

ISO NEW ENGLAND PLANNING PROCEDURE 5-1

PROCEDURE FOR REVIEW OF GOVERNANCE PARTICIPANT'S PROPOSED PLANS (SECTION I.3.9 APPLICATIONS: REQUIREMENTS, PROCEDURES AND FORMS)

EFFECTIVE DATE: November 8, 2017

REFERENCES: ISO New England Transmission, Markets and Services Tariff

ISO NEW ENGLAND PLANNING PROCEDURE NO. 5-1**PROCEDURE FOR REVIEW OF GOVERNANCE PARTICIPANT'S PLANS
(SECTION I.3.9 APPLICATIONS: REQUIREMENTS, PROCEDURES AND FORMS)****TABLE OF CONTENTS**

<u>Section</u>	<u>Title</u>	<u>Page</u>
1	GENERAL	4
1.1	Description of the Proposed Plan Application Process	5
1.1.1	Initial Assessment	5
1.1.2	Submittal of a Proposed Plan Application	5
1.1.3	Review and Consideration of a Proposed Plan Application	6
1.1.4	Withdrawal of a Proposed Plan Application	7
1.1.5	Currency of Approved Applications	7
1.2	Time Limits Prescribed in Section I.3.9 of the Tariff and Section 2.06 of the Transmission Operating Agreement for Review of a Proposed Plan Applications for a New Plan or a Revised Proposed Plan Application for a Revised Plan	8
1.3	Issues not Covered by these Procedures	9
2	ADDITIONS OR CHANGES REQUIRING PROPOSED PLAN APPLICATIONS	9
2.1	Generation Additions or Changes in Net Station Output	10
2.2	Transmission Changes	11
2.3	New Generation or Increases in Net Station Output of Less Than 5 MW	11
2.4	Demand Resource Additions and/or Incremental Upgrades	12
2.5	Protection Systems	13
2.6	Interconnections Operating at 69 kV or Above With Non Governance Participants	13
2.7	Dynamic Control Systems	13
3	Retirements	13
3.1	Requirements	13
3.2	Capacity Resources	14
3.3	Energy only Facilities	14
4	Facility Changes That Do Not Require Proposed Plan Applications or Revisions to Previously Approved Proposed Plan Applications	14
5	APPLICATION FORMS	15
5.1	Summary Statement	15
5.2	Design Voltage Versus Initial Operating Voltage	15
5.3	Protection System and Dynamic Control System Descriptions	15
5.3.1	Protection System Description	15
5.3.2	Dynamic Control System Description	16
5.4	Transformer Description	16
5.5	Generator Description	16
5.5.1	Ratings	16
5.5.2	Unit Operating Characteristics, Governors, and Under frequency Relays	17
5.6	Application Identification	17
6	ATTACHMENTS	18
1	GENERAL	4
1.1	Description of the Proposed Plan Application Process	5
1.1.1	Initial Assessment	5
1.1.2	Submittal of a Proposed Plan Application	5
1.1.3	Review and Consideration of a Proposed Plan Application	6
1.1.4	Withdrawal of a Proposed Plan Application	7
1.1.5	Currency of Approved Applications	7
1.2	Time Limits Prescribed in Section I.3.9 of the Tariff and Section 2.06 of the Transmission Operating Agreement for Review of a Proposed Plan Applications for a New Plan or a Revised Proposed Plan Application for a Revised Plan	8
1.3	Issues not Covered by these Procedures	9

<u>2</u>	<u>ADDITIONS OR CHANGES REQUIRING PROPOSED PLAN APPLICATIONS</u>	<u>9</u>
<u>2.1</u>	<u>Generation Additions or Changes in Net Station Output</u>	<u>10</u>
<u>2.2</u>	<u>Transmission Changes</u>	<u>11</u>
<u>2.3</u>	<u>Demand Resource Additions and/or Incremental Upgrades</u>	<u>12</u>
<u>2.4</u>	<u>Protection Systems</u>	<u>13</u>
<u>2.5</u>	<u>Interconnections Operating at 69 kV or Above With Non-Governance Participants</u>	<u>13</u>
<u>2.6</u>	<u>Dynamic Control Systems</u>	<u>13</u>
<u>3</u>	<u>Retirements</u>	<u>13</u>
<u>3.1</u>	<u>Requirements</u>	<u>13</u>
<u>4</u>	<u>Facility Changes That Do Not Require Proposed Plan Applications or Revisions to Previously Approved Proposed Plan Applications</u>	<u>14</u>
<u>5</u>	<u>APPLICATION FORMS</u>	<u>15</u>
<u>5.1</u>	<u>Summary Statement</u>	<u>15</u>
<u>5.2</u>	<u>Design Voltage Versus Initial Operating Voltage</u>	<u>15</u>
<u>5.3</u>	<u>Protection System and Dynamic Control System Descriptions</u>	<u>15</u>
<u>5.3.1</u>	<u>Protection System Description</u>	<u>15</u>
<u>5.3.2</u>	<u>Dynamic Control System Description</u>	<u>16</u>
<u>5.4</u>	<u>Transformer Description</u>	<u>16</u>
<u>5.5</u>	<u>Application Identification</u>	<u>17</u>
Attachment 1	GENERATION PROPOSED PLAN APPLICATION	
Attachment 2	PROPOSED PLAN APPLICATION DATA REQUIREMENTS FOR HYDRO-ELECTRIC FACILITIES	
Attachment 3	TRANSMISSION FACILITIES PROPOSED PLAN APPLICATION	
Attachment 4	ISO NEW ENGLAND GENERATOR NOTIFICATION FORM FOR UNITS OR CHANGES OF LESS THAN 5 MW	
Attachment 5	PROPOSED PLAN APPLICATION SUBMITTAL PROCEDURE	

**PROCEDURE FOR REVIEW OF
GOVERNANCE PARTICIPANT'S PROPOSED PLANS
(SECTION I.3.9 APPLICATIONS: REQUIREMENTS, PROCEDURES AND FORMS)**

1 GENERAL

This document outlines the requirements, procedures, and application forms to be used in the submission and review of proposed plans pursuant to Section I.3.9 of the ISO New England Transmission, Markets and Services Tariff (the "Tariff").

Each submittal shall include an applicable completed application. Blank application form(s) are provided in Attachments 1, 2, and 3 of this document.

Proposed plans submitted for review pursuant to Section I.3.9 must be supported by information and analysis. PP5-3 "Guidelines for Conducting and Evaluating Proposed Plan Application Analyses" provides guidance on what information and analysis should be available to support a submittal. The completed applications and supporting materials describing and assessing the impact of the proposed plans together shall constitute submittal of a Proposed Plan Application.

Establishment and maintenance of approval of a Proposed Plan Application establishes the determination that implementation of the proposed plan will not have a significant adverse effect upon the reliability or operating characteristics of the Governance Participant's system or of the systems of one or more other Affected Entities¹ and the Governance Participant is free to proceed with the proposed plan.

As prescribed per this document, a Governance Participant will submit a Proposed Plan Application to the ISO. Where a non-Governance Participant is involved, the non-Governance Participant must meet the same requirements as for a Governance Participant, except that a Governance Participant on behalf of the non-Governance Participant must submit any Proposed Plan Applications. Typically, the Transmission Owner that interconnects with the non-Governance Participant will submit the Proposed Plan Application for the interconnection. If transmission facility changes are required to interconnect non-Governance Participant facilities, the Governance Participant who owns, or will own, the facilities at the Point of Interconnection with the non-Governance Participant facilities is responsible for submission of the Transmission Proposed Plan Applications. Joint Applications may need to be filed if systems of others are involved.

