



The Commonwealth of Massachusetts

DEPARTMENT OF PUBLIC UTILITIES

D.P.U. 19-55-C

August 6, 2020

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

ORDER ON AFFECTED SYSTEM OPERATOR STUDIES

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I. BACKGROUND AND RELEVANT PROCEDURAL HISTORY

A customer proposing to interconnect a distributed generation (“DG”) facility to the electric power system (“EPS”) of an electric distribution company (“Distribution Company”) subject to the jurisdiction of the Department of Public Utilities (“Department”)¹ must follow the interconnection process pursuant to that Distribution Company’s Standards for Interconnection of Distributed Generation tariff (“DG Interconnection Tariff”).² However, when the interconnection of a DG facility greater than one megawatt (“MW”) to a Distribution Company’s EPS has the potential to adversely affect a neighboring EPS, a study of potential adverse impacts on that system (i.e., an affected system) is required by ISO New England Inc (“ISO-NE”).³

¹ The jurisdictional Distribution Companies are Fitchburg Gas and Electric Light Company d/b/a Unitil (“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”).

² The following are each Distribution Company’s currently effective DG Interconnection Tariff: Unitil M.D.P.U. No. 269; National Grid M.D.P.U. No. 1320; and Eversource M.D.P.U. No. 55. Each Distribution Company’s DG Interconnection Tariff contains the same terms. In this Order, we refer to the DG Interconnection Tariff.

³ ISO-NE is responsible for managing the bulk generation and transmission systems in New England subject to approval by the Federal Energy Regulatory Commission. DG Interconnection Tariff, § 1.2 (Definitions). ISO-NE requires such a study for facilities larger than five MW. ISO-NE may require a study for facilities that are one MW to five MW in size, based on its determination of whether the interconnections will have a cumulative impact on facilities used for the provision of regional transmission service. See ISO-NE Transmission Operating Agreement (“TOA”), Art. 3.03(b), https://www.iso-ne.com/static-assets/documents/regulatory/toa/v1_er07_1289_000_toa_composite.pdf; ISO-NE Transmission, Markets, and Services Tariff (“ISO-NE Tariff”), § I.3.9.

The DG Interconnection Tariff includes provisions that address the potential for DG facilities to be subject to such studies. Currently, the DG Interconnection Tariff defines an “Affected System” as “any neighboring EPS not under the control of the Company (i.e., a municipal electric light company or other regulated utility).” DG Interconnection Tariff, § 1.2. Affected System operators (“ASOs”) include ISO-NE as the independent operator of the regional bulk transmission system. In addition, the Standard Process for interconnection includes the following provision regarding ASO studies:

Where there are other potentially Affected Systems, and no single Party is in position to prepare an Impact Study covering all potentially Affected Systems, the Company will coordinate but may not be responsible for the timing of any studies required to determine the impact of the interconnection request on other potentially Affected Systems. The Interconnecting Customer will be directly responsible to the potentially Affected System operators for all costs of any additional studies required to evaluate the impact of the interconnection on the potentially Affected Systems. To the extent any studies or System Modifications are required, all associated agreements will be between the Affected System operator and the Interconnecting Customer. The Time Frames in Tables 1 through 5 will be affected if ISO-NE determines that a system Impact Study is required. This will occur if the Interconnecting Customer’s Facility is, or group of facilities are, equal to or greater than 5 megawatts (“MW”) and may occur if the Interconnecting Customer’s Facility is greater than 1 MW.

DG Interconnection Tariff, § 3.4, b.

Over the past few years, we have observed a marked increase in the number of ASO studies resulting from the cumulative impact of DG, particularly for DG facilities under five MW. The Department has received requests from stakeholders for clarification on the process for identifying the need for an ASO study and the roles and responsibilities of various parties. Stakeholders have also requested increased transparency and communication related to ASO studies. As such, the Department has worked with stakeholders and the

Distribution Companies, with participation from ISO-NE⁴ and transmission owners⁵ (“TOs”), to address this growing need.

On May 22, 2019, the Department opened Distributed Generation Interconnection, D.P.U. 19-55, in order to investigate the interconnection of DG in Massachusetts, pursuant to the DG Interconnection Tariff and Distributed Generation Interconnection, D.P.U. 11-75-E (2013). Distributed Generation Interconnection, D.P.U. 19-55 (Vote and Order) (2019).

The Department announced five initial phase topics for investigation, including the process related to ASO studies conducted during DG interconnection. D.P.U. 19-55, at 4. On July 18, 2019, the Department held the first technical conference in D.P.U. 19-55. At this technical conference and in an email issued to the D.P.U. 19-55 electronic distribution list on July 23, 2019, the Department directed the Distribution Companies to collaborate with stakeholders and file agreed upon proposed revisions to the DG Interconnection Tariff related to ASO studies by August 29, 2019.

⁴ ISO-NE served as a technical resource and provided information to explain the Proposed Plan Application process in Section I.3.9 of the ISO-NE Tariff (“Section I.3.9 Process”) and to clarify ISO-NE’s role in the interconnection review process. See e.g., ISO-NE presentation at October 3, 2019, technical conference.

⁵ The Department recognizes that, in Massachusetts, ASO studies are often conducted by the TO affiliated with the respective Distribution Company. Representatives from New England Power Company and Eversource Energy, the TOs affiliated with National Grid and Eversource, respectively, participated in technical conferences in this proceeding to provide information on their roles as the ASOs conducting studies impacting DG customers interconnecting to the National Grid and Eversource distribution EPS. In some instances, the terms TO and ASO are used interchangeably when discussing ASO studies. However, it is possible that ASO studies could be conducted by an ASO other than the TO affiliate of the respective Distribution Company.

On August 29, 2019, the Distribution Companies and Northeast Clean Energy Council (“NECEC”) requested an extension of time and approval of a revised procedural schedule, which the Department granted on August 30, 2019. In accordance with the revised procedural schedule, collaborators submitted alternative revisions to the DG Interconnection Tariff on September 11, 2019, and, on September 27, 2019, the Distribution Companies, NECEC, the Department of Energy Resources (“DOER”), and the Attorney General of the Commonwealth of Massachusetts (“Attorney General”) (together, “Joint Stakeholders”) filed joint stakeholder proposed tariff revisions (“Consensus Redlines”). The Department accepted comments on the proposed DG Interconnection Tariff revisions through October 10, 2019. On October 10, 2019, the Distribution Companies, NECEC, DOER, and the Attorney General filed comments. At the October 24, 2019 technical conference stakeholders discussed outstanding issues concerning the proposed DG Interconnection Tariff related to ASO studies. After the technical conference, on October 30, 2019, the Distribution Companies and DOER submitted comments proposing additional clarifications.⁶

II. ROLES AND RESPONSIBILITIES

When the interconnection of a DG facility to a distribution EPS has the potential to adversely affect a neighboring EPS (distribution or transmission), a study of potential adverse impacts on that neighboring system is required by ISO-NE, pursuant to the Section I.3.9 Process outlined in the ISO-NE Tariff. ISO-NE applies the Section I.3.9 Process to review

⁶ While the Department has considered all comments filed in this docket, the comments referenced below are those filed for the October 10, 2019, comment period unless otherwise noted.

any proposed system changes to ensure that the changes do not have a significant adverse impact on the regional power system. Under ISO-NE Planning Procedure No. 5-1 regarding ISO-NE's review of such changes, a Proposed Plan Application is required for new or increased generation greater than five MW; ISO-NE reserves the right to require a Proposed Plan Application for new or increased generation greater than one MW and less than five MW.⁷

ASO studies are conducted by the ASO in coordination with ISO-NE, and in accordance with the ISO-NE Tariff.⁸ The ASO and ISO-NE determine the procedural details and timing relating to ASO studies, including whether and when an ASO study is necessary.⁹

The Distribution Companies are responsible for coordinating with the ASO and ISO-NE and communicating with interconnecting customers and the Department. DG Interconnection Tariff, § 3.4, b. The Department has regulatory authority over the Distribution Companies in Massachusetts.¹⁰ The Department does not generally have

⁷ ISO-NE Planning Procedures No. 5-1, Procedures for Review of Governance Participant's Proposed Plans (Section I.3.9, Applications: Requirements, Procedures, and Forms), https://iso-ne.com/static-assets/documents/rules_proceeds/isone_plan/pp05_1/pp5_1.pdf

⁸ ISO-NE Planning Procedures No. 5-1, Procedures for Review of Governance Participant's Proposed Plans (Section I.3.9, Applications: Requirements, Procedures, and Forms); ISO-NE presentation at October 3, 2019, technical conference.

