comments on additional proposed, but non-consensus revisions to the DG Interconnection Tariff concerning the interconnection of ESS.

The Department is reviewing and deliberating the issues presented regarding the interconnection of ESS, and we intend to issue an Order in the near term. As the Department's internal process continues, we recognize that it is important to maintain consideration of ESS interconnection issues. Furthermore, the Department is aware of new and developing ESS interconnection issues. Based on the Department's positive experience with the use of working groups and other collaborative processes in assisting the Department in our development of various policies, we find it appropriate to establish a working group to undertake a coordinated examination of ESS interconnection issues to inform the Department in the development of appropriate policies. In the following section we discuss the establishment of the Energy Storage Interconnection Review Group.

II. ENERGY STORAGE INTERCONNECTION REVIEW GROUP

A. Background on Working Groups

On September 28, 2011, the Department opened an investigation into the interconnection of DG in Massachusetts. Interconnection of Distributed Generation,

D.P.U. 11-75 (2011). That investigation reviewed the existing DG interconnection standards and application procedures to determine what changes should be implemented to ensure an efficient and effective interconnection process. D.P.U. 11-75, at 2-3. On January 23, 2012, the Department convened a DG working group (“Working Group”). Order Establishing Distributed Generation Working Group, D.P.U. 11-75-A at 4, 7. On September 14, 2012, the Working Group submitted its final report to the Department, “Proposed Changes to the Uniform Standards for Interconnecting Distributed Generation in Massachusetts” (“Report”). The Report contained many recommendations for changes to the DG Interconnection Tariff and additional non-tariff recommendations, including creation of a technical standards manual and the TSRG. Order On Distributed Generation Working Group’s Redlined Tariff and Non-Tariff Recommendations, D.P.U. 11-75-E (2013); Report at 30.

Since its establishment, the TSRG has created the Technical Standards Manual and has met regularly to discuss common and Distribution Company-specific DG interconnection technical standards. The TSRG has provided a forum for non-Distribution Company members to provide input on DG interconnection technical standards, has been successful in addressing numerous technical issues related to DG interconnection, and has assisted the Department with investigations when requested.

In this docket, the Department directed and facilitated a number of collaborative processes on topics such as affected system operator studies, ESS, and metering. Similarly in D.P.U. 17-164, the Department directed a collaborative process concerning the potential addition of a group study provision in the DG Interconnection Tariff. All of these

collaborative processes have resulted in productive discussions amongst stakeholders and significantly informed Department investigations.

B. Energy Storage Interconnection Review Group

ESS are expected to play an increasingly important role in the evolution of the power grid particularly to provide power on demand and optimize grid performance as the Commonwealth continues to increase its use of intermittent renewable energy resources. Energy storage, by itself and in combination with DG, is an evolving and unique technology that has been identified as a key functionality of the smart grid. The Department identifies development of effective interconnection standards and operational requirements as necessary for the maximization of the value of ESS for the power grid, subject to the need for the safe, reliable, secure, affordable, and resilient operation of the EPS. The Department finds that it would benefit from the input of a broad set of stakeholders to address, in a coordinated manner, ESS interconnection and interface operational requirements.

During the past few years, the Department has directed several collaborative processes to address specific topics under investigation in D.P.U. 19-55. Through these processes and stakeholder comments in this docket, we have received requests for continued collaborative processes and consideration of a working group process to address implementation of the evolving ESS interconnection process (Attorney General May 29, 2020 Comments at 1; Distribution Companies May 29, 2020 Comments at 2; DOER May 28, 2020 Comments at 1; IREC and NECEC May 29, 2020 Comments at 1-4; Attorney General March 11, 2020

Comments at 2; Distribution Companies March 11, 2020 Comments at 4; DOER March 11, 2020 Comments at 3; JESS March 11, 2020 Comments at 9-10, 28, 30).

The Department finds that the TSRG has been a successful and useful model for the Commonwealth and the DG interconnection process. We also agree with stakeholders that it may be beneficial to have an established forum and process in Massachusetts, outside of a Department investigation, to address the unique issues related to implementation of the ESS interconnection process.¹⁰ Therefore, in recognition of the importance of the emerging issues surrounding the interconnection of ESS, we direct the Department's DG and Clean Energy Ombudsperson ("Ombudsperson") to facilitate a stakeholder collaboration to establish an energy storage interconnection review group ("ESIRG"). The ESIRG shall work in parallel and in coordination with the TSRG.¹¹

The Ombudsperson shall work with interested stakeholders¹² to consider an operating construct for the ESIRG, including but not limited to, leadership, membership, interaction with the TSRG, development of a scoping document identifying issues for discussion, and a process for submittal of recommendations to the Department. Within 45 days of the date of

¹⁰ The Department is continuing to examine broader DG interconnection issues through this docket, and may if it is deemed appropriate, establish additional working groups.

¹¹ The ESIRG will be limited in scope to implementation aspects of the interconnection of ESS and coordinate with the TSRG with regards to all related technical standards.

¹² The Ombudsperson shall offer participation in the ESIRG to the EDCs, the DOER, the Attorney General, entities on the Department's DG Stakeholder Electronic Distribution List, and other entities that the Ombudsperson considers would make a beneficial contribution to the ESIRG.

this Order, the Ombudsperson shall submit a report to the Commission on the progress for implementing the ESIRG.

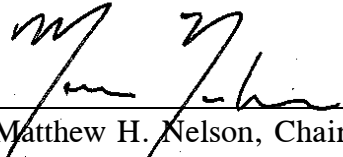
III. ORDER


Accordingly, after due consideration, it is

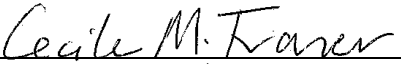
ORDERED: That an Energy Storage Interconnection Review Group be and hereby is established as outlined herein; and it is

FURTHER ORDERED: That the Distributed Generation and Clean Energy Ombudsperson submit a report to the Commission on the progress for implementing the Energy Storage Interconnection Review Group within 45 days of the date of this Order.

By Order of the Department,


Matthew H. Nelson, Chair


Robert E. Hayden, Commissioner


Cecile M. Fraser, Commissioner