Governance Participants must follow the "Proposed Plan Application Submittal Procedure" contained in Attachment 5 to this procedure for their submittal of Proposed Plan Applications to the ISO. This attachment details the flow of information required under this planning procedure and Planning Procedure 5-3, "Guidelines for Conducting and Evaluating

¹ See ISO New England Planning Procedures No. 5-0, "Procedure for Reporting Notice of Intent to Construct or Change Facilities in Accordance with Section I.3.9 of the ISO New England Tariff (Proposed Plan Application Procedure)"

Proposed Plan Application Analysis,” to promote a smooth Proposed Plan Application review by the Reliability Committee and review and approval by the ISO.

1.1 Description of the Proposed Plan Application Process

The ISO will coordinate the Proposed Plan Application process.

1.1.1 Initial Assessment

The complexity of proposed changes to the system can range from minor changes to major alterations. The intention of the Proposed Plan process is to match study effort and review effort appropriate to the complexity of the proposed change. In PP5-3 “Guidelines for Conducting and Evaluating Proposed Plan Application Analyses”, guidance relative to study effort is provided through a discussion of different study levels. PP5-3 defines four levels of analysis: Level 0, Level I, Level II, and Level III. The Governance Participant must discuss proposed plans early in the process with the ISO and, as necessary, the host Transmission Owner for guidance regarding the appropriate level of study required or whether a Proposed Plan Application is needed.

The ISO will examine the proposed plans and evaluate the potential for significant adverse impact on the stability, reliability, or operating characteristics of the interconnected system. Based on this examination, the ISO will advise the Governance Participant regarding whether input should be solicited from other committees or any Affected Entity. Other committees include, but are not limited to, the Principal Committees.

The ISO will engage potentially technically impacted Affected Entities during the conduct of the studies that will be used to support a Proposed Plan Application.

1.1.2 Submittal of a Proposed Plan Application

The completed application form(s) should be sent with supporting documentation to the ISO who will collect, distribute, and provide a permanent record of the Proposed Plan Application at least two weeks prior to a Reliability Committee meeting for which action is expected. Applications received by the ISO less than two weeks prior to a Reliability Committee meeting may, at the discretion of the officers of the Reliability Committee, be reviewed at that meeting or will likely be deferred to the next noticed meeting that satisfies the two week review expectation.

A typical submittal will include the application(s) with a cover letter, a one-line diagram illustrating the proposed change relative to the existing system along with proposed equipment nomenclature, if available, and, if applicable, a report that documents the study and supports the application. The report that is distributed to the Reliability Committees typically does not have to include appendices or attachments provided that the appendices and/or attachments are available upon request. A map locating the facilities is desirable. The submittal

will be distributed by the ISO to the Reliability Committee. A discussion of the expected analysis and information to be provided in a final report is further discussed in PP5-3 "Guidelines for Conducting and Evaluating Proposed Plan Application Analyses".

It is recommended that a Proposed Plan Application not be filed more than 5 years prior to the proposed in-service date. Applications that are submitted for review more than 5 years in advance of the proposed in-service date must include an explanation of the need for this lead time and a schedule of clearly defined milestones related to the pursuit of permitting, licensing and construction of the proposed plan. The schedule of milestones will be used to demonstrate due diligence to the Reliability Committee and the ISO.

A draft motion describing the conditions of the approval for the Proposed Plan Application is recommended. Such motion will be distributed by the ISO consistent with the Technical Committee Bylaws.

1.1.3 Review and Consideration of a Proposed Plan Application

The ISO will supply the Reliability Committee brief statements describing the ISO's recommendation on Proposed Plan Applications that require Level II or Level III analysis, including any opinions expressed by Affected Entities regarding significant impacts that they believe to be insufficiently addressed. Such recommendations are preferably provided to the Reliability Committee with the distribution of the meeting material and agenda. If any of the recommendations are not available at the time of the distribution of the meeting material and agenda, the recommendations should be provided prior to the Reliability Committee acting on the Proposed Plan Application. If the recommendations are not available by the time the Reliability Committee is prepared to act on the application, the committee may elect to defer action subject to the time constraints defined in Section 1.3.

If in reviewing the application and associated information, the Reliability Committee decides additional information, review, or study is required prior to acting on the application, the Reliability Committee may elect to defer action and solicit supplementary information, review, or study as required. Sources for such additional information may be, but are not limited to, the Governance Participant sponsoring the application, other Governance Participants, the ISO, other committees.

The actions the Reliability Committee may take are to defer action, recommend approval by the ISO, or recommend disapproval by the ISO. The Reliability Committee is expected to act on all Proposed Plan Applications that require Level II or Level III analysis. Applications requiring Level I analysis do not need approval, but do need Reliability Committee concurrence that only Level I analysis is required.

Reliability Committee members will be responsible for establishing an understanding of each application through their own knowledge, review of the documentation provided with the application, and/or consultation with the ISO, and/or other committees.

The Secretary of the Reliability Committee will notify the Members and Alternates of the Participants Committee and the ISO of the actions taken by the Reliability Committee. This written notice will be delivered prior to the end of the fifth (5th) business day following a meeting of the Reliability Committee as specified by the Technical Committee Bylaws. This notification will constitute formal confirmation that such action was taken. The ISO will consider the recommendations of the Reliability Committee in the process of approving/disapproving each Proposed Plan Application. The ISO will transmit an official letter to the Governance Participant submitting the Application noting such approval or disapproval. Upon approval the Governance Participant shall be free to implement the proposed plan in accordance with the Tariff, including compliance with any additional requirements contained therein, e.g. the requirements of the process for the interconnection of new generating resources or modification of existing generating resources pursuant to Schedules 22 and 23 of Part II of the Tariff, subject to the terms of this document. If any Reliability Committee member provides a written objection to a Proposed Plan Application, such objection will be conveyed to the ISO. In the event that another Governance Participant objects to the actions of the ISO, the Tariff specifies avenues for resolution of the objection.

1.1.4 Withdrawal of a Proposed Plan Application

Withdrawal of a Proposed Plan Application is indication that a Governance Participant no longer intends to pursue a proposed plan. Should a Governance Participant wish to withdraw its Proposed Plan Application, a letter to that effect should be sent to the ISO. The ISO will distribute the notice of withdrawal to the appropriate committees. Consideration as to which committees should be notified will be subject to the stage of the processing of the application. [Proposed Plan Applications associated with projects that have withdrawn from the interconnection queue shall be considered automatically withdrawn.](#)

1.1.5 Currency of Approved Applications

Following review and approval of the proposed plans associated with one or more Proposed Plan Applications, implementation of the proposed plans must continue to be actively pursued for such applications to remain current. Any of the following conditions may result in a determination that approval of such applications is revoked:

- a. Two years have elapsed from the proposed in-service date on the approved Proposed Plan Application(s) and the Governance Participant has not demonstrated due diligence in pursuit of permitting, licensing and

construction of the approved proposed plans. For proposed plans associated with an application submitted pursuant to the Tariff ("Tariff Application"), a valid and current Tariff Application shall constitute due diligence in pursuit of implementation of the proposed plans.

- b. The Governance Participant has not sufficiently modified the proposed plans as required to address the difference between the modeled and actual or expected system.
- c. The Governance Participant has elected not to pursue completion of the proposed plans described in the approved Proposed Plan Application(s).
- d. The Governance Participant makes a change in the scope of the proposed plans described by the original Proposed Plan Application.
- e. The Proposed Plan Applications were submitted for review and approved more than 5 years in advance of the proposed in-service date, and the Governance Participant has not demonstrated due diligence in pursuit of permitting, licensing and construction of the approved proposed plans through annual progress reports. For proposed plans associated with an application submitted pursuant to the Tariff ("Tariff Application"), a valid and current Tariff Application shall constitute due diligence in pursuit of implementation of the proposed plans.

