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October 20, 2017

Mark D. Marini, Secretary  
Department of Public Utilities  
One South Station, 5<sup>th</sup> Floor  
Boston, MA02110

Re: Joint Petition of Fitchburg Gas and Electric Light Company d/b/a Unitil, Massachusetts Electric Company and Nantucket Electric Company, d/b/a National Grid, NSTAR Electric Company and Western Massachusetts Electric Company, d/b/a Eversource Energy for Approval of a Proposed Revised Version of Section 3.4.1 of the Standards of Interconnection of Distributed Generation Tariff-D.P.U. 17-XX

Dear Secretary Marini:

On behalf of Fitchburg Gas and Electric Light Company d/b/a Unitil, Massachusetts Electric Company and Nantucket Electric Company, d/b/a National Grid, NSTAR Electric Company and Western Massachusetts Electric Company, d/b/a Eversource Energy (the “Distribution Companies”), enclosed for filing is a joint proposed revised version of Section 3.4.1 of the Standards of Interconnection of Distributed Generation tariff (“Interconnection Tariff”).

Section 3.4.1 of the Interconnection Tariff, addressing so-called “Group Studies”, was in effect for the period June 1, 2015 through May 31, 2016. Since the end of that period, the Distribution Companies have determined that a new tariff provision authorizing Group Studies is reasonable, subject to modifications.

The proposed revised Section 3.4.1 meets the same purpose as the original version of Section 3.4.1, but is updated to incorporate lessons learned by the Distribution Companies in implementing the original version of Section 3.4.1. Therefore, the Company is seeking approval of the proposed revised Section 3.4.1, for incorporation into the Interconnection Tariff.

In support of this request, please find the following documents:

- Exhibit JDT-1 – Joint Direct Testimony of John J. Bonazoli, Timothy R. Roughan, and Brett A. Jacobson;
- Exhibit JDT-2 – A clean and redlined version of the proposed Section 3.4.1; and

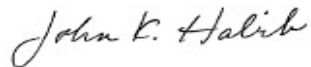
- Exhibit JDT-3 – A clean version of the original Section 3.4.1.

Please contact me or the counsel below with any questions you may have:

<p>Liana P. Moore, Esq. Bowditch &amp; Dewey 200 Crossing Boulevard, Suite 300 Framingham, MA 01702 On Behalf Of: Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National Grid 508-416-2470</p>	<p>Gary Epler, Esq. Chief Regulatory Counsel Fitchburg Gas &amp; Electric Light Company 6 Liberty Lane West Hampton, NH 03842 603-773-6440</p>
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Thank you for your attention to this matter.

Sincerely,



John K. Habib, Esq.

On Behalf Of:  
NSTAR Electric Company and  
Western Massachusetts Electric Company,  
each d/b/a Eversource Energy

Enclosures

cc: Sarah Herbert, Esq.  
Nathan Forster, Esq., Assistant Attorney General  
Elizabeth Mahony, Esq., Assistant Attorney General  
Robert Hoaglund Esq., General Counsel, DOER

**COMMONWEALTH OF MASSACHUSETTS  
DEPARTMENT OF PUBLIC UTILITIES**

**D.P.U. 17-XXX**

**JOINT TESTIMONY OF**

**JOHN J. BONAZOLI**

**TIMOTHY R. ROUGHAN**

**BRETT A. JACOBSON**

**ON BEHALF OF**

**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  
WESTERN MASSACHUSETTS ELECTRIC COMPANY,  
EACH d/b/a EVERSOURCE ENERGY**

**EXHIBIT JDT-1**

**OCTOBER 20, 2017**

1 **I. INTRODUCTION**

2 **Q. Mr. Bonazoli, please state your name and business address.**

3 A. My name is John J. Bonazoli. My business address is 6 Liberty Lane West, Hampton,  
4 New Hampshire 03842.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by Unitil Service Corporation as the Manager of Distribution  
7 Engineering. My responsibilities include the capacity and power quality planning of the  
8 electric distribution system and the interconnection of all Distributed Energy Resources.

9 **Q. On whose behalf are you testifying?**

10 A. I am testifying on behalf of Fitchburg Gas and Electric Light Company d/b/a Unitil  
11 (“Unitil”).

12 **Q. Please describe your educational background and professional experience.**

13 A. I am a registered Professional Engineer in the states of Massachusetts and New  
14 Hampshire and received a Bachelor of Science degree in Electrical Engineering from  
15 Northeastern University in 1987 and a Master of Science degree in Management from  
16 Lesley University in 1993.

17 I have 30 years of experience in the utility industry with expertise in power flow and  
18 system fault analysis and the design of protection and control systems. Prior to joining  
19 Unitil in April of 1999, I was a partner at DCG Technologies for over a year, and before  
20 then, I was employed for ten years at Boston Edison (now Eversource Energy).

1 **Q. Have you previously testified before the Department or any other regulatory**  
2 **commission?**

3 A. Yes.

4 **Q. Mr. Roughan, please state your name and business address.**

5 A. My name is Timothy R. Roughan. My business address is 40 Sylvan Road, Waltham,  
6 Massachusetts 02451.

7 **Q. By whom are you employed and in what capacity?**

8 A. I am employed by National Grid USA Service Company, Inc. as the Director of Energy  
9 and Environmental Policy. My responsibilities include providing regulatory and policy  
10 direction on issues relative to distributed generation. I have worked extensively on  
11 procedures for interconnecting distributed generation to National Grid USA subsidiaries,  
12 Massachusetts Electric Company and Nantucket Electric Company, each d/b/a National  
13 Grid (together, "National Grid"), electric distribution systems both for state jurisdictional  
14 projects in Massachusetts and Federal Energy Regulatory Commission jurisdictional  
15 projects at the ISO New England.