⁹ ISO-NE TOA, Art. 3.03(b): ISO-NE Planning Procedures No. 5-1, Procedures for Review of Governance Participant's Proposed Plans (Section I.3.9, Applications: Requirements, Procedures, and Forms).

¹⁰ The Department's basic legislative directive is to regulate in the public interest the rates, services, facilities, and practices of companies engaged within the

regulatory authority over the ASOs performing ASO studies, nor does it have authority over ISO-NE, which is regulated by the Federal Energy Regulatory Commission.

While the Department may direct the Distribution Companies to make requests of the ASO and ISO-NE with regard to the identification of a need for an ASO study, the ASO and ISO-NE determine the details of conducting an ASO study and the time frame for completion of an ASO study pursuant to the ISO-NE tariff and planning procedures. However, the Department can ensure that the DG Interconnection Tariff and any accompanying guidance material clearly delineate the roles and responsibilities of entities involved in the ASO study process while providing as much predictability as possible around the timing, process, and costs of ASO studies.

While certain aspects of the ASO process remain outside of the Department's purview, frequent and meaningful communication between the Distribution Companies and interconnecting customers is imperative, both when determining the need for an ASO study and throughout the ASO study process. With this Order, the Department clarifies the interplay between the DG Interconnection Tariff and the ASO study process by establishing (1) requirements on additional information that the Distribution Companies must provide to interconnecting customers; (2) defined points (early and consistently) in the interconnection

Commonwealth in the business of supplying any utility service to customers for compensation. See, e.g., G.L. c. 164, § 94 (regulation of rates and tariffs); G.L. c. 164, § 69I (ensure a necessary energy supply for the Commonwealth with a minimum impact on the environment at the lowest possible cost); Zachs v. Department of Public Utilities, 406 Mass. 217, 224 (1989) (the mission of the Department is to regulate in the public interest).

process for ASO screening; (3) clear timelines for the Distribution Companies to provide information to interconnecting customers, the ASO, and ISO-NE, as well as timelines for interconnecting customers to respond to the Distribution Companies; (4) requirements related to the impact ASO studies can have on interconnection timelines; and (5) requirements for processing costs associated with ASO studies.

III. DEPARTMENT DG GUIDELINES

A. Introduction

Through public inquiries and concerns raised over the past year, stakeholders have identified to the Department the lack of communication and transparency of information related to ASO studies. Following the July 18, 2019, technical conference and the receipt of a series of directed written comments, the Department issued interim guidance related to ASO studies (“ASO Interim Guidance”). D.P.U. 19-55, Hearing Officer Memorandum (September 25, 2019). The ASO Interim Guidance sets forth notification requirements directing the Distribution Companies to implement several procedures related to potential and ongoing ASO studies, including requirements to communicate the potential need for an ASO study to the Department and potentially affected DG applicants, and to provide the Department and affected DG applicants with timely and relevant information, updates, and notifications.

Commenters further emphasized the need for clear, permanent guidelines around communications, transparency, and prioritizations concerning ASO studies (Attorney General Comments at 3; DOER Comments at 3; NECEC Comments at 2). Commenters generally

support approving much of the ASO Interim Guidance on a permanent basis, while they also recommend several modifications (Attorney General Comments at 3; DOER Comments at 3; NECEC Comments at 2).

B. Summary of Comments

The Attorney General, DOER, and NECEC contend that incorporating the ASO Interim Guidance into the DG Interconnection Tariff would facilitate effective communication between the Distribution Companies, interconnecting customers, and other interested parties (Attorney General Comments at 3; DOER Comments at 3; NECEC Comments at 5). DOER recommends incorporating the ASO Interim Guidance into the DG Interconnection Tariff or including language in the tariff that requires the Distribution Companies to follow the Department's ASO Interim Guidance as it is amended from time to time (DOER Comments at 3). Additionally, the Attorney General states that, to ensure accountability, it is important that the DG Interconnection Tariff incorporate ASO study communication guidelines with firm and measurable timelines so that they can be incorporated into the timeline enforcement mechanism (Attorney General Comments at 3-4).¹¹

¹¹ The timeline enforcement mechanism measures each Distribution Company's performance in meeting interconnection timelines set forth in the DG Interconnection Tariff. D.P.U. 11-75-F at 2. Performance is measured annually by aggregating the average time spent to execute a final interconnection service agreement and comparing that average performance to the total days allowed under the DG Interconnection Tariff's timeframes. D.P.U. 11-75-F at 3, 5. A Distribution Company is then either penalized or earns offsets depending on its performance for that year. D.P.U. 11-75-F at 5-6, Att. B. The Department is exploring possible modifications to the timeline enforcement mechanism in this proceeding. D.P.U. 19-55, Hearing Officer Memorandum (May 14, 2020).

Also, DOER and the Distribution Companies each submitted proposed revisions to the ASO Interim Guidance. DOER recommends that the Department establish a uniform reporting format for data submitted pursuant to the ASO Interim Guidance, such as in a sortable, excel spreadsheet format with uniform fields of data (DOER October 30, 2019 Comments at 1). The Distribution Companies propose clarification to Paragraph A.7. of the ASO Interim Guidance, specifically, that the written updates to be provided every two weeks be provided on the 1st and the 15th of the month or the first business day following the 1st or the 15th of the month if that date happens to be a weekend or holiday, regardless of the date of the A.5. notification (Distribution Companies October 30, 2019 Comments at 1). Additionally, the Distribution Companies propose to clarify A.8. to include that updated spreadsheets be provided every two weeks, on the 1st or 15th of the month or the first business day following the 1st or the 15th of the month if that date happens to be a weekend or holiday, regardless of the date of the A.5. notification (Distribution Companies October 30, 2019 Comments at 1). Under Paragraph A.9 the Distribution Companies propose that the obligation to provide monthly written updates begin on the 1st of the month following the month in which the applicable Distribution Company sent invoices for that ASO study to affected interconnecting customers, or the first business day following the 1st of the month if that date happens to be a weekend or holiday (Distribution Companies October 30, 2019 Comments at 1). The Distribution Companies suggest that, instead of the terms “bimonthly” and “biweekly”, the ASO Interim Guidance should use “every two months” and “every two weeks” and request this be applied to the suggested revisions to Paragraphs A.7.

and A.8. (Distribution Companies October 30, 2019 Comments at 1). The Distribution Companies conclude that the communication protocols concerning ASO studies are likely to need modification over time as the Distribution Companies, stakeholders, and the Department gain more experience with ASO studies and as ASO studies become more common due to the increasing amounts of DG in the Commonwealth (Distribution Companies October 30, 2019 Comments at 1).

C. Analysis and Findings

As an initial matter, throughout this process, stakeholders have voiced support for the use of formal Department guidance for DG interconnection that would apply to interconnecting customers and the Distribution Companies. Providing additional formal Department guidance from time to time would allow for responsiveness and flexibility in issuing and revising policy, published technical standards, interpretive clarification, and compliance directives (“Guidance Document”). In issuing a Guidance Document, the Department can provide timely guidance without having to engage in the more involved process to approve a revised tariff or to amend regulations.¹² The Department finds that it is consistent with the public interest to issue a Guidance Document to provide additional clarity and regulatory certainty concerning the rules and procedures governing DG interconnection in Massachusetts (“Department DG Guidelines”). Accordingly, the Department establishes Department DG Guidelines that apply to interconnecting customers and the Distribution

¹² The Department’s use of a Guidance Document does not supplant the Department’s approval of a revised or new tariff or its promulgation of new or amended regulations as required or needed.

Companies. Users of each Distribution Company's DG Interconnection Tariff also should refer to the Department DG Guidelines.

The Department will publish the Department DG Guidelines on its "Interconnecting Renewable Energy Facilities" webpage.¹³ The Department's Commission will approve any revision to the Department DG Guidelines.¹⁴ Each Distribution Company shall post a link to the Department DG Guidelines on its website in near proximity to its DG Interconnection Tariff.¹⁵

The Distribution Companies shall revise the DG Interconnection Tariff, Definitions, Section 1.2, to include:

"Department DG Guidelines for Interconnection" shall mean the guidance materials for interconnection of distributed generation, as approved and published by the Department of Public Utilities.