The ISO, in consultation with the Reliability Committee, will notify the Governance Participant where such conditions have led to the conclusion that the approval of the associated Proposed Plan Applications may be revoked. However, within 90 days following notification of such action the Governance Participant may submit studies and/or information for review and approval by the ISO that addresses the issues leading to this conclusion in order to maintain approval of such applications. The ISO may modify the time limits identified above as appropriate.

Studies must be updated and proposed plans modified accordingly if the actual or expected system is, as of the proposed plans' actual in-service date, sufficiently different from what was modeled in the analysis supporting the approved Proposed Plan Application(s). The updated studies will identify whether a part of a proposed plan that is no longer being pursued, as identified per this Procedure, is a necessary component or condition of another proposed plan that has maintained its currency. In this case, a Proposed Plan approval associated with the necessary component or condition will remain current.

1.2 Time Limits Prescribed in Section I.3.9 of the Tariff and Section 2.06 of the Transmission Operating Agreement for Review of a Proposed Plan Applications for a New Plan or a Revised Proposed Plan Application for a Revised Plan

Section I.3.9 of the Tariff and Section 2.06 of the Transmission Operating Agreement require that a Governance Participant take no significant action (other than preliminary engineering on any components of the new or revised plan that require Proposed Plan approval) leading toward implementation of any new or changed plan:

- Earlier than 60 days (or 90 days, if the ISO determines that it requires additional time to consider the plan, and so notifies the Market Participant in writing within the 60 days) after the completed Proposed Plan Application has been submitted to the ISO by the Market Participant; or
- Earlier than 90 days after the completed Proposed Plan Application has been submitted to the ISO by a Participating Transmission Owner.

Any revisions to a previously approved Proposed Plan Application proposed for implementation prior to the in-service date of such previously approved Proposed Plan must be specified on a revised Proposed Plan Application form. The completed Proposed Plan Application form for a new plan or a revised Proposed Plan Application for a revised plan requiring analysis must include documentation of the analyses that have been determined to be required by the ISO, in consultation with Affected Entities, as necessary, or the Reliability Committee. If during the Proposed Plan Application review process a significant adverse impact on the New England Control Area system or any Governance Participant's system is identified, then the Proposed Plan Application will be rejected.

Due to the amount of time required for the Proposed Plan process, Governance Participants are strongly recommended to supply appropriate data, with adequate lead times for performance and completion of any anticipated analyses and its review by ISO as described in "Level of Analysis Required" (see PP5-3, Section III.A.2.0), prior to formal submittal of a Proposed Plan Application to the ISO. If the appropriate data is not supplied with adequate lead times for performance and completion of any anticipated analyses and its review by ISO, then implementation of the proposed plans may be delayed or rejected regardless of their stage of physical completion.

1.3 Issues not Covered by these Procedures

For issues not covered by these or any other documented procedure, Governance Participants are expected to discuss pertinent issues with, and seek guidance first from the ISO. If the issue involves a policy decision, the ISO may suggest an approach for addressing the issue. Such approach may involve raising the issue for discussion, guidance, or decision from one or more committees.

2 ADDITIONS OR CHANGES REQUIRING PROPOSED PLAN APPLICATIONS

This section identifies when a Proposed Plan Application is required based upon the type and/or size of facility.

2.1 Generation Additions or Changes in Net Station Output

~~All~~The following table describes the Proposed Plan Application requirements for ~~all~~ new generation or changes in station output that meet the defined conditions ~~defined below require a Proposed Plan Application to be approved by the ISO.~~

~~A Proposed Plan Application is required for cumulative capacity changes relative to the latest approved Proposed Plan Application for the subject generation that are:~~

- ~~1. An increase of 5 MW or more of net station output for a single unit within a station~~
- ~~2. An increase of 5 MW or more of total net station output~~
- ~~3. An increase or decrease (lead or lag) of 5 MVAR or more in net station output for a single unit within a station~~
- ~~4. An increase or decrease (lead or lag) of 10 MVAR or more in total net station output~~

Notes:

- ~~a. Changes in MW or MVAR capability reflect a change in the fundamental capability of the unit or station.~~
- ~~b. For the purposes of this section, a station is a group of generators and associated terminal equipment (including generator interconnections) all contained by a continuous fence and owned by a single entity.~~

~~Net station output is output delivered to the Point of Interconnection.~~

<u>Generation Change</u> ^{2,3,4}	<u>Proposed Plan Application Required?</u>	<u>Study and Performance Requirements</u>	<u>Modeling Requirements</u>
<u>New or Increased Generation ≥ 5MW</u> ⁵	<u>Yes</u>	<u>Requirements of Planning Procedure 5-6 and 5-3</u>	<u>Requirements of Planning Procedure 5-6</u>
<u>≥ 5 MVAR Unit or ≥ 10 MVAR Station Change in Reactive Capability</u> ⁶	<u>Yes</u>	<u>Requirements of Planning Procedure 5-6 and 5-3</u>	<u>Requirements of Planning Procedure 5-6</u>
<u>New or Increased Generation > 1MW and < 5 MW</u>	<u>No. Notification Form only is Required – Unless the ISO identifies that a PPA is required</u>	<u>None, unless the ISO identifies that a PPA is required, in which case Requirements of Planning Procedure 5-6 and 5-3</u>	<u>None, unless the ISO identifies that a PPA is required, in which case Requirements of Planning Procedure 5-6</u>

² Changes in MW or MVAR capability reflect a change in the fundamental capability of the unit or station.

³ For the purposes of this section, a station is a group of generators and associated terminal equipment (including generator interconnections) all contained by a continuous fence and owned by a single entity.

⁴ Net station output is output delivered to the Point of Interconnection.

⁵ An increase of 5 MW or more of net station output for a single unit within a station or an increase of 5 MW or more of total net station output.

⁶ An increase or decrease (lead or lag) of 5 MVAR or more in net station output for a single unit within a station, or, an increase or decrease (lead or lag) of 10 MVAR or more in total net station output

New or Increased Generation ≤1MW	No	None	None
--	--------------------	----------------------	----------------------

€.

⌘. This language only encompasses requirements related to the submission of Proposed Plan Applications under Section 3.9 of Part I of the Tariff. The provisions of Schedules 22 and 23 of ~~Part II of the~~ [the ISO New England Open Access Transmission](#) Tariff with regard to the interconnection of new generation or modification of existing generation or the provisions of Market Rule 1, Section III of the Tariff, with regard to a reduction in the capacity or a retirement of a generator must also be observed. [Proposed Plan Applications should be submitted in accordance with this Planning Procedure within 30 calendar days from the end of the Interconnection Customer's comment process following the completion of a System Impact Study pursuant to Schedule 22 or Schedule 23 of the ISO New England Open Access Transmission Tariff.](#)

~~As soon as possible after~~ [At the same time \(for same Reliability Committee meeting\) as the](#) submittal of the Generation Proposed Plan Application, the Governance Participant, if necessary, must submit a Proposed Plan Application for transmission associated with the generation in accordance with Section 2.2 of this procedure.

2.2 [Transmission Changes](#)

All transmission changes that change the topology or characteristics of the transmission system or that change the thermal capability of a portion of the system by replacement of transmission facilities except as exempted in Section 4 require a Proposed Plan Application (Attachment 3). Transmission Applications must be approved by the ISO.

For all major changes to transmission facilities with design voltages at or above 69 kV, the Governance Participant will supply the results of completed studies to the ISO sufficiently in advance of the Proposed Plan Transmission Application so that sufficient time for review is allowed. This includes changes to generator leads and their associated equipment, such as a GSU.