16 **Q. On whose behalf are you testifying?**

17 A. I am testifying on behalf of National Grid.

18 **Q. Please describe your educational background and training.**

19 A. I am a 1982 graduate of Worcester Polytechnic Institute with a Bachelor of Science in  
20 Mechanical Engineering and have worked for the Service Company or its predecessors  
21 for 35 years.

1 **Q. Please describe your professional experience.**

2 A. I have been the Company's lead expert witness for matters pertaining to the Company's  
3 interconnection tariff(s). I was a member of the original distributed generation Working  
4 Group (defined in Section II below) convened in 2003, which resulted in the initial  
5 interconnection tariff filing and subsequent approval in early 2004. Since that time, I  
6 have been involved with a number of iterations of the tariff in the 2005-2007 timeframe,  
7 and served as a member of the most recent Working Group that met through the summer  
8 of 2012 and filed tariff revisions in the fall of that year.

9 **Q. Have you previously testified before the Department or any other regulatory**  
10 **commission?**

11 A. Yes.

12 **Q. Mr. Jacobson, please state your name, position and business address.**

13 A. My name is Brett A. Jacobson. My address is 247 Station Drive, Westwood,  
14 Massachusetts 02090.

15 **Q. By whom are you employed and in what capacity?**

16 A. I am Manager-Distributed Generation for Eversource Energy Service Company.

17 **Q. On whose behalf are you testifying?**

18 A. I am testifying on behalf of NSTAR Electric Company and Western Massachusetts  
19 Electric Company, each d/b/a Eversource Energy (together, "Eversource").

1 **Q. Please summarize your education and professional experience.**

2 A. I graduated from The Massachusetts Maritime Academy in 1995. Since that time, I have  
3 was an Engineer for the Merchant Marines, and worked for Viola in Business  
4 Development, focused on Combined Heat and Power solutions. Since 2014, I have been  
5 employed by Eversource. I have been in my current position since May 2017.

6 **Q. Have you previously testified before the Department of Public Utilities**  
7 **(“Department”)?**

8 A. I have not.

9 **Q. What is the purpose of your joint testimony?**

10 A. The purpose of this joint testimony is to propose a revised version of Section 3.4.1 of the  
11 model Standards for Interconnection of Distributed Generation tariff (“Interconnection  
12 Tariff”) that is provided by each of the Massachusetts electric distribution companies  
13 (“EDCs”). Currently, Section 3.4.1 in the Interconnection Tariff includes provisions  
14 authorizing each EDC to perform cluster or “group” impact studies of multiple  
15 applications to interconnect distributed generation (“DG”) facilities to a discrete portion  
16 of a EDC’s Electric Power System (“EPS”) where the operation of multiple  
17 Interconnecting Customers’ Facilities may have cumulative impacts and/or require  
18 common system modifications on an EDC’s EPS. The proposed revised version of  
19 Section 3.4.1 meets the same purpose, but is updated to incorporate lessons learned by  
20 the EDCs in implementing the current version of Section 3.4.1 since it took effect on  
21 June 1, 2015.

1 **II. HISTORY OF THE DISTRIBUTED GENERATION INTERCONNECTION**  
2 **GROUP STUDY PROVISION**

3 **Q. Where did the Group Study section of the Interconnection Tariff originate?**

4 A. The Group Study provision originated from recommendations offered by the  
5 Massachusetts Distributed Generation Interconnection Working Group (“Working  
6 Group”) to the Department in Distributed Generation Interconnection, D.P.U. 11-75. The  
7 Working Group was comprised primarily of the EDCs, DG providers, and the  
8 Department of Energy Resources. In 2011, the Department opened a proceeding to  
9 review the interconnection process, and established the Working Group to make  
10 recommendations. D.P.U. 11-75-A, at 4. The Working Group was tasked with creating a  
11 more efficient and effective interconnection process. D.P.U. 11-75-A, at 4. On  
12 September 14, 2012, the Working Group submitted a final report to the Department  
13 detailing its findings. Among those findings was a commitment to continue discussions  
14 within the Working Group to propose a process to study in the aggregate multiple  
15 applications to interconnect distribution facilities to a discrete area of an EDC’s EPS.

16 **Q. When did the EDCs submit the original Group Study provision to the Department?**

17 A. At the direction of the Department, the EDCs filed a model interconnection tariff in 2014,  
18 which included the original Group Study provision in Section 3.4.1. The original Group  
19 Study provision was designed as a 12-month pilot, commencing from the effective date  
20 of the tariff.

21 **Q. Was the Working Group’s proposed model tariff approved?**

22 A. Yes, the Working Group’s proposed model tariff, with some modifications, was



1 approved, on May 4, 2015, in D.P.U. 11-75-G, and took effect on June 1, 2015.

2 **Q. What was the EDCs' experience implementing the Group Study provision?**

3 A. As described herein, there were pros and cons of the original Group Study provision. At  
4 the conclusion of the 12-month pilot period, the EDCs reflected on their collective  
5 experience implementing Group Studies. The EDCs determined that the inclusion of a  
6 Group Study provision in the Interconnection Tariff could provide overall benefits to  
7 customers and the EDCs if certain aspects of Section 3.4.1 were rethought to improve the  
8 efficiency of the Group Study process for all parties. As a result, the EDCs are proposing  
9 revised Group Study language for the Department's review and approval, provided as  
10 Exhibit JDT-2 in both clean and redlined versions. For ease of reference, the EDCs have  
11 provided the original Group Study Provision as Exhibit JDT-3.