The Distribution Companies shall further revise the DG Interconnection Tariff, Basic Understandings, Section 2.0, to include the sentence:

¹³ <https://www.mass.gov/interconnecting-renewable-energy-facilities>.

¹⁴ The Department may initiate a review of the Department DG Guidelines to determine whether revisions or additions are needed. In addition, interested persons may request that the Department consider an addition or revision to the Department DG Guidelines by making a written request to the Ombudsperson (<https://www.mass.gov/forms/submit-distributed-generation-compliance-filings-and-letter-requests-to-the-ombudsperson>). In making such a request, an interested person must demonstrate good cause for review of the Department DG Guidelines and provide a proposed addition or revision.

¹⁵ The Department will work with the Distribution Companies to develop messaging so that users of a Distribution Company's DG Interconnection Tariff are prompted to visit the link to the Department's DG Guidelines.

“The Department’s DG Guidelines are an integral part of understanding the process and requirements for an Interconnecting Customer to connect a power-generating facility to the Company EPS under this Interconnection Tariff.”

The Department agrees with commenters that it is important to maximize transparency throughout the ASO study process and to ensure early communication of potential need for an ASO study. We find that the provisions included in the Department’s ASO Interim Guidance have provided stakeholders with much needed information, communication, and transparency. Given the evolving nature of ASO studies in the Commonwealth, we expect that the procedures initially established in the ASO Interim Guidance may need to be revised over time. Therefore, we find it appropriate to incorporate the provisions of the ASO Interim Guidance, subject to the modifications and additions discussed below, into the Department DG Guidelines, attached hereto as Attachment A.¹⁶

The Distribution Companies and DOER recommend several modifications intended to improve the efficiency of the ASO Interim Guidance. The Distribution Companies offered clarification on timing terminology based on their experience implementing the ASO Interim Guidance (Distribution Company October 30, 2019 Comments at 1). The Department recognizes the Distribution Companies’ experience implementing the ASO Interim Guidance and understands that these suggestions are aimed to facilitate efficiency and ease of administration. Furthermore, the proposed changes maintain the intent of the ASO Interim Guidance to provide clear timelines that mitigate uncertainty around the timing of written

¹⁶ The Department DG Guidelines shall also include the above delineation of the roles and responsibilities of the various entities involved in ASO studies.

updates. We find the Distribution Companies' recommendations reasonable and efficient; therefore, we incorporate them into the Department DG Guidelines. Similarly, DOER's recommendation to establish a uniform reporting format for data submitted pursuant to the ASO Interim Guidance is reasonable and would create efficiency in the study process.

Therefore, the Department directs the Distribution Companies to develop a uniform reporting spreadsheet and to submit data in a sortable excel spreadsheet with uniform fields of data.

The Distribution Companies shall submit the uniform reporting spreadsheet template for informational purposes to the Department within 15 business days of this Order.

IV. AREAS OF CONSENSUS

At the direction of the Department, the Joint Stakeholders convened a series of collaborative meetings and calls to understand the current ASO study process and identify areas where consensus was possible. On September 27, 2019, the Joint Stakeholders submitted Consensus Redlines that provide proposed DG Interconnection Tariff revisions related to the ASO study process in the following areas: 1) definitions; 2) pre-application content; 3) communications; and 4) parallel studies. After review and consideration, we find these revisions reasonable and we approve the Consensus Redlines. Therefore, the Department directs the Distribution Companies to revise the DG Interconnection Tariff consistent with the Consensus Redlines.

V. DEFINITIONS

A. Introduction

Section 1.2 of the DG Interconnection Tariff sets forth definitions of key words used in the DG Interconnection Tariff. The Consensus Redlines provide several agreed upon new definitions. In addition, through comments, stakeholders propose additional definitions applicable to the ASO study process.

B. Summary of Comments

The Joint Stakeholders outline consensus definitions designed to provide clarity for entities involved in an ASO study process (Consensus Redlines at 2). While NECEC supports the Consensus Redlines, it also recommends two additional definitions of “ASO Impact Screen” and “Standard Process Initial Review Report”; and to revise the definition of “Common Study Area” in the interest of clarity (NECEC Comments at 3). NECEC recommends defining “ASO Impact Screen” to provide early review and notification for interconnecting customers; and “Standard Process Initial Review Report” to formalize the communication of project information shortly after a DG application has been deemed complete. NECEC recommends refinements to the “Common Study Area” definition to clarify how Distribution Companies can perform a group ASO study (NECEC Comments at 3).

The Distribution Companies note that NECEC did not provide a specific definition for “ASO Impact Screen” (Distribution Companies Comments at 19). The Distribution Companies would consider the concept of an ASO impact study screen, but contend that

NECEC's proposed redline should not be included in the DG Interconnection Tariff until a workable definition has been jointly developed and the appropriate timing of the screen is determined (Distribution Companies Comments at 19).

C. Analysis and Findings

As stated above, the Department approves the consensus definitions proposed by the Joint Stakeholders and finds that the Consensus Redlines provide clarity for the roles and responsibilities of those involved in an ASO study. In addition, we find that defining the term "Transmission Owner" would further assist in clarifying the roles and responsibilities of entities involved in ASO studies. As such, we direct the Distribution Companies to revise the DG Interconnection Tariff to include, in accordance with ISO-NE's current definition, "Transmission Owner" which shall mean an entity that owns and maintains transmission facilities.¹⁷

The Department agrees with NECEC that early screening and reporting is necessary for identification of the need for an ASO study for an interconnecting customer. However, we also agree with the Distribution Companies that additional consideration and collaboration is necessary to identify the information that must be included in the initial screening process. As such, we include definitions for "ASO Impact Screen" and "Standard Process Initial Review Report" in the Department DG Guidelines only as follows:

¹⁷ ISO-NE Glossary, defining a transmission owner as "a entity that owns and maintains transmission facilities." https://www.iso-ne.com/participate/support/glossary-acronyms#transmission_owner

“ASO Impact Screen” shall mean an initial screening process conducted by the Company for each Interconnecting Customer to collect the information necessary to determine if an Affected System Operator study is necessary.

“Standard Process Initial Review Report” shall mean the report provided by the Company to the Interconnecting Customer and Affected System Operator that includes the information identified in the ASO Impact Screen.

We discuss the initial screening process associated with the above two definitions in Section VIII.C below. The Department does not revise the definition of “Common Study Area” in the DG Interconnection Tariff at this time; however, we discuss grouping for ASO studies in Section X below.

VI. BASIC UNDERSTANDINGS

A. Introduction

Section 2.0 of the DG Interconnection Tariff (“Basic Understandings”) sets forth a general set of understandings of the DG interconnection process. Commenters propose several revisions to this section to clarify the Distribution Companies’ obligations related to ASO studies (NECEC September 11, 2019 Revisions, § 2.0; Distribution Companies September 11, 2019 Revisions, § 2.0).

B. Summary of Comments

The Joint Stakeholders propose the addition of “affected systems” in three locations in Section 2.0 (Consensus Redlines at 2-3). NECEC suggests that the Basic Understanding section reference ISO-NE’s Tariff and the Distribution Companies’ corresponding obligations

to submit information to ISO-NE related to changes to resources on the Distribution Company's system that may have significant effects on any affected system (NECEC Comments at 3). NECEC argues that adding such a provision would provide clarity to all parties of the potential for ASO-level review (NECEC Comments at 3). In its September 11, 2019, proposed DG Interconnection Tariff revisions, NECEC proposed adding the following paragraph:

The Company is also subject to the ISO New England Inc. Transmission, Markets, and Services Tariff, ISO-NE Planning Procedures and related ISO-NE agreements. Section I.3.9. of the ISO New England Inc. Transmission, Markets, and Services Tariff, as may be amended from time to time, obligates the Company to submit information to ISO-NE regarding additions or changes to generating and demand resources under the Company's control, including distributed generation resources, which may significantly impact the stability, reliability or operating characteristics of transmission facilities, or the Company's EPS as determined per Sections 3.3 and 3.4. In such cases, the Affected System Operators must examine and evaluate the potential for significant effects on the stability, reliability or operating characteristics of any Affected Systems, and may require system modifications to any Affected Systems to avoid such significant effect.

(NECEC September 11, 2019 Revisions, § 2.0).