[Proposed Plan Applications associated with Elective Transmission Upgrades should be submitted in accordance with this Planning Procedure within 30 calendar days from the end of the Interconnection Customer's comment process following the completion of a System Impact Study pursuant to Schedule 25 of the ISO New England Open Access Transmission Tariff.](#)

~~2.3~~ [New Generation or Increases in Net Station Output of Less Than 5 MW](#)

~~Subject to the cumulative capacity limitations in Section 2.1 of this procedure, before the proposed (i) increase of greater than 1 MW and less than 5 MW in net~~

~~station output for generation with a Point of Interconnection to a facility operated with a nominal voltage of less than 69 kV or (ii) addition of new generation (i.e., not incremental to existing generation) of greater than 1 MW and less than 5 MW is implemented, the sponsoring Governance Participant must complete the "Generator Notification Form for Units or Changes of Less Than 5 MW", Attachment 4 to this procedure. Cumulative capacity changes of 5 MW or more relative to the latest approved Proposed Plan Application require a new Proposed Plan Application, regardless of the voltage at the Point of Interconnection, in accordance with Section 2.1 of this planning procedure. Please note that the above language only addresses the need to submit a proposed plan application under Section 3.9 of Part I of the Tariff and that the provisions of Schedule 22 and 23 of Part II of the Tariff must be observed.~~

~~At least 15 Calendar Days prior to the requested effective date, the sponsoring Governance Participant must submit this completed notification form to the ISO via e-mail at ProposedPlans@iso-ne.com. The ISO will notify the Reliability Committee at its next scheduled meeting of receipt of the completed notification form regardless of the requested effective date of the proposed plan.~~

~~Upon receipt of the completed notification form, the ISO, in consultation with the Interconnecting Transmission Owner or Distribution Company, will determine whether the proposed plan is a Level 0, per PP5-3, which does not require a Proposed Plan Application. The ISO will notify the sponsoring Governance Participant of its determination. If the ISO determines that the proposed plan is a Level 0, then the sponsoring Governance Participant may request, in accordance with the ISO New England System Rules, activation in the New England Markets or Settlement Only Resource treatment. If the ISO determines that the proposed plan is a Level I, II or III, then the sponsoring Governance Participant must submit a Proposed Plan Application in accordance with this Planning Procedure.~~

~~Upon receipt of the completed notification form, including operating data, the ISO or any Governance Participant may request that a reliability review be conducted by the appropriate committee.~~

2.42.3 Demand Resource Additions and/or Incremental Upgrades

Any generation additions or changes, including Distributed Generation, should follow the generation submittal and notification requirements of this PP5-1, even if they are intended to participate in ISO New England markets as **Demand demand Resourcesresources**. No notification or submittal is required pursuant to this PP5-1, for **Demand-demand Resourcesresources** that are not comprised of generation.

2.52.4 Protection Systems

Any addition or change in a protection system which results in actions such as transmission cross-tripping, runback, fast valving, removal of voltage regulators or a permanent change which results in significant limitations to generating equipment, opening or removal of transmission lines from service, etc. requires submission of a Proposed Plan Application. Such application will be treated the same as Section 2.2.

2.62.5 Interconnections Operating at 69 kV or Above With Non-Governance Participants

Interconnections operating at 69 kV or above with non-Governance Participants (such as a new connection with a neighboring Control Area) require a Proposed Plan Application to be approved by the ISO. ~~Please note that the provisions of Schedule 22 and 23 of Part II of the Tariff regarding generator interconnection must also be observed.~~

2.72.6 Dynamic Control Systems

Any addition or significant change in a continuously acting control system and associated devices that respond to normal and abnormal system conditions or events, so as to change the stability, reliability, or operating characteristics of the bulk power system requires submission of a Proposed Plan Application. Any significant difference in a continuously acting control system and associated devices from those parameters studied and approved under a Proposed Plan Application or otherwise conveyed to the ISO as part of the Applicant's ongoing data provision requirements requires submission of a new Proposed Plan Application to assess the actual operating parameters. This includes, but is not limited to significant changes in control systems associated with static var and synchronous compensators, HVdc, generator excitation systems, power system stabilizers and turbine governor systems. Please note that the provisions of Schedule 22, 23 and 23 of Part II 25 of the ISO Open Access Transmission Tariff regarding modifications to existing generators and Elective Transmission Upgrades must also be observed.

3 Retirements

3.1 Requirements

~~Beginning June 1, 2010, generator~~Generator retirements do not require the submission of a Proposed Plan Application. However, ~~notice to the ISO must be provided via (1) submittal of an Asset Registration Form as described all requirements in the ISO New England Manual for Registration and Performance Auditing (M-RPA); (2) the provisions of Schedule 22 and 23 of Part II of the Tariff and (3) must satisfy the prerequisites noted below.~~

3.2 Capacity Resources

~~) must be met. Retirement of a capacity resource⁷ may only be accomplished where a resource has either (1) submitted and received approval of a Non Price Retirement Request,⁸ or (2) has a denied Non Price Retirement Request and has informed the ISO that it has elected to pursue retirement rather than continue operating, or (3) has a cleared Permanent De List Bid and the resource has no Capacity Supply Obligation between its requested retirement date and the effective date of its cleared Permanent De List Bid or the start of the Capacity Commitment Period for which it submitted a Non Price Retirement Request.~~

~~Note: that the form for submittal of a binding Non Price Retirement Request may be found in Planning Procedure No. 10 (PP 10) Appendix B and must be submitted pursuant to the timelines set out in resource must follow the requirements of Section III.13 of the Tariff.~~

~~A capacity resource with an approved Non Price Retirement Request that is seeking to retire the capacity resource prior to the start of the Capacity Commitment Period for which the Non Price Retirement Request must also adhere to the requirements of Section 3.1 of this procedure.~~

~~Pursuant to Section III.13.2.5.2.5.3(a)(iii), capacity resources that have had a Non Price Retirement Request rejected for reliability reasons must notify the ISO of the intent to retire rather than to remain in service until the reliability issue is resolved no later than 6 months after receiving notice from the ISO that the Non Price Retirement Request has been rejected.~~

3.3 Energy only Facilities

~~Energy only facilities, those resources/assets that are not currently listed as capacity resources, may retire in accordance with the provisions in Tariff Section III.13.2.5.2.5.3.(c) by notifying the ISO in accordance with Section 3.1 of this procedure. However, it is the responsibility of the Lead Market Participant of that energy only facility to ensure that their obligation(s) in any of the ISO New England markets in which the facility participates have been satisfied.~~

4 Facility Changes That Do Not Require Proposed Plan Applications or Revisions to Previously Approved Proposed Plan Applications

Facility changes, such as but not limited to the following, do not require Proposed Plan Applications or revisions to previously approved Proposed Plan Applications:

⁷ ~~A capacity resource shall mean a New Generating Capacity Resource, an Existing Generating Capacity Resource, a New Demand Resource or an Existing Demand Resource as described in Tariff Section III.13.~~

⁸ ~~In accordance with Tariff Section III.13.1.2.3.1.5 and Planning Procedure No. 10.~~

- Routine protection and relaying changes only if there will be no increase in the fault clearing times and no material change in elements tripped for all events that would be analyzed pursuant to the Proposed Plan Application process.
- Minor adjustments of parameters of continuously acting control systems from what had been previously approved under a Proposed Plan Application (However, such adjustments must be conveyed to the ISO as part of the Applicant's ongoing data provision requirements.)
- Disconnect switches
- Replacement in kind or with greater energy dissipation of surge arrestors
- Station automation
- SCADA
- Communications
- Metering
- Rehabilitation with like equipment that does not affect transmission capability
- Static wire changes
- Counterpoise changes
- Replacement in kind of line terminal equipment and bus conductor to increase thermal capability (Such changes however require the Market Participant to submit revised NX-9 data to the ISO in accordance with OP 16 "Transmission System Data")
- Reductions in capability that result from the retirement of the resource/asset

5 **APPLICATION FORMS**

Attachments 1, 2 and 3 are forms to be used to notify the ISO of proposed generation and transmission changes.