12 **III. DISTRIBUTION COMPANY EXPERIENCE IMPLEMENTING GROUP STUDY**  
13 **PROVISION**

14 **Q. In the EDCs' collective experience, what were some of the benefits of performing**  
15 **Group Studies pursuant to Section 3.4.1?**

16 A. The Group Study provisions provided guidance and transparency on the process to study  
17 multiple interconnection applications in a common area. Studying multiple applications  
18 at the same time has the potential to realize cost savings on study fees, off-set the impact  
19 of system modifications costs to individual customers, and reduce study and/or  
20 construction time in the aggregate when compared to sequential individual studies and  
21 construction of multiple projects.

1 **Q. What were some of the main problems implementing Group Studies pursuant to**  
2 **Section 3.4.1?**

3 A. The EDCs found that implementing the Group Study provisions was challenging in large  
4 part due to individual customer requests for multiple study iterations, project changes,  
5 extensions and other delays, such as missed deadlines. Where multiple Interconnecting  
6 Customers were involved, coordinating Group members, obtaining consensus on a scope  
7 of work and mutually agreeable time frames, and managing delays was difficult and the  
8 EDCs were refereeing conflicts between Interconnecting Customers. These issues  
9 increased the length and complexity of the Group Study, which was contrary to its  
10 intended purpose.

11 **IV. PROPOSED REVISED GROUP STUDY PROVISION**

12 **Q. Were any definitions in the Interconnection Tariff changed to implement the**  
13 **proposed revised Group Study provision?**

14 A. Yes, as a result of modifying the Group Study provision, the EDCs are proposing a new  
15 definition for the term Common System Modification. In addition, a few other current  
16 definitions require refinements, as noted below.

17 **Q. How have the EDCs defined “Common System Modification”?**

18 A. The term “Common System Modification” shall mean any System Modification that is  
19 required for more than one Interconnection Customer’s facility. The current Group Study  
20 provision does not define the term Common System Modification although the term is  
21 referenced in the provision.

1 **Q. Was the definition of “Group” altered in the proposed provision?**

2 A. Yes, the “application completion date” for the Group has been removed because such  
3 date is unnecessary in the interconnection process and, therefore, led to confusion about  
4 its applicability. The Company will continue to determine when individual  
5 interconnection applications are deemed complete and the order within the group will be  
6 determined by this date. Additional edits were made to provide clarification where the  
7 EDCs thought it was necessary, such as defining the term “Group member.”

8 **Q. Was the definition of “Group Study” modified in the proposed provision?**

9 A. Yes, now, at the discretion of the EDC, a Group Study may be performed after a  
10 Preceding Study. The current Group Study provisions required the Preceding Study to be  
11 completed before a Group Study could commence. This was not always necessary and,  
12 as such, caused some unnecessary delays in the Group Study process. Similarly, there  
13 were instances where the need for a Group Study was identified before any Preceding  
14 Study was commenced, which lead to confusion as to how and when to start the Group  
15 Study process.

16 The term “Group Study” will continue to mean a modified Impact Study; however, a  
17 Group Study may also mean Detailed Study to be performed for the collective group of  
18 Interconnecting Customers at a given Common Study Area. Additional edits were made  
19 where the EDCs thought it was necessary to provide clarity in the Group Study process.

20 **Q. Was the definition of “Preceding Study” modified in the proposed provision?**

21 A. Yes, edits were made to more clearly address the interplay between a Preceding Study

1 and a Group Study. Because the Group Study definition was modified to address the  
2 timing of the Group Study in relation to a Preceding Study, as detailed above, the  
3 requirement that a Preceding Study be completed before a Group Study is commenced  
4 was removed from the Preceding Study definition. Now, a Preceding Study shall mean a  
5 study of an Interconnecting Customer's Facility within a Common Study Area  
6 commenced before a Group has been formed. Also, this new definition includes the  
7 language from current Group Study provision Subsection (j) stating that an on-going  
8 Group Study will be considered a Preceding Study (thereby warranting its removal from  
9 Subsection (j)). The definition also clarifies that those Interconnecting Customers with a  
10 Preceding Study, not an on-going Group Study, will not be required to participate in a  
11 Group Study.

12 **Q. In addition to revisions to definitions applicable to Group Studies, the Group Study**  
13 **process provisions of Section 3.4.1 have undergone significant alterations. Can you**  
14 **explain the changes broadly?**

15 A. Yes. The Group Study provisions have been altered to provide greater clarity and  
16 efficiency on the process. Of particular note, Interconnecting Customers participating in  
17 a Group Study may no longer make alterations or modifications to the scope of the study  
18 once the study agreement is sent to the Group, timeframes and defaults were clarified,  
19 and limitations were placed on a Group member's cure and extension periods. These  
20 modifications were made to help streamline and lower costs associated with the Group  
21 Study process for participants as well as the Company, and to minimize the likelihood  
22 that one Interconnecting Customer will delay the process for the other Group members.

1 Additionally the EDCs removed, modified, and/or reorganized some of the Group Study  
2 provisions to provide clarity and make it easier for Interconnecting Customers to  
3 understand the process and requirements.