The Distribution Companies propose adding the following paragraph:

The Company is subject to the ISO New England Inc. Transmission, Markets, and Services Tariff, ISO-NE Planning Procedures and related ISO-NE agreements. Section I.3.9. of the ISO New England Inc. Transmission, Markets, and Services Tariff, as may be amended from time to time, obligates the Company to submit information to ISO-NE regarding certain additions or changes to generating and demand resources under the Company's control, including distributed generation resources, which may have a significant effect on the stability, reliability or operating characteristics of transmission facilities, or the Company's EPS. In such cases, ISO-NE and/or other Affected System Operators must examine the proposal and evaluate the potential for significant adverse impact on the stability, reliability or operating characteristics of any

Affected Systems, and may require system modifications to any Affected Systems to avoid such adverse effect.

(Distribution Companies September 11, 2019 Revisions, § 2.0).

The Distribution Companies also propose clarifying language that the interconnection of a facility must be reviewed for potential impact on the Company EPS “and the electric power system of potentially Affected System Operators” (Distribution Companies September 11, 2019 Revisions, § 2.0).

C. Analysis and Findings

Consistent with our findings above, the Department directs the Distribution Companies to revise the DG Interconnection Tariff to include the revisions to Section 2.0 proposed in the Consensus Redlines. The Department also agrees that Section 2.0 should reference ISO-NE’s Tariff and the Distribution Companies’ corresponding obligations. We find the proposed revisions submitted by NECEC and the Distribution Companies on this topic to be reasonable and substantially similar. As such, we direct the Distribution Companies to revise Section 2.0 of the DG Interconnection Tariff to include their proposed paragraph. Also, we find the clarifying language proposed by the Distribution Companies to be reasonable and we direct the Distribution Companies to revise Section 2.0 of the DG Interconnection Tariff after the language “The interconnection of the Facility with the Company EPS must be reviewed for potential impact on the Company EPS” to include the following: “and the EPS of potentially Affected System Operators.”

VII. PRE-APPLICATION REPORTS

A. Introduction

Section 3.2 of the DG Interconnection Tariff sets forth information and requirements regarding Pre-Application Reports. Prior to submitting an interconnection application, all interconnecting customers with facilities that are 500 kilowatts (“kW”) or greater must request and receive a “Pre-Application Report” from the Distribution Company.¹⁸ The Pre-Application Report is a non-binding report of certain information specific to a proposed facility interconnection location provided to the interconnecting customer by the Distribution Company prior to the Application. This report is optional at the election of the interconnecting customer for facilities that are less than 500 kW.

Following a request for a Pre-Application Report, the Distribution Company must provide the report within ten business days. In the Pre-Application Report, the Distribution Company provides the following information for the proposed facility interconnection location:

- 1) circuit voltage at the substation;
- 2) circuit name;
- 3) circuit voltage at proposed facility;
- 4) whether single or three-phase is available near site;
- 5) if single phase, the distance from three-phase service;

¹⁸ The Pre-Application Report Form is set forth in Exhibit B of the DG Interconnection Tariff.

- 6) aggregate connected facilities (kW) on circuit;
- 7) submitted complete applications of facilities (kW) on circuit that have not yet been interconnected;
- 8) whether the interconnecting customer is served by an area network, a spot network, or radial system;
- 9) identification of feeders within $\frac{1}{4}$ mile of the proposed interconnection site through a snapshot of GIS map or other means; and
- 10) other potential system constraints or critical items that may impact the proposed facility.

The Consensus Redlines provide proposed additions to the Pre-Application Report and through comments stakeholders propose further additions.

B. Summary of Comments

The Joint Stakeholders propose the addition of the following in the Pre-Application Report:

- 1) substation name;
- 2) substation transformer rating;
- 3) aggregated connected facilities (kW) on the substation transformer and submitted complete applications of the facilities (kW) that have not yet been interconnected;
- 4) whether 3V0 is deployed or scheduled for deployment on the circuit or substation;

- 5) for the nearest available feeder, the circuit rating and approximate circuit length from the proposed facility to the substation;
- 6) whether the proposed facility is likely to be on the standard process track; and
- 7) whether an ASO has informed the Distribution Company that an ASO study is required, or the Distribution Company is aware of an on-going ASO study for the proposed facility interconnection.

(Consensus Redlines at 3-4)

NECEC contends that interconnecting customers can make better informed business decisions if the Distribution Companies make them aware of the potential of an ASO study as soon as possible (NECEC September 23, 2019 Comments at 3). To advance this goal, NECEC proposes that Section 3.2 of the DG Interconnection Tariff require the following additional Pre-Application Report information:

- 1) the identification of facilities on the circuit and substation transformer by technology type;
- 2) whether the facility may have impacts on other systems resulting in the need for an ASO study;
- 3) whether the circuit, transformer or substation is, or scheduled to become part of an ASO study;
- 4) whether a new project's application will require new transmission infrastructure; and

- 5) whether an ASO study, if performed, would include a set of facilities as a “cluster”

(NECEC September 23, 2019 Comments at 4).

DOER asserts that the changes contemplated in the Consensus Redlines serve to inform a DG applicant, at the earliest stage possible, of potential risks and likelihood that its project will incur high interconnection costs and may trigger an ASO study (DOER Comments at 4). DOER suggests that stakeholders continue to discuss additional information to include in the Pre-Application process to eliminate or mitigate the need for a facility to be involved in an ASO study (DOER Comments at 4).

In response to NECEC’s recommendation to inform the DG applicant whether an ASO study would include a set of facilities as a cluster, the Distribution Companies contend that they may not have sufficient information at the time of the production of Pre-Application Report to make such a determination (Distribution Companies Comments at 15).

C. Analysis and Findings

The Pre-Application Report provides technical information about a specific point of interconnection that can help inform interconnecting customers of potential limitations for their projects early in the interconnection process. Including additional information related to ASO studies in the Pre-Application Report is a transparent means to make interconnecting customers aware of the potential for ASO studies at a distinct point early in the interconnection process. In addition to the Consensus Redlines for Section 3.2 of the DG Interconnection Tariff, we find the following additional requirement to be reasonable and we

direct the Distribution Companies to revise Section 3.2 of the DG Interconnection Tariff to include the following information in the Pre-Application Report: “the identification of facilities on the circuit and substation transformer by technology type.” We do not find any additional Pre-Application Report requirements to be appropriate at this time.

VIII. IDENTIFYING THE NEED FOR AN ASO STUDY

A. Introduction

Once an interconnection application is submitted to a Distribution Company, a determination of whether an ASO study is necessary must be made. Commenters provided various recommendations as to when and how such a determination is made, and to ensure that customers understand the potential for an ASO study. In this section, the Department clarifies and updates the responsibilities of interconnecting customers and the Distribution Companies during the process of determining the necessity of an ASO study.

B. Summary of Comments

1. NECEC

NECEC proposes DG Interconnection Tariff revisions that clarify the interplay between the DG Interconnection Tariff and the ASO process and make the timing and process of ASO studies more predictable (NECEC Comments at 2). NECEC argues that a customer is in a better position to make informed business decisions about how to plan and proceed with a DG project when the customer understands the potential for ASO-level review of a project earlier in the interconnection process (NECEC Comments at 4). NECEC proposes an ASO screening process assessing a facility’s significant effect on the stability, reliability, or

operating characteristics of an ASO that results in a “Standard Process Initial Review Report” within 20 days of the date on which an interconnecting customer’s application is deemed complete (NECEC Comments at 4).¹⁹ NECEC further argues that to avoid instances where an interconnection services agreement (“ISA”) is executed before an ASO review has been conducted, the Distribution Companies should be required to file Form I.3.9 Generator Notification Form (“GNF”) with ISO-NE in a timely manner shortly after the execution of the impact study agreement, with a copy to the interconnecting customer (NECEC Comments at 4). NECEC states that the timing of the Distribution Companies filing of the GNF should be coordinated with the impact study process to allow the interconnecting customer and the Distribution Company to determine whether any modifications to the project should be considered before the impact study moves forward (NECEC Comments at 4-5).