5.1 Summary Statement

Each application will include a summary statement describing the proposed change and its purpose, and explaining its impact on the system, if any.

5.2 Design Voltage Versus Initial Operating Voltage

Where a transmission line will be operated initially at a voltage lower than its design voltage, both voltage levels will be specified in the space provided. The procedure to be followed is determined by the initial operating voltage. A separate Proposed Plan Application is required when the line is to be converted to the higher voltage.

5.3 Protection System and Dynamic Control System Descriptions

5.3.1 Protection System Description

The relaying section of the transmission form will describe the types of line relaying, backup relaying, communications and reclosing to be installed. Breaker failure protection also will be described. Any protective system that requires

remote tripping, runback, or fast valving of generating equipment must be described in detail.

5.3.2 Dynamic Control System Description

If applicable, a description of the equipment and design considerations must be provided. If testing and maintenance is an important factor in the overall performance in mitigating any adverse system impact, then a plan of the system testing and maintenance must be provided.

5.4 Transformer Description

Transformer terminal voltages will be stated in the space provided, including tertiary winding, if there is one. The type of transformer or transformer bank should be described in the "comments" section. A separate sheet may be used, if needed.

~~5.5 Generator Description~~

~~5.5.1 Ratings~~

~~The following MW and MVAR ratings shall be provided:~~

- ~~• The gross and net unit rating (MW) at 20 Degrees F;~~
- ~~• The gross and net unit rating (MW) and the gross maximum lagging and the gross maximum leading reactive power capability (MVAR) at the gross MW output level at 90 Degrees F;~~
- ~~• The maximum gross unit rating (MW) at 0 Degrees F or higher; also reported at this temperature are the net unit rating (MW) and the gross maximum lagging and the gross maximum leading reactive power capability (MVAR) at the gross MW output level (used for stability analysis); and~~
- ~~• The maximum net unit rating (MW) at 50 Degrees F or higher; also reported at this temperature are the gross unit rating (MW) and the gross maximum lagging and the gross maximum leading reactive power capability (MVAR) at the gross MW output level (used for thermal analysis).~~

~~Net unit ratings shall be based on subtracting the load of all auxiliary equipment that is directly related to the operation of the generator (i.e. normal "plant house load" should not be subtracted) at the ambient temperature for which the net rating is being specified.~~

~~Monthly hydraulic generator capacity and energy values shall be provided based on the historical monthly water availability.~~

~~5.5.2 Unit Operating Characteristics, Governors, and Under-frequency Relays~~

~~Both physical and contractual operating characteristics of all units must be reported. During emergency conditions, including the entire spectrum of load levels from peak to light load, the most restrictive operating limitations, either physical or contractual, will be used to determine the units' operation. Identify the normal and emergency operating characteristics of the unit from a physical unit characteristic perspective. Also, identify the contractual operating characteristics, if different. Particular attention should be given to operating limits (high and low), minimum shut down times, minimum run times and start up times.~~

~~If unable to complete the NX-12 form, provide a detailed description of the amount of dispatch control the ISO will have in determining the operation and/or output of the unit. Indicate when and how frequently the unit can be reduced to its low limit and/or shut down during emergency conditions.~~

~~Provide information on any operating restrictions due to waste to energy conversions, primary/secondary steam requirements, environmental regulations, regulatory constraints, or any other physical constraints that determine operating flexibility.~~

~~Indicate conformance to the requirement that all units rated greater than 10 MW have a working governor.~~

~~The settings for under frequency relays must comply with NPCC guidelines (see OP 14 for references) and be approved by the host utility.~~

~~5.65.5 Application Identification~~

A company identification number will be assigned to each application by the Governance Participant preparing it. The following codes will be used:

- Company initials
- Last two digits of year submitted
- Letter(s) indicating
 - G - Generation Addition
 - T - Transmission Change
 - X - Protection System/Dynamic Control System Change or Addition

-
- Company's serial number of Section I.3.9 filing for year indicated
 - REV indicating a revision to a previously completed and approved Proposed Plan Application
 - Serial number reflecting sequence of revisions to the previously completed and approved Proposed Plan Application

These codes will be assembled into a string as shown in the example below:

EXAMPLES: NSTAR-03-T06

NSTAR-03-T06-REV-01

~~6~~ ATTACHMENTS

~~Modifications to the following attachments to this procedure will not require Reliability Committee or Participants Committee action:~~

- ~~• Attachment 4, "Generator Notification Form for Units or Changes of Less Than 5 MW"; and~~
- ~~• Attachment 5, "Proposed Plan Application Submittal Procedure".~~

~~If modifications are made to these attachments, the ISO will notify the Reliability Committee and the Participants Committee.~~

Document History⁹

Rev. 0: Rec.: RTPC – 1/18/00; App.: PC – 2/4/00
Rev. 1: Rec.: RC – 11/14/00; App.: PC – 12/1/00
Rev. 2: Rec.: RC – 6/10/03; App.: PC – 6/25/03
Rev. 3: Eff.: 2/1/05
Rev. 4: App.: RC – 9/19/07; PC – 10/12/07; ISO-NE – 10/12/07
Rev. 4.1: Noticed RC regarding revision to Attachment 4 – 12/19/07
Rev. 4.2: Noticed RC regarding revision to Attachment 2 – 1/30/08
Rev. 4.3: Noticed PC regarding revision to Attachment 5 – 2/4/09
Rev. 5: Rec.: RC – 2/24/09; PC – 3/6/09; ISO-NE – 3/6/09
Rev. 6: App.: RC – 5/19/09; PC – 6/5/09; ISO-NE – 6/5/09
Rev. 7: App. RC – 11/17/10; PC – 12/10/10; ISO-NE – 12/10/10
Rev. 8: App. RC – 03/19/13; PC – 04/05/13; ISO-NE – 04/05/13 (Updated the Section 2.4 description of the review of Demand Resources)
Rev. 9: App. RC – 02/18/14; PC – 03/07/14; ISO-NE – 04/09/14 (Conforming change recognizing paragraph 2.9 had been made Section 4)
Rev. 10: App. RC – 08/18/15; PC – 09/11/15; ISO-NE – 10/02/15 (Added data field on Attachment 4, updated website links on Attachment 5)
Rev. 11: App. RC – 10/17/17; PC – 11/03/17; ISO-NE – 11/08/17 (elimination of Task Force review)

⁹ This Document History documents action taken on the equivalent NEPOOL Procedure prior to the RTO Operations Date as well as revisions to the ISO New England Procedure subsequent to the RTO Operations Date.

GENERATION PROPOSED PLAN APPLICATION

Applicant _____ Date _____.

Contact Person _____ Phone # _____.

1. Station Name and Location _____.

Unit Identification _____.

	Winter (0 Deg F)*	Winter (20 Deg F)	Summer (50 Deg F)**	Summer (90 Deg F)
Gross Unit Rating (MW)				
Net Unit Rating (MW)				
Unit Rating (Lagging MVAR)		N/A		
Unit Rating (Leading MVAR)		N/A		

* Enter values corresponding to the M_{max} maximum gross unit facility rating must be that occurs at a temperature of 0 degrees F or greater.

** Enter values corresponding to the M_{max} maximum net unit facility rating output must be that occurs at a temperature of 50 degrees F or greater.