4 **Q. Please explain the alterations made to Section 3.4.1(a).**

5 A. First, the language regarding the Pilot Period was removed from Subsection (a).  
6 Subsection (a) now provides clarity on how and when a Group is formed and a Group  
7 Study may be initiated. Specifically, when an EDC receives one or more interconnection  
8 applications for proposed facilities in the same Common Study Area, the EDC may form  
9 a Group and commence a Group Study, and notify the Interconnecting Customers  
10 affected. Lastly, similar to the original version of Section 3.4.1(b) the EDCs reserve their  
11 right to conduct a study separate from the Group even if such facility is within the  
12 Common Study Area, at the discretion of the EDC.

13 **Q. Please explain the alterations made to Section 3.4.1(b).**

14 A. The most important change to Subsection (b) is the disallowance of changes and  
15 modifications to the scope of the study once the study agreement has been submitted to  
16 the Group. The EDCs also specified that the Group members will have 15 days to  
17 execute the Group Study Agreement and submit the requisite fees, which is consistent  
18 with the Tariff Time Frame requirements.

19 The EDCs will continue to hold Group Study scoping meetings before the  
20 commencement of the Group Study. The scoping meeting will cover the feasibility of the  
21 Group Study. The Group will close to new members on a date to be set by the EDC but in

1 no event later than on or before the date of the scoping meeting. However, the EDCs  
2 reserve the right to add additional Group members after the scoping meeting if critical or  
3 compelling business cases are present.

4 **Q. Please explain the alterations made to Section 3.4.1(c).**

5 A. Subsection (c) concerns the removal of Interconnecting Customers from a Group. An  
6 Interconnecting Customer may be removed from a Group at their request by cancelling  
7 their application or for non-conformance with Time Frames or other tariff requirements.  
8 Interconnecting Customers will have an extension or cure period only if all Group  
9 members agree. In addition, the EDCs clarified what is meant by “Time Frame non-  
10 conformance” to ensure that the Group members would understand the process  
11 expectations and proceed expeditiously without causing delay to other Group members.  
12 Lastly, a provision has been added noting that, to the extent a deadline is missed, the  
13 application will be withdrawn and the customer must submit a new application request if  
14 they wish to proceed with the project.

15 **Q. Please explain the alterations made to Section 3.4.1(d).**

16 A. The language regarding the Time Frame for completion of the Group Study has been  
17 moved to Subsection (c). Additionally, the language disallowing refunds of contributions  
18 to Group Study cost has been modified and moved to Subsection (i).

19 **Q. Please explain the alterations made to Section 3.4.1(e).**

20 A. The language regarding reallocation of costs subsequent to a change in Group  
21 composition has been moved to Subsection (i). EDCs elaborate in this section on cost-

1 sharing associated with system modifications, based on the concepts pulled from current  
2 Group Study provision Subsection (i). Costs will continue to be assessed on the basis of  
3 applied capacity for any Common System Modifications required. Any costs for System  
4 Modifications not shared will continue to be the sole responsibility of the Group member  
5 requiring the System Modifications. System Modification costs associated with the  
6 Group Study will be subject to Section 5.3 of the tariff. Section 5.3 of the current tariff  
7 does not have any proposed changes. Lastly, the EDCs specified that the Group members  
8 will be directly responsible for third-party costs, and the EDCs will not be responsible to  
9 determine cost allocations for such cost between the Group members.

10 **Q. Please explain the alterations made to Section 3.4.1(f).**

11 A. The language regarding adherence to Time Frames has been moved to Subsection (c).  
12 The requirements of the Preceding Study have been modified and addressed under the  
13 definitions for the terms “Preceding Study” and “Group Study”. Proposed Subsection (f)  
14 provides for Group members to have fifteen days from their receipt of the completed  
15 Group Study to notify the EDC whether they wish to proceed with the interconnection  
16 process. If any Facilities in the Group do not require Common System Modifications,  
17 then those Interconnecting Customer(s) may proceed with the interconnection process  
18 outside of the Group.

19 **Q. Please explain the alterations made to Section 3.4.1(g).**

20 A. The language regarding System Modification costs has been moved to Subsection (e).  
21 The language setting forth the Group Study iterations was deleted in its entirety. The

1 EDCs will address any Group member(s)'s request(s) for various Group Study iterations  
2 in the scoping meeting, and come to an agreement on the scope of each Group Study. As  
3 specified in proposed Group Study provision Subsection (b), once the Group Study  
4 agreement is sent to the Group, there will be no changes to the scope. This change was  
5 made to address potential processing delays when one or more Group members seek to  
6 change the scope of the Group Study after the scoping meeting.

7 Language was added to address project changes requested by a Group member during a  
8 Group Study process, and to specify the determinations that the EDC will make in  
9 accordance with Section 3.5 and the EDC's technical standards. Additionally, to  
10 minimize the impact one Interconnecting Customer's changes could have on the other  
11 Group members, the EDCs specified that project changes that will cause delays will not  
12 be permitted unless the other Group members and the Company agree to such changes.

13 **Q. Please explain the alterations made to Section 3.4.1(h).**

14 A. First, the EDCs have removed language regarding steps to be taken after the completion  
15 of the Group Study. Also, proposed Subsection (h) provides that there will be no time  
16 extensions for payments of Group Study costs and/or Common System Modifications.  
17 Further, Time Frame extensions that will delay Group Studies or construction of  
18 Common System Modifications will require all Group members to agree in writing. Full  
19 payment will continue to be required before the EDC begins any Group Study or  
20 construction for Common System Modifications, consistent with the current Group Study  
21 provisions in Subsection (i).