NECEC also argues that the DG Interconnection Tariff should provide explicit protections for smaller (<25 kW) projects to ensure that such applicants do not experience delays or costs associated with an ASO study triggered by larger facilities (NECEC Comments at 3). NECEC further argues that facilities subject to the simplified interconnection process should be exempt from ASO study review (NECEC Comments at 3,

¹⁹ NECEC submits that the “ASO Impact Screen” should include details of ASO screens (as determined by the Technical Standards Review Group), any other material information prepared by or delivered to the Company in connection with application of screens 6-10 to the facility described in the applicable application, and the identity of the affected system owner(s) and the identity of the ASO. The Standard Process Initial Review Report should include the results of the ASO Impact Screen, in addition to the following information: the available fault current at the proposed location; the existing peak loading on the lines in the general vicinity of the facility; and the configuration of the distribution lines (NECEC Comments at 4).

citing September 11, 2019 Tariff Revisions). Finally, NECEC proposes language be added to Section 3.3, Expedited Process, to indicate the potential need for an ASO study if certain screens indicate significant impact on affected systems (NECEC September 11, 2019 Tariff Revisions, § 3.3,b).

2. Attorney General

The Attorney General argues that timely and successful ASO study processing requires early notification and engagement with ISO-NE by the Distribution Companies (Attorney General Comments at 1). The Attorney General explains that each TO has a TOA with ISO-NE and that the TOA indicates that when a Distribution Company is affiliated with a TO that the required notification to ISO-NE about potential cumulative impacts can come from the TO or its distribution affiliate (Attorney General Comments at 2 citing TOA, § 3.03(b)). As such, the Attorney General suggests that, where the Distribution Company is a TO's affiliate, the DG Interconnection Tariff should require the Distribution Company to provide ISO-NE with regular, monthly potential cumulative impact updates to ensure early notification and engagement of ISO-NE (Attorney General Comments at 2). The Attorney General maintains that the DG Interconnection Tariff should also include similar requirements to notify the non-affiliated ASO in situations where a Distribution Company is not affiliated with a TO (Attorney General Comments at 2-3). The Attorney General further recommends that the DG Interconnection Tariff be revised to include the language in Section 3.1(h) to account for the possibility that ISO-NE may revise its tariff to require the study of projects less than 1 MW under the Section I.3.9 Process (Attorney General Comments at 4).

3. Distribution Companies

The Distribution Companies proposed to add language to Section 3.1 of the DG Interconnection Tariff, Simplified Process, to account for the possibility that a DG facility, regardless of size, may need to be included in an ASO study if the aggregate impact of it and other DG facilities on the same circuit may adversely affect a system (Distribution Comments at 13, citing September 11, 2019 Tariff Revisions).

The Distribution Companies also propose additional language in Section 3.3 of the DG Interconnection tariff, Expedited Process, to clarify that if any screens or internal studies identify potentially Affected Systems, or if the Distribution Company determines that the facility in the aggregate with other generation capacity may result in an adverse impact to an affected system, that an ASO study may be required (Distribution Companies Comments at 17, citing September 11, 2019 Tariff Revisions).

The Distribution Companies would consider the concept of an ASO impact study screen as proposed by NECEC; however, they contend that a workable definition should be jointly developed, and that the appropriate timing of the screen be determined before it is implemented in the DG Interconnection Tariff (Distribution Companies Comments at 19). The Distribution Companies agree to screen for the potential need for an ASO study within the first 20 business days of the impact study process, but contend that they cannot be bound to a strict 20-day window to determine whether a project will be subject to an ASO study (Distribution Companies Comments at 24-25). The Distribution Companies argue that even if a project initially does not need to be studied, subsequent project changes to the facility or

other facilities in the queue could necessitate an ASO study (Distribution Companies Comments at 24-25). The Distribution Companies propose revisions to Section 3.4(g) of the DG Interconnection Tariff to define points in the interconnection process at which the Distribution Company and interconnecting customer will make decisions regarding ASO studies (Distribution Companies Comments at 26).

The Distribution Companies recognize that stakeholders want more certainty around the timing and impact of ASO studies, but indicate that since the Distribution Companies are not responsible for conducting the ASO studies they can only control the timing of when they notify ASOs of a project/s that could impact an ASO's system (Distribution Companies Comments at 27). The Distribution Companies indicate that, in the past, some companies have worked with their TO affiliates to submit GNFs to ISO-NE for facilities between one MW and five MW during the detailed design phase; as ISO-NE has been increasingly exercising its discretion to request ASO studies, the Distribution Companies have begun to submit GNFs earlier in the process (Distribution Companies Comments at 27). The Distribution Companies' revision to Section 3.4(g) intends to commit the Distribution Companies to notify the ASO and interconnecting customer of the potential for ASO impact within the first 20-business day review period of a distribution System Impact Study, or upon any change in the application resulting in a potential adverse impact to an Affected System (Distribution Companies Comments at 27). The Distribution Companies conclude that this revision would provide a clear point for the commencement of an ASO review (Distribution Companies Comments at 27).

4. DOER

DOER proposes to clarify that the Distribution Companies may identify potentially affected systems through the screening process (DOER September 11, 2019 Tariff Revisions, § 3.0, § 3.1, Simplified Process, and § 3.3, Expedited Process).

C. Analysis and Findings

The Department recognizes stakeholder desire for a clear and enforceable process for identifying the need for an ASO study early in the interconnection process. Although the Department lacks jurisdiction over ASOs and ISO-NE and we recognize that much of this process is outside of the Distribution Companies control, we encourage early decision-making and information sharing between and among the Distribution Company, the ASO, ISO-NE, and interconnecting customers. To the extent feasible, the Distribution Companies shall work with the ASO and ISO-NE to make an initial determination on whether a facility will be the subject of an ASO study before they issue an executed ISA to an interconnecting customer. We encourage the Distribution Companies to request that the ASO and ISO-NE make this determination as soon as possible to avoid unnecessary delays in the interconnection process for interconnecting customers.

The Department finds it appropriate to ensure that all interconnecting customers are aware of the potential need for an ASO study that could affect their interconnection process, and to establish a process to provide as much clarity as possible for early identification of the need for an ASO study for each interconnecting customer. The earlier in the interconnection process an interconnecting customer understands the potential for an ASO study, the better

position that customer will be in to make informed business decisions benefiting both the interconnecting customer and the general distribution queue. While we share concerns about the implications of exposing projects subject to the simplified interconnection process to ASO studies, the Department cannot exempt any facilities from the possibility of being included in an ASO study. We encourage the Distribution Companies to take all feasible steps to recommend to the ASO and ISO-NE that facilities subject to the simplified interconnection process not be subject to ASO studies. To account for the possibility that a DG facility, regardless of size, may need to be included in an ASO study, we direct the Distribution Companies to revise the DG Interconnection Tariff to include the following Section 3.1(h):

In accordance with Section I.3.9 of the ISO New England Inc. Transmission, Markets, and Services Tariff, Facilities proceeding through the Simplified Process shall be evaluated for significant effect on Affected Systems. If Section I.3.9 is amended to require Facilities less than one megawatt to be evaluated for potential adverse impact to Affected Systems, or it is determined that the Facility, in aggregate with other generation capacity on the Company EPS, may result in an adverse impact to Affect Systems, the Company may require that the project be reviewed under Section 3.4(g) of the Standard Process.²⁰

In addition, we direct the Distribution Companies to revise the DG Interconnection Tariff to include the following Section 3.3(c), which is a modification of the revisions proposed in the Distribution Companies' September 11, 2019 Tariff Revisions:²¹

²⁰ The Distribution Companies may, at their discretion, revise Section 3.1(h) to conform to DG Interconnection Tariff formatting, definitions, and memorializations.

²¹ DOER also proposes to revise the DG Interconnection Tariff to clarify that the Distribution Companies through the screening process, may identify potentially affected systems (DOER September 11, 2019 Tariff Revisions, § 3.3, Expedited Process).

In accordance with Section I.3.9 of the ISO New England Inc. Transmission, Markets, and Services Tariff, Facilities proceeding through the Expedited Process shall be evaluated for significant effect on Affected Systems. If the results of any screens or internal studies identify potentially Affected Systems, or it is determined that the Facility, in aggregate with other generation capacity on the Company EPS, may result in an adverse impact to Affect Systems, the Company may require that the project be reviewed under Section 3.4(g) of the Standard Process.²²

The Department finds it appropriate to establish the following ASO initial screening procedure to enable an ASO study determination early in the interconnection process. We recognize that this novel ASO study identification process is complex and may require revision based on lessons learned through implementation. As such, at this time, we establish the ASO study identification process as part of the Department DG Guidelines to allow for flexibility in revising the process, if necessary.