2. Type of Application

☐ Construction ☐ Capacity Change
3. Effective Commercial Operation Date _____.4. Will the unit be equipped for AGC? ☐ Yes ☐ Noa. What is the unit's low operating limit based on its physical characteristics? _____b. Does the unit have an operating range of 25MW or more? ☐ Yes ☐ Noc. Does the unit have a response rate of \geq 1MW/Min? ☐ Yes ☐ No

5. Will the unit facility be equipped with a functioning governor? ☐ Yes ☐ No (A "No" response may be grounds for rejection pursuant to OP 14 "Technical Requirements for Generators, Demand Resources and Asset Related Demands and Alternative Technology Resources".)

6. Is the unit equipped with under-frequency protection? ☐ Yes ☐ NoIf "yes/Yes":a. Has the host utility reviewed the settings? ☐ Yes ☐ No

b. Will the unit be tripped for under-frequency conditions in the area above the curve in Figure 1 of Standard PRC-006-NPCC Document A-3? ☐ Yes ☐ No

i. If "Yes": Has additional automatic load shedding been provided equivalent to the amount of generation to be tripped? ☐ Yes ☐ No

c. Will the unit be tripped in conjunction with dropping low voltage feeders during load shedding? ☐ Yes ☐ No

i. If "Yes": Has the host utility ensured that sufficient automatic load shedding capability will be available to system operators? ☐ Yes ☐ No ☐ Yes ☐ No

d. ~~If "Yes" to b or c: Has additional automatic load shedding been provided equivalent to the amount of generation to be tripped?~~ ☐ Yes ☐ No

~~If "Yes", describe using an attachment.~~

Note: A "No" response to ~~d.b.i or c.i~~ is grounds for rejection. ~~A "Yes" response to b. or c. has an on-going obligation to report this information to the ISO. A "No" response to a. will obligate the Governance Participant to complete this review prior to interconnection of the facility.~~

~~Attachment 1~~

ISO New England Planning Procedure 5-1

Page 2 of 2

~~7. Provide estimates of SO₂, NO_x and CO₂ emissions rates as well as rate estimates for other regulated atmospheric emissions in the format of pounds per MMBTU and pounds per MWH on a per unit basis. Attach a list of all restrictions on generation operation due to environmental or other constraints (such as limited hours of operation, max. output) on the unit. Define conditions under which these restrictions can be lifted.~~

~~8. Will the operation of this unit impact other generating units or interconnections in the vicinity?~~

~~☐ Yes ☐ No If "Yes", describe, using an attachment if necessary.~~

~~9.7. Provide the following information on fuel used by the unit~~

~~a. List the unit's primary fuel _____ and secondary fuel _____.~~

~~b. How is the fuel being transported to the site? _____~~

~~c. Does fuel availability vary with the season? ☐ Yes ☐ No If "Yes", please describe _____~~

~~d. What contingency plans are there to cover fuel shortages? _____~~

~~e. Specify number of days of fuel storage. _____~~

~~f. What alternate form(s) of fuel transportation are available to the unit? _____~~

~~10.8. Will the unit have black start capability?~~

~~☐ Yes ☐ No~~

~~If "Yes", can it be operated on its own auxiliaries prior to synchronization with the system? ☐ Yes ☐ No~~

~~11.9. Attach an electrical one line diagram showing all essential devices including GSU impedance, station arrangements, station service and connections to the bulk power system/transmission system (69 kV and higher), including the voltage levels.~~

~~12.10. Is a Transmission Proposed Plan Application required?~~

~~☐ Yes~~

~~☐ No~~

~~a. If "Yes", identify the Transmission Applications associated with this Application, the Governance Participant responsible for filing and the date the Application was/will be submitted.~~

~~_____~~

~~b. If "No", are thermal, stability, or other reliability analyses required for this application? ☐ Yes ☐ No~~

~~13.11. System Reliability Studies~~

~~Short Circuit~~

~~☐ Completed~~

~~☐ Planned~~

~~☐ Not Needed~~

Load Flow

☐ Completed

☐ Planned

☐ Not Needed

Stability

☐ Completed

☐ Planned

☐ Not Needed

Other _____

☐ Completed

☐ Planned

☐ Not Needed

~~14. Do any of the above studies indicate problem areas?~~

~~☐ Yes ☐ No~~

~~If "Yes", attach description.~~

~~NOTE: APPLICATIONS FOR HYDRO UNITS MUST INCLUDE COMPLETED ATTACHMENT 2~~

PROPOSED PLAN APPLICATION DATA REQUIREMENTS FOR HYDRO-ELECTRIC FACILITIES

1. Applicant _____ Date _____

2. Station Name _____

3. Number of Units _____ Type of Turbine _____
(Adj. Blade, Kaplan, etc.)

For each turbine type:	Full Gate	Best Gate	Speed No Load
Capacity (kW) / (kvar)			
Flow (cfs)			
Head (ft)			
Water Use Efficiency (kW/cfs)			

(Attach additional sheets for each different turbine type)

4. Mode of Operation
(ISO definition: i.e., Daily cycle, Storage, Run of River, etc.)

5. River

6. Minimum Flow to Support Power Production (cfs)

7. Drainage Area at Site (sq. mi.)

8. USGS Gauging Station Number and Drainage Area (sq. mi.)

9. Usable Storage in Pond (kWh)

10. Upstream Storage Available (kWh)

11. Upstream Storage Transit Time (Hrs.)

12. Minimum In-stream Discharge Requirements (cfs)

Can this flow be used through the unit(s) Yes ☐ No ☐

13. Attach Monthly Flow Duration data (20 year maximum record)

TRANSMISSION FACILITIES PROPOSED PLAN APPLICATION

1. Applicant _____ Date _____.
2. Type of Facility _____ In-Service Date _____
3. Transmission Line and/or Substations
 - a. From _____ To _____
(Terminal - Name - Location) (Terminal - Name - Location)
 - b. Third Terminal or tap (if any) _____
(Name - Location)
 - c. Distance - Overhead _____ miles. Underground _____ miles. Design Voltage _____ KV
Conductor Size _____ Initial Operation _____ KV
 - d. Proposed Relaying:
Type of line relaying
Backup relaying
Stuck breaker
Special protective relaying schemes
4. Transformer Rating _____ MVA HV _____ KV LV _____ KV Tertiary _____ KV

Parameters in percent on a 100 MVA Base

Resistance _____ -R Reactance _____ -X
5. Attach simplified one line diagram(s) of transmission and/or substations with breaker configuration, indicating existing and proposed additions or changes on construction.

Comments
6. Reliability Studies

Short Circuit:	Completed	<input type="checkbox"/>	Planned	<input type="checkbox"/>	Not Needed	<input type="checkbox"/>	Explanation Attached	<input type="checkbox"/>
Load Flow:	Completed	<input type="checkbox"/>	Planned	<input type="checkbox"/>	Not Needed	<input type="checkbox"/>	Explanation Attached	<input type="checkbox"/>
Stability:	Completed	<input type="checkbox"/>	Planned	<input type="checkbox"/>	Not Needed	<input type="checkbox"/>	Explanation Attached	<input type="checkbox"/>
Other _____	Completed	<input type="checkbox"/>	Planned	<input type="checkbox"/>	Not Needed	<input type="checkbox"/>	Explanation Attached	<input type="checkbox"/>
7. a. If this Application is associated with a Generation Proposed Plan Application, identify the Generator Proposed Plan Application(s) and the Governance Participant(s) responsible for submitting it. N/A ☐

b. Has the Generation Proposed Plan Application(s) been submitted? Yes ☐ No ☐
If "No", when will the Application(s) be submitted?

ISO NEW ENGLAND GENERATOR NOTIFICATION FORM FOR UNITS OR CHANGES OF LESS THAN 5 MW

Submit Completed Form to ProposedPlans@iso-ne.com.