1 **Q. Please explain the alterations made to Section 3.4.1(i).**

2 A. The provisions in Subsection (i) pertaining to cost allocations have been moved, with  
3 some modification, to Subsection (e). Subsection (i) now contains the language  
4 disallowing refunds on any contributions made to the Group Study or Common System  
5 Modification cost. If the Group composition requires revised or additional studies, the  
6 remaining Group member(s) shall pay their cost, and the completion date will be re-  
7 estimated by the Company. Subsequent to a change in the Group composition, the EDC  
8 may reassess both study and Common System Modification costs. Any increase in such  
9 cost(s) will be borne by remaining Group members.

10 **Q. Please explain the alterations made to Section 3.4.1(j).**

11 A. Subsection (j) has been eliminated and replaced with the language of current  
12 Subsection (k) detailing ISO-NE requirements. ISO-NE studies and requirements are  
13 outside the scope of the Group Study and may interrupt the applicable Time Frame for  
14 completion of the Group Study.

15 **VII. CONCLUSION**

16 **Q. Does this conclude your testimony?**

17 A. Yes, it does.

## 1.2 **Definitions**

“Common Study Area” shall mean a discrete portion of the Company EPS where the operation of multiple Interconnecting Customers’ Facilities may have cumulative impacts and/or require Common System Modifications on the Company’s EPS. The Company shall determine if applications fall within a Common Study Area. A Common Study Area may include, but is not limited to, an area that: (1) is fed from a common substation, or (2) is bounded by a circuit.

“Common System Modification” shall mean any System Modification that is required for more than one Interconnection Customer’s Facility as determined by the Company.

“Group” shall mean two or more proposed Facilities (by the same or different Interconnecting Customer(s)) in a Common Study Area. The order of Interconnection Applications within a Group shall be determined on the basis of the date the Interconnection Applications were received by the Company. References to a Group member shall mean the Interconnecting Customer for the Facility included within the Group.

“Group Study” shall mean a modified Impact Study and/or Detailed Study that may be performed at the same time for a Group, instead of each application undergoing such study separately (either sequentially or in parallel as determined by the Company). The Company may elect to commence a Group Study after the Preceding Study, if any, is completed.

“Preceding Study” shall mean any study of an Interconnecting Customer’s Facility within a Common Study Area that is in process prior to the formation of a Group. An on-going Group Study will be considered a Preceding Study for any interconnection applications received after the Group Study has commenced. Interconnecting Customers with a Preceding Study (that is not an on-going Group Study) shall not be required to be part of a Group or participate in a Group Study.

## 3.4 **Standard Process**

### **3.4.1. Group Study Process**

- a) The Company may form a Group any time it receives more than one Interconnection Application through the Expedited or Standard Process for proposed Facilities in a Common Study Area. The Company will notify Interconnecting Customers prior to the commencement of any individual Impact Study that such Interconnecting Customer’s application will be processed as part of a Group. The Company may also, in its sole judgment, conduct a study for an Interconnecting Customer’s Facility separate from the Group even if such Facility is within the Common Study Area.
- b) A Group Study may only commence when all members of the Group have met the prerequisites for commencement of an Impact Study. The application receipt and review, and all screening reviews, for each potential Group member is subject to the applicable Time Frames set forth in the Tariff, Tables 2 to 4, as applicable. Time

Frames for completion of Group Studies shall be by mutual agreement. The Company shall invite all potential Group members to a Group Study scoping meeting to discuss the feasibility of the Group Study after the initial or screening reviews have been completed for all potential Group members. The Group shall be closed to additional members when determined by the Company but in any event no later than on or before the date the scoping meeting for the Group is scheduled to be held. The Company reserves the right to add group members after the meeting is held for critical or compelling business cases and all Group members will be informed immediately of the changes.

There will be no changes or modifications to the scope of the study allowed once the Company sends the study agreement to the group.

Group members have 15 days to execute the Group Study Agreement, and submit payment of fees in a form acceptable to the Company.

- c) Interconnecting Customers may be removed from the Group at any time (i) at their request by canceling the application; or (ii) by the Company because of non-conformance with Time Frames or other tariff requirements. It shall be considered a Time Frame non-conformance for any Interconnecting Customer to miss a tariff Time Frame deadline, and no Group member shall have a cure or extension period of such missed deadline under the tariff unless the Company and all Group members agree to such cure or extension period. Once a deadline is missed, the application will be withdrawn and the customer must submit a new application request if they wish to proceed with a project.
- d) Each member of the Group shall pay a percentage of the Group Study cost on the basis of applied capacity (in MW AC of aggregated maximum system design capacity for each applicant's Facility).<sup>1</sup> The cost for any study(ies) that are not common shall be the sole responsibility of the Group member for whom the study(ies) are required.
- e) The Group Study shall be performed such that System Modifications, whether shared or individual, and associated costs shall be determined for the entire Group, along with allocated costs for each member of the Group. Cost allocations shall be assessed on the basis of applied capacity (in MW AC of aggregated system design capacity for each applicant's Facility) for any Common System Modifications required. The cost for any System Modification(s) that are not common shall be the sole responsibility of the Group member for whom the System Modifications are required. System Modification costs associated with the Group Study shall be subject to Section 5.3 of this Tariff. Group member(s) will be responsible to pay any third party cost associated with the interconnection including Common System Modifications. The Company will not be responsible to determine cost allocation of these third party costs.

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Any scope and costs of ISO New England studies shall be considered to be separate from the scope and costs of a Group Study. Each Facility included in the Group may be subject to additional ISO-NE requirements, compliance with which is the responsibility of the Interconnecting Customer.