In accordance with the definitions established above in Section III.C of this Order, within 20 days of an interconnection application being deemed complete, the Distribution Company shall conduct an ASO Impact Screen to determine if a facility has the potential to cause an adverse impact on an ASO resulting in the need for an ASO study. The ASO Impact Screen shall result in a Standard Process Initial Review Report to be provided to the interconnecting customer within five business days of completion. If the Distribution Company finds the potential of adverse impact to an ASO, it shall submit the information contained in the Standard Process Initial Review Report to the ASO and ISO-NE and request a determination whether the facility must undergo an ASO study. The Distribution

²² The Distribution Companies may, at their discretion, revise Section 3.1(c) to conform to DG Interconnection Tariff formatting, definitions, and memorializations.

Companies shall work with interested stakeholders over the next six months to determine the appropriate data and information to be considered in the ASO Impact Screen and to be included in the Standard Process Initial Review Report. Once identified, if any party believes the data and information that must be considered in the ASO Impact Screen and included in the Standard Process Initial Review Report should be detailed in the Department DG Guidelines, it may request that the Department revise the Department DG Guidelines.

The Department recognizes that, despite best efforts to make a determination early in the interconnection process, a determination of whether a facility must undergo an ASO study may not be possible at the time of initial submission of information to the ASO and/or ISO-NE. Thus, to avoid instances where an ISA is executed before an ASO study has been conducted, we direct the Distribution Companies to revise Section 3.3 of the DG Interconnection Tariff to require a second screen for the potential need for an ASO study within the first 20 business days of the impact study process and to submit either necessary additional information or a GNF to the ASO and to request a determination from ISO-NE. This timeline should allow the interconnecting customer and the Distribution Company to determine whether any modifications to the facility should be considered before the impact study moves forward. Given the Distribution Companies' assertion that they have begun to submit GNFs earlier in the interconnection process prior to the detailed design phase in the process, the Department expects that most GNFs will be submitted within the first 20 business days of the impact study process if a facility is not subject to an ASO study.

The Department understands that, even if a facility initially does not need to be studied, subsequent project changes to the facility or other facilities in the queue could necessitate an ASO study. As such, we include in the Department DG Guidelines a provision that the Distribution Company must submit information to the ASO within ten business days upon identification of any change in an interconnecting customer's application resulting in a potential adverse impact to an ASO, or upon changes to other facilities in the queue that could necessitate an ASO study. Similarly, an interconnecting customer must notify the Distribution Company promptly upon identification of any need or desire to make changes to its interconnection application.

Determining the need for an ASO study requires communication and the sharing of information between the interconnecting customers and the Distribution Companies, and the Distribution Companies, the ASO, and ISO-NE. To ensure transparency and the accuracy of the information shared, the following requirements for the sharing of such information are included in the Department DG Guidelines. The Distribution Companies shall provide interconnecting customers with a copy of any information submitted to the ASO or ISO-NE concerning the interconnecting customer's facility and whether it will be subject to an ASO study, within five business days of submission. Similarly, if the Distribution Company receives a determination or related information from the ASO or ISO-NE, that information must be relayed to the affected interconnecting customer within five business days of receipt. Upon receipt of information that has been submitted to the ASO or ISO-NE, the interconnecting customer shall have ten days to dispute with the Distribution Company the

accuracy of the information submitted. The Distribution Company and the interconnecting customer must work together to resolve the disputed accuracy of information. If the dispute remains unresolved after ten business days of the interconnecting customer's contact with the Distribution Company, either party may bring the dispute to the Department's Ombudsperson pursuant to Section 9 of the DG Interconnection Tariff.²³

IX. ASO STUDY TIMEFRAMES

A. Introduction

Stakeholders seek specific requirements for time frames to conduct an ASO study, and to clarify the impact an ASO study may have on existing time frames currently set forth in the DG Interconnection Tariff.²⁴ In this section, the Department considers how it can assist in clarifying these processes within its regulatory authority.

B. Summary of Comments

The Joint Stakeholders suggest revisions to the Time Frames in Tables 1 through 5 to state that the Time Frames set forth in the Tables will be affected if ISO-NE determines that an Affected System Operator and/or Affected System Owner review is required (Consensus Redlines at 4-5). The Joint Stakeholders propose language that states in the event the ASO determines that a concurrently completed Impact Study requires re-study due to the

²³ The dispute must be submitted via online form. <https://www.mass.gov/info-details/interconnection-dispute-resolution-guidance>

²⁴ The interconnection process time frames in the DG Interconnection Tariff are set forth in the following tables: Table 1 – Simplified Process Radial Distribution Circuit; Table 2 – Expedited Process; Table 3 – Standard Process; Table 4 – Standard Process Complex Projects; and Table 5 – Simplified Spot and Area Network.

assumptions originally included in the initial Impact Study are now valid, the Distribution Company will provide an amended Impact Study Agreement with a cost estimate and expected time frame for the needed restudy (Consensus Redlines at 4-5). The Joint Stakeholders propose that this time frame shall not exceed the timeline in Table 3 for completion of an Impact Study (Consensus Redlines at 5).

NECEC proposes bounding the timeline for an ASO study to 125 days in its September 11, 2019 Tariff Revision filing (NECEC Comments at 2; NECEC September 11, 2019 Tariff Revision, § 3.4 f)). While NECEC recognizes the jurisdictional limitations of the DG Interconnection Tariff, it argues that the Distribution Companies should, at a minimum, be responsible for expediting the ASO process using all reasonable efforts (NECEC Comments at 2).

The Distribution Companies state that ASO studies are completed by the ASO and that the Distribution Companies have no control over when the ASO completes the study (Distribution Companies Comments at 25). They maintain that ASOs are typically TOs or ISO-NE, which are not regulated by the Department and not bound by the DG Interconnection Tariff (Distribution Companies Comments at 25). The Distribution Companies propose to modify Section 3.5 of the DG Interconnection Tariff to inform interconnecting customers in an ASO study that (i) the time frames set forth in the DG Interconnection Tariff do not apply to projects in an ASO study since those projects are put on hold while the ASO study is being performed and (ii) that any modifications to the interconnecting customer's application after the ASO study has commenced may result in

delays or removal of the application from the ASO study (Distribution Companies Comments at 30). The Distribution Companies propose to revise Section 3.6.2 of the DG Interconnection Tariff to reiterate that time frames do not apply to projects in an ASO study and, therefore, time frame extensions also do not apply (Distribution Companies Comments at 30-31).

C. Analysis and Findings

As detailed in Section II, ASO studies are conducted by the ASO in coordination with ISO-NE and in accordance with the ISO-NE Tariff, all of which are outside the Department's authority. As such, the Department cannot direct the Distribution Companies to complete an ASO study within a certain time period. We can, however, direct the Distribution Companies to make all reasonable efforts to expedite the ASO study process. As such, we include in the Department DG Guidelines a provision that the Distribution Companies work with ASOs and ISO-NE to ensure the efficient and expedient processing of ASO studies.

Interconnecting customers also have a responsibility to ensure timely processing of ASO studies. For example, when an ASO study is comprised of multiple facilities, the failure of a single customer to provide information requested by an ASO during the study process may delay the ASO study to the detriment of others in the group. We, therefore, direct the Distribution Companies to revise Section 3.3 of the DG Interconnection Tariff to include the following requirements.

- When an ASO requires additional information and technical data about a facility to conduct its study, the Distribution Company shall notify the interconnecting customer of this need within five business days of notice from the ASO.

- The interconnecting customer shall have 15 business days from notice by the Distribution Company to transmit the requested data to the Distribution Company or to request additional time from the Distribution Company.
- If the interconnection customer fails to provide the requested data within the allowed time, the interconnecting customer shall have ten business days to cure.
- If the interconnecting customer fails to cure within the prescribed time, it will lose its queue position, and must reapply for interconnection unless the interconnecting customer and the Distribution Company agree otherwise.

The Department finds it prudent that interconnecting customers should be notified that time frames set forth in the DG Interconnection Tariff may be affected if a facility is subject to an ASO study. We find the Distribution Companies' proposed DG Interconnection Tariff revisions reasonable and, therefore, direct the Distribution Companies to revise Sections 3.5 and 3.6.2 of the DG Interconnection Tariff consistent with the Distribution Companies' September 11, 2019 proposed tariff revisions.