Contact Customer Service at 413-540-4220 or custserv@iso-ne.com to begin market system asset registration process.

Applicant _____ Date _____

Generation Owner (if different than Applicant) _____

Contact Person _____

Phone # (____) _____ Fax # (____) _____ E-mail _____

1. Station Name _____

- a. Location/Interconnection Point (Indicate point of coupling with utility system by specifying distribution feeder or transmission line name(s) or substation name. Distribution facilities should include the transmission facility substation(s) that the distribution facilities are supplied from.)

- b. Address of Plant (~~Town or City, County, State and Zip Code~~)

Street Address _____

Town or City _____

County _____ State _____ Zip Code _____

- c. Unit/Aggregate Generation Asset Identification _____

Net ratings entered in ~~d., e. and f.~~ below should reflect the netting of auxiliary loads from the gross unit rating(s) that are directly related to the operation of the unit/aggregate generation.

	<u>Winter (0 Deg F)*</u>	<u>Winter (20 Deg F)</u>	<u>Summer (50 Deg F)**</u>	<u>Summer (90 Deg F)</u>
<u>Gross Unit Rating (MW)</u>				
<u>Net Unit Rating (MW)</u>				
<u>Unit Rating (Lagging MVAR)</u>		<u>N/A</u>		
<u>Unit Rating (Leading MVAR)</u>		<u>N/A</u>		

* Enter values corresponding to the maximum gross facility that occurs at a temperature of 0 degrees F or greater.

** Enter values corresponding to the maximum net facility output that occurs at a temperature of 50 degrees F or greater.

- ~~d. Ratings at 20 degrees F ambient and at 90 degrees F ambient.~~

	<u>Winter (20 Deg F)</u>	<u>Summer (90 Deg F)</u>
<u>Gross Unit Rating (MW)</u>		
<u>Net Unit Rating (MW)</u>		
<u>Unit Rating (Lagging MVAR)</u>		
<u>Unit Rating (Leading MVAR)</u>		

- ~~e. The maximum gross unit rating is at _____ degrees F ambient. (Must be at 0 degrees F or greater.)~~

Maximum Gross Unit Rating (MW)	
Net Unit Rating (MW)	
Unit Rating (Lagging MVAR)	
Unit Rating (Leading MVAR)	

f. ~~The maximum net unit rating is at _____ degrees F ambient. (Must be at 50 degrees F or greater.)~~

Gross Unit Rating (MW)	
Maximum Net Unit Rating (MW)	
Unit Rating (Lagging MVAR)	
Unit Rating (Leading MVAR)	

~~g.d.~~ What is the maximum net power injection at the point of interconnection? _____

~~h.e.~~ Is there load reduced by operating this generation? (Check ☒ ~~yes-Yes~~ or ~~no-No~~) ☐ Yes ☐ No

If "Yes":

By how much is the load reduced? _____

Where is the load located? _____

2. Type of Application (Check ☒ one)

☐ Construction ☐ Capacity Change

3. Requested ~~Effective~~Commercial Operation Date _____

~~4. Indicate whether the unit or generation aggregate capability is affected by steam host requirements.~~

~~(Check ☒ yes or no) ☐ Yes ☐ No~~

~~If "Yes", define these requirements.~~

5. Is the unit equipped with under-frequency protection? (Check ☒ yes or no) ☐ Yes ☐ No

If "Yes":

a. Has the host utility reviewed the settings? ☐ Yes ☐ No

b. Will the unit be tripped for under-frequency conditions in the area above the curve in Figure 1 of [Standard PRC-006-NPCC Document A-3](#)? ☐ Yes ☐ No

~~i. If "Yes": Has additional automatic load shedding been provided equivalent to the amount of generation to be tripped?~~ ☐ Yes ☐ No

c. Will the unit be tripped in conjunction with dropping low voltage feeder during load shedding? ☐ Yes ☐ No

~~i. If "Yes": Has the host utility ensured that sufficient automatic load shedding capability will be available to system operators?~~ ☐ Yes ☐ No

~~d. If "Yes" to b or c: Has additional automatic load shedding been provided equivalent to the amount of generation to be tripped?~~ ☐ Yes ☐ No

~~If "Yes", describe using an attachment.~~

Note: ~~A "No" response to b.i or c.i is grounds for rejection. A generator will not be allowed to be activated in the New England Markets for a "No" response to d. Such generator may request Settlement Only Resource treatment.~~

~~6. On a separate sheet, provide the following information:~~

~~a. Prime mover code for the units (from "Generator Unit/Technology Types" listed on page 4);~~

~~b. Number of units;~~

~~c. Manufacturer and model number of the energy conversion unit(s);~~

~~d. Manufacturer and model number of the exciter(s) for synchronous unit(s); and~~

~~e. Manufacturer and model number of the voltage regulator(s) for synchronous unit(s).~~

~~7. On a separate sheet, provide estimates of SO₂, NO_x and CO₂ emissions rates. Also include rate estimates for other regulated atmospheric emissions in the format of pounds per MMBTU and pounds per MWH. Attach a list of all restrictions on generation due to environmental or other constraints (such as limited hours of operation, max. output) on the unit. Define conditions under which these restrictions can be lifted.~~

~~8. Will the operation of this unit impact other generating units or interconnections in the vicinity?~~

~~(Check ☒ yes or no) ☐ Yes ☐ No~~

~~If "Yes", describe, using an attachment if necessary.~~

~~_____~~

9. Provide the following information on fuel used by the unit.

a. List the unit's primary energy source code (from "Energy Sources" listed on [the following page 4](#)).

b. List the unit's secondary energy source code (from "Energy Sources" listed on [the following page 4](#)).

~~c. How is the fuel being transported to the site? (from "Mode of Transportation" listed on page 4). _____~~

~~d. Does energy source (fuel) availability vary with the season? (Check ☒ yes or no) ☐ Yes ☐ No~~

~~If "Yes", describe. _____~~

~~e. What contingency plans are there to cover energy source shortages?~~

~~_____~~

~~f. Specify number of days of energy source storage. _____~~

~~g. What alternate form(s) of fuel transportation are available to the unit for primary energy source?~~

~~_____~~

~~h. What alternate form(s) of fuel transportation are available to the unit for secondary energy source?~~

~~_____~~

10. Will the unit have black start capability? (Check ☒ yes/Yes or ~~no~~No) ☐ Yes ☐ No

If "Yes", can it be operated on its own auxiliaries prior to synchronization with the system? ☐ Yes ☐ No

11. Provide the following information on the interconnection point.

a. Specify the interconnection bus name and the voltage level the unit is connected to.

b. Specify the modeled PSS/E bus name and number that is electrically closest to where the unit is interconnected.

(Check ☒ the appropriate box and provide appropriate diagram(s))

☐ The unit is connected to the power system at transmission voltage ([69 kV or higher](#)). Provide an electrical one line diagram showing all essential devices including GSU impedance, station arrangements, station service and connections to the bulk power system, including the voltage levels [below 69 kV](#).

☐ The unit is connected to the distribution system. Provide one line diagram(s) showing the unit connection and where the distribution network connects to the bulk power system.

12. Has an interconnection request been submitted for the new unit or change of less than 5 MW? (Check ☒ yes or no) ☐ Yes ☐ No

a. If "Yes", when was the interconnection request submitted and to whom?

b. If "No", when will the interconnection request be submitted and to whom?