- f) Once the Group Study is completed it shall be distributed to the Group, and the Group member(s) shall have fifteen (15) business days to notify the Company whether they wish to proceed through the remainder of the interconnection process. If the Company identifies Facilities in the Group that would not require Common System Modifications independent of whether or not the other Group members' Facilities move forward with interconnection, those Interconnecting Customer(s) will move forward with the interconnection process outside of the Group.
- g) If any Group member requests a project change during the Group Study process, any potential need for additional information, documentation, time, fees, or the removal of that project from the Group shall be determined by the Company in accordance with Section 3.5 and the Company-specific technical standards. Notwithstanding the provisions of Section 3.5, project changes that will delay Group Studies or the construction of Common System Modifications will not be allowed for any Group member unless the Company and all Group members agree to the project change(s) in writing.
- h) Time Frame extensions permitted under Section 3.6.2 of this Tariff that will delay Group Studies or the construction of Common System Modifications will not be allowed for any Group member unless the Company and all Group members agree to the extension in writing. No extensions will be allowed for payments of Group Study costs and/or Common System Modifications. The Company shall not initiate any Group Study or construction for Common System Modifications until full payment is received for such work.
- i) If a member ceases to belong to the Group for any reason, any payments made to the Group Study or Common System Modification cost from that member shall be non-refundable. To the extent that a change to the Group composition requires revised or additional studies, the remaining Group member(s) shall pay their cost, and the completion date of such study shall be re-estimated by the Company. The Company may reassess study costs and Common System Modification costs subsequent to a change in composition of the Group and any increase in such costs must be paid by the remaining Group members.
- j) A group of facilities on a common bus may be subject to additional requirements, including without limitation ISO-NE operating procedure OP-14. If the ISO-NE maintains that a group of facilities must be set up as a single modeled generator, each member of the Group (i.e., each individual generator) must comply with these requirements. To the extent permitted under applicable ISO-NE requirements, Group members may arrange for an alternative means of performing the duties required under OP-14. In all cases, it will be the Group members' responsibility to determine what the individual ISO-NE requirements are, and the most efficient means to comply with those requirements (i.e., individually or collectively). ISO-NE studies and resulting requirements, such as design and construction of additional system modifications, are outside the scope of the Impact and Detailed Studies for the Group, and may interrupt the applicable Time Frame for completion of the Group Study.

**1.2 Definitions**

“Common Study Area” shall mean a discrete portion of the Company EPS where the operation of multiple Interconnecting Customers’ Facilities may have cumulative impacts and/or require Common System Modifications on the Company’s EPS. The Company shall determine if applications fall within a Common Study Area. A Common Study Area may include, but is not limited to, an area that: (1) is fed from a common substation, or (2) is bounded by a circuit.

~~Deleted: Group Study Process (Effective June 1, 2015-May 31, 2016)¶  
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“Common System Modification” shall mean any System Modification that is required for more than one Interconnection Customer’s Facility as determined by the Company.

“Group” shall mean two or more proposed Facilities (by the same or different Interconnecting Customer(s)) in a Common Study Area. The order of Interconnection Applications within a Group shall be determined on the basis of the date the Interconnection Applications were received by the Company. References to a Group member shall mean the Interconnecting Customer for the Facility included within the Group.

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“Group Study” shall mean a modified Impact Study and/or Detailed Study that may be performed at the same time for a Group, instead of each application undergoing such study separately (either sequentially or in parallel as determined by the Company). The Company may elect to commence a Group Study after the Preceding Study, if any, is completed.

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“Preceding Study” shall mean any study of an Interconnecting Customer’s Facility within a Common Study Area that is in process prior to the formation of a Group. An on-going Group Study will be considered a Preceding Study for any interconnection applications received after the Group Study has commenced. Interconnecting Customers with a Preceding Study (that is not an on-going Group Study) shall not be required to be part of a Group or participate in a Group Study.

~~Deleted: of applications whenever two or more applications are awaiting completion of a Preceding Study within a Common Study Area, as provided in Section 3.4.1. The Group Study shall be performed once the Preceding Study is completed~~

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Section 3.4.1¶  
a) . This section shall be in effect for a period of 12 months commencing June 1, 2015 (the “Pilot Period”). Any duties or obligations of either the Company or~~

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b) . As appropriate, the Company shall require that~~

~~Deleted: Interconnecting Customer within the Common Study Area participate in the Group Study whenever a Group exists.~~

**3.4 Standard Process**

**3.4.1. Group Study Process**

a) The Company may form a Group any time it receives more than one Interconnection Application through the Expedited or Standard Process for proposed Facilities in a Common Study Area. The Company will notify Interconnecting Customers prior to the commencement of any individual Impact Study that such Interconnecting Customer’s application will be processed as part of a Group. The Company may also, in its sole judgment, conduct a study for an Interconnecting Customer’s Facility separate from the Group even if such Facility is within the Common Study Area.

b) A Group Study may only commence when all members of the Group have met the prerequisites for commencement of an Impact Study. The application receipt and review, and all screening reviews, for each potential Group member is subject to the applicable Time Frames set forth in the Tariff, Tables 2 to 4, as applicable. Time Frames for completion of Group Studies shall be by mutual agreement. The

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Exhibit JDT-2

Company shall invite all potential Group members to a Group Study scoping meeting to discuss the feasibility of the Group Study after the initial or screening reviews have been completed for all potential Group members. The Group shall be closed to additional members when determined by the Company but in any event no later than on or before the date the scoping meeting for the Group is scheduled to be held. The Company reserves the right to add group members after the meeting is held for critical or compelling business cases and all Group members will be informed immediately of the changes.

There will be no changes or modifications to the scope of the study allowed once the Company sends the study agreement to the group.