X. ASO STUDY GROUPING

A. Introduction

Stakeholders seek specific criteria for determining grouping of an ASO study affecting more than one interconnecting customer, and criteria and prioritization for processing and interconnecting facilities included in an ASO study. In this section, the Department considers how it can assist in clarifying these processes within its regulatory authority.

B. Summary of Comments

Several commenters recommend that the Joint Stakeholders develop protocols to determine how the Distribution Companies might more efficiently group or configure interconnecting customers in an ASO study (Attorney General Comments at 3-4; DOER

Comments at 5; NECEC Comments at 2). NECEC recommends that the Distribution Companies group projects by maturity threshold within a 40-day window from identification of the first project to be included in an ASO Study (NECEC Comments at 2). Furthermore, NECEC argues that the DG Interconnection Tariff should ensure that the process and selection criteria for combining multiple interconnection applications into a single ASO study is predictable and well-communicated to interconnecting customers (NECEC Comments at 2). The Attorney General suggests that the collaborative stakeholder group should identify specific group projects/areas for the Distribution Companies to use for monthly notifications to the TOs and ISO-NE because it is likely that these initial groupings substantially inform, if not, ultimately reflect actual ASO study groupings (Attorney General Comments at 3). The Attorney General further suggests that potential cumulative impact notification groupings should be coordinated as fairly and efficiently as possible (Attorney General Comments at 3). The Attorney General further recommends that the collaborative stakeholder group craft prioritization criteria and associated processes that can be implemented through DG Interconnection Tariff revisions or guidance materials for the Distribution Companies to use to prioritize and progress viable projects into the appropriate ASO study configuration in a way that maximizes potential time and cost benefits (Attorney General Comments at 4). DOER recommends DG Interconnection Tariff revisions that require the Distribution Companies to group ASO studies in an efficient manner and prioritize the study of projects that have completed or nearly completed construction and those projects with signed ISAs (DOER September 11, 2019 Tariff Revisions, § 3.4(c)).

Finally, NECEC asserts that fully paid post-ISA projects should not be included in any ASO study, and that Distribution Companies should be prohibited from including projects for which full costs have been incurred and full detailed studies have been completed in future ASO studies (NECEC Comments at 3). NECEC argues that failure to clarify this distinction puts mature projects at risk and jeopardizes the viability of projects for which significant costs have already been incurred (NECEC Comments at 3).

C. Analysis and Findings

The Department cannot direct the Distribution Companies how to group facilities in an ASO study or determine criteria and prioritization for processing and interconnecting facilities included in ASO studies because those details are determined by the ASO in coordination with ISO-NE. The Department agrees with the Attorney General, however, that the manner in which a Distribution Company groups facilities in its communications to the ASO and ISO-NE is likely to inform the ultimate grouping criteria. While we agree that NECEC's approach and timing for grouping facilities is reasonable, we recognize that it is not the only reasonable approach and that the approach taken may vary depending on circumstances. Regardless of the approach, we find that the criteria used to group facilities in an ASO study and for progressing viable facilities through the ASO study process should be predictable and clearly communicated to interconnecting customers. In accordance, we include in the Department DG Guidelines a provision that the Distribution Companies shall work with the ASO to determine criteria for grouping and prioritization for progressing facilities within an ASO study and to clearly communicate the grouping and prioritization

criteria to all affected interconnecting customers and to the Department at the earliest time possible in the ASO study process.

Finally, the Department agrees with commenters that an interconnecting customer should be informed of the need for an ASO study prior to execution of an ISA (NECEC Comments at 2, Attorney General Comments at 3). However, we also recognize that the ultimate determination for an ASO study is that of the ASO and ISO-NE, not the Distribution Companies. Nevertheless, we include a provision in the Department DG Guidelines for the Distribution Companies to take all feasible actions to obtain a determination of whether a facility will be subject to an ASO study prior to an interconnecting customer's execution of an ISA. If a Distribution Company is not able to obtain this information seasonably, the Distribution Company shall request that the ASO and ISO-NE prioritize the study of projects that have completed or nearly completed construction and those projects with signed ISAs. The Department anticipates that it will review its guidelines associated with grouping of facilities as these studies become more common.

XI. ASO STUDY COSTS

A. Introduction

After an ASO study determination has been made, stakeholders' concerns are two-fold. First, to clarify the role of the DG Interconnection Tariff in the ASO process; second, to have predictable timing, costs, and process for the ASO study (NECEC Comments at 2), (DOER Comments at 3).

B. Summary of Comments

NECEC argues that the Department should reject the Distribution Companies' proposal to include an ASO Operator Study Agreement as an exhibit to the DG Interconnection Tariff (NECEC Comments at 6). NECEC disagrees with the exhibit's proposed cost allocation, the fact that the entity conducting an ASO would not be included in the agreement, and the lack of assurances that the exhibit would afford interconnecting customers (NECEC Comments at 6). NECEC contends that the DG Interconnection Tariff should require the Distribution Companies to provide DG developers with interconnection costs, including for distribution and transmission system modifications, and that these costs should be included in the ISA (NECEC Comments at 6).

The Distribution Companies propose revisions to DG Interconnection Tariff, Section 1, Forms and Agreements to add an ASO Study Agreement to provide insight into the ASO study process including terms, conditions, roles, process, and estimated costs for completing an ASO study (Distribution Companies Comments at 7). The Distribution Companies claim that such an agreement would serve to memorialize agreements between the Distribution Company and an interconnecting customer and set forth respective roles and responsibilities, an ASO study cost schedule, ASO study fee allocation, and the requirements for group ASO studies and analysis (Distribution Companies Comments at 7-8). In addition to the ASO Study Agreement, the Distribution Companies propose amendments to the ISA to allow a Distribution Company, at its discretion, to include ASO system upgrade costs in the

ISA and to collect those costs on behalf of the ASO (Distribution Companies Comments at 8, n.3).

The Distribution Companies contend that there is no situation where an interconnecting customer would not be responsible for costs of a required ASO study necessary to review the interconnecting customer's project (Distribution Companies Comments at 20). The Distribution Companies contend that Department precedent has consistently held that customers are responsible for bearing the costs to serve them (Distribution Companies Comments at 20 citing SMART Tariff, D.P.U. 17-140-A at 156 (2018), citing Retail Access for Competitive Suppliers of Renewable Energy Generation Attributes , D.P.U. 08-52, at 18 (2014) (further citations omitted).

C. Analysis and Findings

The Department recognizes stakeholders' desire for certainty around the ASO study and system modification costs and estimates. Because the estimates and actual costs for ASO studies and system modifications are determined by the ASO, they are not bound by the same limitations as distribution-level studies and resulting system modification costs. Consistent with our long-standing precedent, the interconnecting customer bears the costs associated with its interconnection, which includes any ASO study or system modification costs triggered by the interconnection. SMART Tariff, D.P.U. 17-140-A at 156 (2018); Retail Access for Competitive Suppliers of Renewable Energy Generation Attributes, D.P.U. 08-52, at 18 (2014); Aquarion Water Company of Massachusetts, Inc., D.P.U. 11-43, at 250 (2012); Boston Edison Company / Cambridge Electric Light Company / Commonwealth

Electric Company.²⁵ However, the Department takes this opportunity to clarify the roles and responsibilities of the Distribution Companies and interconnecting customers with respect to ASO study costs and system modifications, as described below.

ASO studies require the Distribution Companies to take on additional coordination responsibilities as the nexus between interconnecting customers, the ASO, and ISO-NE. In addition to communicating data requests, timelines, and cost estimates, the Distribution Companies, in practice, have become responsible for collecting costs for ASO studies or system modifications from interconnecting customers and passing money collected on to the ASO. Consistent with our findings regarding ASO study processing, we find it appropriate to revise Section 3.3 of the DG Interconnection Tariff as follows to reflect the roles and responsibilities of the interconnecting customer and the Distribution Companies with respect to ASO study costs and any resultant system modification costs. The following process shall apply to ASO study costs:

- Once an ASO notifies a Distribution Company of the transmission study costs, the Distribution Company has five business days to notify the interconnecting customer.
- Once notified by the Distribution Company, the interconnecting customer has 15 business days to remit payment.
- If the interconnecting customer fails to remit payment within the prescribed time, the interconnecting customer has ten business days to cure.