Group members have 15 days to execute the Group Study Agreement, and submit payment of fees in a form acceptable to the Company.

c) Interconnecting Customers may be removed from the Group at any time (i) at their request by canceling the application; or (ii) by the Company because of non-conformance with Time Frames or other tariff requirements. It shall be considered a Time Frame non-conformance for any Interconnecting Customer to miss a tariff Time Frame deadline, and no Group member shall have a cure or extension period of such missed deadline under the tariff unless the Company and all Group members agree to such cure or extension period. Once a deadline is missed, the application will be withdrawn and the customer must submit a new application request if they wish to proceed with a project.

d) Each member of the Group shall pay a percentage of the Group Study cost on the basis of applied capacity (in MW AC of aggregated maximum system design capacity for each applicant's Facility).<sup>1</sup> The cost for any study(ies) that are not common shall be the sole responsibility of the Group member for whom the study(ies) are required.

e) The Group Study shall be performed such that System Modifications, whether shared or individual, and associated costs shall be determined for the entire Group, along with allocated costs for each member of the Group. Cost allocations shall be assessed on the basis of applied capacity (in MW AC of aggregated system design capacity for each applicant's Facility) for any Common System Modifications required. The cost for any System Modification(s) that are not common shall be the sole responsibility of the Group member for whom the System Modifications are required. System Modification costs associated with the Group Study shall be subject to Section 5.3 of this Tariff. Group member(s) will be responsible to pay any third party cost associated with the interconnection including Common System Modifications. The Company will not be responsible to determine cost allocation of these third party costs.

<sup>1</sup> Any scope and costs of ISO New England studies shall be considered to be separate from the scope and costs of a Group Study. Each Facility included in the Group may be subject to additional ISO-NE requirements, compliance with which is the responsibility of the Interconnecting Customer.

**Deleted:** The application receipt and review, and all screening reviews, for each potential Group member is subject to the applicable Time Frames set forth in the Tariff, Tables 1 to 5, as applicable. The Company may also, in its sole judgment, conduct a study for an Interconnecting Customer separate from the Group Study to the extent warranted by Good Utility Practice

**Deleted:** c) . If any Interconnecting Customer within

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¶ f) A Group Study may only commence after completion of the Preceding Study that was in-process when the Group was formed and all members of the Group have met the prerequisites for commencement of an Impact Study. The Preceding Study is the Impact Study that was in process when the Group was formed, so the Time Frame for the

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f) Once the Group Study is completed it shall be distributed to the Group, and the Group member(s) shall have fifteen (15) business days to notify the Company whether they wish to proceed through the remainder of the interconnection process. If the Company identifies Facilities in the Group that would not require Common System Modifications independent of whether or not the other Group members' Facilities move forward with interconnection, those Interconnecting Customer(s) will move forward with the interconnection process outside of the Group.

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g) If any Group member requests a project change during the Group Study process, any potential need for additional information, documentation, time, fees, or the removal of that project from the Group shall be determined by the Company in accordance with Section 3.5 and the Company-specific technical standards. Notwithstanding the provisions of Section 3.5, project changes that will delay Group Studies or the construction of Common System Modifications will not be allowed for any Group member unless the Company and all Group members agree to the project change(s) in writing.

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h) Time Frame extensions permitted under Section 3.6.2 of this Tariff that will delay Group Studies or the construction of Common System Modifications will not be allowed for any Group member unless the Company and all Group members agree to the extension in writing. No extensions will be allowed for payments of Group Study costs and/or Common System Modifications. The Company shall not initiate any Group Study or construction for Common System Modifications until full payment is received for such work.

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i) If a member ceases to belong to the Group for any reason, any payments made to the Group Study or Common System Modification cost from that member shall be non-refundable. To the extent that a change to the Group composition requires revised or additional studies, the remaining Group member(s) shall pay their cost, and the completion date of such study shall be re-estimated by the Company. The Company may reassess study costs and Common System Modification costs subsequent to a change in composition of the Group and any increase in such costs must be paid by the remaining Group members.

j) A group of facilities on a common bus may be subject to additional requirements, including without limitation ISO-NE operating procedure OP-14. If the ISO-NE maintains that a group of facilities must be set up as a single modeled generator, each member of the Group (i.e., each individual generator) must comply with these requirements. To the extent permitted under applicable ISO-NE requirements, Group members may arrange for an alternative means of performing the duties required under OP-14. In all cases, it will be the Group members' responsibility to determine what the individual ISO-NE requirements are, and the most efficient means to comply with those requirements (i.e., individually or collectively). ISO-NE studies and resulting requirements, such as design and construction of additional system modifications, are outside the scope of the Impact and Detailed Studies for the Group, and may interrupt the applicable Time Frame for completion of the Group Study.

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**Group Study Process (Effective June 1, 2015-May 31, 2016)****Section 1.2**

“Common Study Area” shall mean a discrete portion of the Company EPS where the operation of multiple Interconnecting Customers’ Facilities may have cumulatively adverse EPS impacts. The Company shall determine if applications fall within a Common Study Area. A Common Study Area may include, but is not limited to, an area that: (1) is fed from a common substation transformer, or (2) is bounded by a circuit.

“Group” shall mean all proposed Facilities studied as part of a Group Study or those Facilities’ applicants (as determined by the context). The order of applicants within a Group shall be determined on the basis of the date the applicants’ applications were deemed complete by the Company. The application completion date for the Group shall be defined as the earliest application completion date of any active application in the Common Study Area (excluding applications that have progressed through a Preceding Study).