²⁵ The Department is currently exploring alternative cost allocation approaches for interconnection in this docket (D.P.U. 19-55, Hearing Officer Memorandum (May 14, 2020)). Should the Department determine that an alternative approach is appropriate in the future, the Department will direct any necessary changes to the DG Interconnection Tariff and Department DG Guidelines at the conclusion of its investigation.

- If the interconnecting customer fails to cure within the prescribed time, the interconnection customer loses its queue position, and must reapply for interconnection unless the interconnecting customer and the Distribution Company agree otherwise.²⁶

Because the Distribution Companies do not control the ASO study or system modification costs, the Department cannot require them to provide a guaranteed cost envelope for any ASO study estimates. Therefore, we direct the Distribution Companies to revise Section 3.3 of the DG Interconnection Tariff to clarify that interconnecting customers are responsible for all ASO study costs or system modifications, and that these costs and any estimates shall not be subject to any cap or limitation under the DG Interconnection Tariff. The Department expects the Distribution Companies to use their best efforts to obtain accurate, up-to-date cost information from the ASOs, and to clearly communicate any cost information to interconnecting customers in a timely manner, consistent with the Consensus Redlines approved in Section IV.

Finally, we agree with stakeholders that the ISA should include both distribution and transmission level costs that the customer is required to bear. Therefore, we direct the Distribution Companies to amend the form Interconnection Agreement as proposed in their September 11, 2019 Comments. The Department cautions the Distribution Companies against issuing an ISA until all transmission costs have been determined. However, if a

²⁶ Nothing in this Order is intended to preclude the ASO from billing the interconnecting customer directly. Further, should the ASO invoice reflect a different timeline (i.e., a longer period to submit payment, or a staggered payment schedule), the Distribution Company shall include that information in its communication to interconnecting customers.

Distribution Company issues an ISA without all known transmission costs, the Distribution Company must provide the interconnecting customer with full transmission costs when they are known and must incorporate those costs in an amended ISA. Interconnecting customers that proceed with an ISA absent a transmission-level cost determination do so at their own risk and shall be responsible for any such costs if and when they are determined.

While the Department appreciates the Distribution Companies' effort to codify the responsibilities of various parties through a new form agreement, the Department declines to adopt such an agreement at this time. We find that the revisions to the DG Interconnection Tariff and Department DG Guidelines contained herein provide sufficient clarity on the roles and responsibilities of the interconnecting customer and Distribution Companies.

XII. PROJECT MODIFICATIONS TO MITIGATE ASO STUDIES

A. Introduction

Stakeholders suggest that the Distribution Companies may be able to reduce the need for ASO studies if the DG interconnection process includes a role for identifying project mitigation measures (NECEC Comments at 5-6; DOER Comments at 4). In this section, the Department considers a process for identifying project modifications to mitigate the need or result of an ASO study.

B. Summary of Comments

NECEC recommends that the DG Interconnection Tariff require that DG applications be reviewed for modifications that might mitigate the need for an ASO study (NECEC Comments at 5). After an ASO study has been conducted, NECEC further recommends that

the Department consider requiring an investigation of project modifications to identify ways to reduce the scope and cost of the interconnection process (NECEC Comments at 5-6).

DOER supports revising the DG Interconnection Tariff to encourage measures that may mitigate the system impact of interconnecting DG resources, including energy storage, curtailment, and demand-side management (DOER Comments at 3-4). After a DG application has been submitted, DOER suggests that the Distribution Companies and interconnecting customers jointly explore measures to shorten the time and mitigate the cost of the ASO study process, while also reducing system impacts (DOER Comments at 4-5). DOER proposes that the DG Interconnection Tariff include a process for Distribution Companies to provide the information necessary for interconnecting customers to revise a project design and to account for potential mitigation measures (DOER Comments at 4-5). According to DOER, such a process will help reduce the need for system upgrades, thus enabling the Commonwealth to achieve its energy policy objectives in a reliable, cost-effective manner (DOER Comments at 5).

The Distribution Companies object to NECEC's and DOER's proposals to identify and provide possible mitigation measures to DG applicants beyond a reduction in project size (Distribution Companies Comments at 21). With increased saturation on the distribution EPS, the Distribution Companies contend that mitigation measures are, at most, a temporary fix to a long-term challenge (Distribution Companies Comments at 21). The Distribution Companies object to providing business advice on project design because interconnecting customers are responsible for designing their projects, and the Distribution Companies do not

want exposure to future liability if an interconnecting customer relies on that business advice (Distribution Companies Comments at 21). The Distribution Companies argue that they cannot devote additional resources to each interconnection customer for what is already a time-sensitive process (Distribution Companies Comments at 21). Finally, the Distribution Companies note that an ASO study follows ISO-NE requirements to study projects as proposed rather than running multiple analyses that account for different mitigation measures (Distribution Companies Comments at 21-22). If ISO-NE study requirements change to allow study of mitigation options, the Distribution Companies assert that ASO studies will take longer and be more costly (Distribution Companies Comments at 26). In any case, the Distribution Companies contend that mitigation is not always a viable possibility (Distribution Companies Comments at 26).

C. Analysis and Findings

The Department understands commenters desire to have the Distribution Companies explore or propose mitigation measures to interconnecting customers (NECEC Comments at 5-6; DOER Comments at 3-5). As the entities that own and operate the distribution system, the Distribution Companies are best positioned to understand the operational state of their EPS. In that position, the Distribution Companies may be able to recommend certain mitigation measures as part of the interconnection process that could not be identified by other entities. The Department recognizes, however, the Distribution Companies' concerns with providing business advice to interconnecting customers and the associated liability (Distribution Companies Comments at 21). We are persuaded that further progress may be

possible in developing a process whereby the Distribution Companies and interconnecting customers work together to identify project modifications that could mitigate the need for or results of an ASO study without Distribution Companies' assuming liability for business or design decisions of the interconnecting customer. Therefore, we encourage continued cooperation and collaboration among stakeholders in reaching consensus on this issue.

XIII. CONCLUSION

We approve the Consensus Redlines filed by the Joint Stakeholders on September 27, 2019 and direct further revisions to the DG Interconnection Tariff in accordance with the findings and directives herein. The Distribution Companies shall jointly file a revised model DG Interconnection Tariff within fifteen business days of this Order. Furthermore, we establish Department DG Guidelines for the interconnection of DG as set forth in Attachment A.

XIV. ORDER

Accordingly, after notice, opportunity for comment, and due consideration, it is

ORDERED: That the revisions to the Standards of Interconnection of Distributed Generation Tariff identified herein are APPROVED; and it is

FURTHER ORDERED: That the proposed revisions to the Standards of Interconnection of Distributed Generation Tariff jointly filed by Fitchburg Gas and Electric Light Company d/b/a Unitil, Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, and NSTAR Electric Company d/b/a Eversource Energy on September 11, 2019, to be modified and amended consistent with the directives contained

herein, are APPROVED; and it is

FURTHER ORDERED: That, within 15 business days of the date of this Order, Fitchburg Gas and Electric Light Company d/b/a Unitil, Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, and NSTAR Electric Company d/b/a Eversource Energy shall jointly file a revised model Standards of Interconnection of Distributed Generation Tariff consistent with the provisions herein; and it is

FURTHER ORDERED: That Fitchburg Gas and Electric Light Company d/b/a Unitil, Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid, and NSTAR Electric Company d/b/a Eversource Energy shall comply with all directives contained in this Order; and it is

FURTHER ORDERED: That the DG Guidelines set forth in Attachment A to this Order be and hereby are APPROVED.

By Order of the Department,

/s/
Matthew H. Nelson, Chair

/s/
Robert E. Hayden, Commissioner

/s/
Cecile M. Fraser, Commissioner

An appeal as to matters of law from any final decision, order or ruling of the Commission may be taken to the Supreme Judicial Court by an aggrieved party in interest by the filing of a written petition praying that the Order of the Commission be modified or set aside in whole or in part. Such petition for appeal shall be filed with the Secretary of the Commission within twenty days after the date of service of the decision, order or ruling of the Commission, or within such further time as the Commission may allow upon request filed prior to the expiration of the twenty days after the date of service of said decision, order or ruling. Within ten days after such petition has been filed, the appealing party shall enter the appeal in the Supreme Judicial Court sitting in Suffolk County by filing a copy thereof with the Clerk of said Court. G.L. c. 25, § 5.