“Group Study” shall mean a modified Impact Study that is performed for a Group of applications whenever two or more applications are awaiting completion of a Preceding Study within a Common Study Area, as provided in Section 3.4.1. The Group Study shall be performed once the Preceding Study is completed, instead of each application undergoing Impact Studies sequentially.

“Preceding Study” shall mean any study that is required by the Company to be completed prior to commencing the Group Study process for the remaining applicant(s) in a Common Study Area. A Preceding Study shall be deemed to have commenced upon execution of the relevant Impact Study Agreement(s) and the initial payment of the study costs. A Preceding Study shall be deemed to be complete upon issuance of the final Impact or Group Study report.

**Section 3.4.1**

- a) This section shall be in effect for a period of 12 months commencing June 1, 2015 (the “Pilot Period”). Any duties or obligations of either the Company or an Interconnecting Customer associated with a Group Study that arise during the Pilot Period shall remain in effect after the Pilot Period, subject to the Company’s Interconnection Tariff and Terms and Conditions for Distribution Service in effect from time to time.
- b) As appropriate, the Company shall require that an Interconnecting Customer within the Common Study Area participate in the Group Study whenever a Group exists. The Company shall invite all potential Group members to a Group Study scoping



- meeting to discuss the feasibility of the Group Study after the initial or screening reviews have been completed for all potential Group members. The application receipt and review, and all screening reviews, for each potential Group member is subject to the applicable Time Frames set forth in the Tariff, Tables 1 to 5, as applicable. The Company may also, in its sole judgment, conduct a study for an Interconnecting Customer separate from the Group Study to the extent warranted by Good Utility Practice.
- c) If any Interconnecting Customer within the Common Study Area wishes to continue in the application process outside of a Group or are removed from a Group because of non-conformance with Time Frames or other Group Study Process requirements, that Interconnecting Customer's Facility shall be studied after the completion of the Group Study (or the study of the individual applicant that chose to remain within the Group), even if the Interconnecting Customer that was removed from the Group applied before the remaining Group member(s).
  - d) Each member of the Group shall pay a percentage of the Group Study cost on the basis of applied capacity (in MW AC of aggregated system design capacity for each applicant's Facility).<sup>1</sup> If a member ceases to belong to the Group, any contributions to the Group Study cost from that member shall be non-refundable. Time Frames for completion of Group Studies shall be by mutual agreement.
  - e) The Company may reassess study costs subsequent to a change in composition of the Group and any increase in Group Study costs must be paid by the remaining Group members.
  - f) A Group Study may only commence after completion of the Preceding Study that was in-process when the Group was formed and all members of the Group have met the prerequisites for commencement of an Impact Study. The Preceding Study is the Impact Study that was in process when the Group was formed, so the Time Frame for the Preceding Study is the same Time Frame applicable for the underlying Impact Study. Thereafter, the Time Frames are by mutual agreement with the parties. No Time Frame extensions shall be allowed for any Group member unless all Group members agree to the extension in writing. Should any Group member not comply with its Time Frame requirements, the member shall be removed from the Group.
  - g) The Group Study shall be performed such that System Modifications (whether shared or individual) and associated costs shall first be determined for the entire Group, along with the allocated costs for each member of the Group. Generally, subsequent to studying the impacts and System Modification requirements of the entire Group, the same study approach shall be performed in iterations for the Group with the latest applicant in the Group removed from consideration. However, if all Group members

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<sup>1</sup> Any scope and costs of ISO New England studies shall be considered to be separate from the scope and costs of a Group Study. Each Facility included in the Group may be subject to additional ISO-NE requirements, compliance with which is the responsibility of the Interconnecting Customer.

- mutually agree in the scoping meeting, the Company may limit the scope of the Group Study to particular iterations of the composition of the Group.
- h) Once all iterations of the Group Study are complete, the Group Study report shall be distributed to the Group, and the Group member(s) shall decide whether to proceed through the remainder of the interconnection process. Earlier applicants within the Group shall have precedence over later applicants if earlier applicants are able to modify their applications that obviate the need for significant distribution modifications for their modified projects. To the extent that a change to the Group composition requires additional studies, the remaining Group member(s) shall pay their cost, and the completion date of the revised study shall be re-estimated by the Company.
  - i) Cost allocations shall be assessed on the basis of applied capacity (in MW AC of aggregated system design capacity for each applicant's Facility) for the portion of System Modifications associated with the Group Study that benefit multiple Group member(s). This shall pertain to both Detailed Study and construction costs. The cost for Detailed Studies and System Modifications that are not common shall be the sole responsibility of the Group member(s) for whom the System Modifications are required. The Company shall not commence any work on Detailed Studies associated with common System Modifications until full payment is received from all affected Group member(s) for the studies. The Company shall not commence any work on construction associated with common System Modifications until full payment is received from all affected Group member(s) for the System Modifications. System Modifications costs associated with the Group Study shall be subject to section 5.3 of the Interconnection Tariff.
  - j) The Group Study shall not be binding upon any member. To the extent that any Interconnecting Customers are no longer part of an on-going Group Study or submit applications after an on-going Group Study has commenced, the on-going Group Study shall be considered a Preceding Study.
  - k) A group of facilities on a common bus may be subject to additional requirements, including without limitation ISO-NE operating procedure OP-14. If the ISO-NE maintains that a group of facilities must be set up as a single modeled generator, each member of the group (i.e., each individual generator) must comply with these requirements. To the extent permitted under applicable ISO-NE requirements, group members may arrange for an alternative means of performing the duties required under OP-14. In all cases, it will be the group members' responsibility to determine what the individual ISO-NE requirements are, and the most efficient means to comply with those requirements (i.e., individually or collectively).