~~NOTE: APPLICATIONS FOR HYDRO UNITS MUST INCLUDE COMPLETED PP5-1 ATTACHMENT 2~~

GENERATOR UNIT/TECHNOLOGY TYPES

CODE	PRIME MOVER (UNIT TYPE)
ST	Steam Turbine, including nuclear, geothermal and solar steam (does not include Combined Cycle)
GT	Combustion (Gas) Turbine (does not include Combined Cycle)
IC	Internal Combustion (diesel, piston) Engine
CC	Combined Cycle – Represents the total unit/plant/asset. Also used for combustion turbine units that are in the planning stage, for which specific generator details cannot be provided. (Includes EIA Codes CA, CT, and CS.)
HD	Hydro (Conventional Daily)
HW	Hydro (Conventional Weekly) – Stations may be considered as operated on a weekly or seasonal draw-down cycle (HW) provided there is on-site Energy storage between normal operating elevations equivalent to at least ten (10) times Claimed Capability Ratings, assuming zero (0) inflow from natural run-off and upstream station water discharge. Otherwise, stations will be considered as operated on a daily cycle (HD).
PS	Hydro (Pump Storage)
PV	Photovoltaic
WT	Wind Turbine
CE	Compressed Air Energy Storage
FC	Fuel Cell
OT	Other

MODE OF TRANSPORTATION

CODE	TRANSPORTATION (DESCRIPTION)
CV	Conveyor
PL	Pipeline
RR	Railroad
TK	Truck
WA	Water Transportation

ENERGY SOURCES

CODE	TYPE (FUEL)
AB	Agricultural Crop Byproducts/Straw/Energy Crops
BFG	Blast-Furnace Gas
BIT	Bituminous Coal
BLQ	Black Liquor
DFO	Distillate Fuel Oil (includes all Diesel and No. 1, No. 2 and No. 4 Fuel Oils)
GEO	Geothermal
JF	Jet Fuel
KER	Kerosene
LIG	Lignite Coal
LFG	Landfill Gas
MSW	Municipal Solid Waste
NG	Natural Gas
NUC	Nuclear (Uranium, Plutonium, Thorium)
PC	Petroleum Coke
PG	Propane
OBG	Other Biomass Gases (Digester Gas, Methane and other biomass gases)
OBL	Other Biomass Liquids (Ethanol, Fish Oil, Liquid Acetonitrile Waste, Medical Waste, Tall Oil, Waste Alcohol and other biomass liquids not specified)
OBS	Other Biomass Solids (Animal Manure and Waste, Solid Byproducts and other solid biomass not specified)
OG	Other Gas (Butane, Coal Processes, Coke-Oven, Refinery and other processes)
OTH	Other (Batteries, Chemicals, Coke Breeze, Hydrogen, Pitch, Sulfur, Tar Coal and miscellaneous technologies)
RFO	Residual Fuel Oil (includes No. 5 and No. 6 Fuel Oils and Bunker C Fuel Oil)

CODE	TYPE (FUEL)
SC	Coal-based Synfuel, including briquettes, pellets or extrusions, which are formed by binding materials and processes that recycle material
SLW	Sludge Waste
SUB	Sub-bituminous Coal
SUN	Solar (Photovoltaic, Thermal)
TDF	Tires
WAT	Water (Conventional, Pumped Storage)
WC	Waste/Other Coal (Anthracite Coal, Anthracite Culm, Bituminous Gob, Fine Coal, Lignite Waste, Waste Coal)
WDL	Wood Waste Liquids
WDS	Wood/Wood Waste Solids (Paper Pellets, Railroad Ties, Utility Poles, Wood Chips and other wood solids)
WND	Wind
WO	Oil – Other and Waste Oil (Butane (Liquid), Crude Oil, Liquid Byproducts, Oil Waste, Propane (Liquid), Re-refined Motor Oil, Sludge Oil, Tar Oil)

PROPOSED PLAN APPLICATION SUBMITTAL PROCEDURE

Governance Participants will follow the “Proposed Plan Application Submittal Procedure” contained herein for the submittal of their proposed plans for review pursuant to Section I.3.9 of the ISO New England Inc. Transmission, Markets and Service Tariff (the “Tariff”). The intent of this procedure is to detail the information required under Planning Procedure Nos. 5-1 (PP5-1) and 5-3 (PP5-3) to assure an efficient Proposed Plan Application (PPA) review by the Reliability Committee (RC) and by the ISO. PP5-1 and PP5-3 may be found on the ISO Website at:

<http://www.iso-ne.com/participate/rules-procedures/planning-procedures>.

The most recent revision of this Attachment 5 may be found on the ISO Website at:

http://www.iso-ne.com/static-assets/documents/trans/pp_tca/forms/ppa_submittal_procedure.pdf.

Notification

The Governance Participant is encouraged to discuss a proposed project (or project revision) with the ISO and, as necessary, the Transmission Owner for guidance regarding the appropriate level of study required and whether a PPA or a “Generator Notification Form for Units or Changes of Less Than 5 MW” should be submitted to the ISO. PPA forms may be found on the ISO Website at:

<http://www.iso-ne.com/system-planning/transmission-planning/proposed-plan-applications>.

A Governance Participant wishing to discuss a proposed project with the ISO should notify the ISO via the e-mail address ProposedPlans@iso-ne.com.

Submittal of Study Results and Proposed Plan Application Materials

- **Level 0 Analysis**

PP5-1 Section 4 lists the types of projects that do not require a PPA submittal under this procedure. Pursuant to this procedure and procedure PP5-3, these types of project require Level 0 analysis. However, subject to the provisions of PP5-1, a “Generator Notification Form for Units or Changes of Less Than 5 MW”, should be submitted to the ISO for proposed projects which are less than 5 MWs of new or increased generation. These submittals shall be made to the ISO via the email address ProposedPlans@iso-ne.com for ISO review and for RC distribution.

- **Level I Analysis**

In the case of a project requiring Level I analysis, as defined in PP5-3, the PPA submittal is for information only, and the reporting of any study results is not required. The Governance Participant may submit the PPA requiring Level I analysis directly to the ISO for review and distribution. ISO may confer with

potentially Affected Entities to confirm that no reporting of analysis is required and that the project requires Level I analysis.

The complete PPA package for a project requiring Level I analysis shall be submitted to the ISO via e-mail to ProposedPlans@iso-ne.com and shall include:

- A cover letter that is addressed to the Chair of the Reliability Committee and requests RC review under Section I.3.9 of the Tariff. The letter must identify the project, the submitted PPA(s), the level of analysis (Level I), and additional related materials that are being submitted.
- PPA(s) completed in accordance with this PP 5-1.
- One-line diagram(s) showing the proposed modification(s).
- Additional materials related to the project, as may be requested by the ISO.
- Once the project PPA package is deemed complete, the RC Secretary shall provide the materials to the RC for their review.

- **Level II or III Analysis**

A project requiring Level II or III analysis requires RC and ISO review.

- 1) The project's proponent must contact the ISO via e-mail at ProposedPlans@iso-ne.com, to coordinate the review of the project.
- 2) The project proponent shall submit to the ISO, via e-mail at ProposedPlans@iso-ne.com, a draft of each PPA for the project along with the study report(s). The complete study report(s) shall include a project description of sufficient detail for review and one-line diagrams showing the elements of the project, and sufficient reporting of the analyses performed to demonstrate that the project will not have any significant adverse effects under Section I.3.9 of the Tariff. The project description must include any additional upgrades necessary to mitigate any adverse effects that may be identified during the review and any specific conditions regarding the construction sequencing of the elements within the project and with the elements of other projects that have been determined to have no adverse effects under Section I.3.9 of the Tariff.
- 3) The ISO review will ensure consistency of the project description with the one-line diagrams in the report. ISO Planning staff will ensure that the project report and draft PPA(s) are consistent.
- 4) When the ISO confirms that the study results adequately support the project, it will provide a recommendation letter to the RC indicating the project reports

are complete and that the project will not have any significant adverse effects pursuant to Section I.3.9 of the Tariff. This recommendation letter will include any opinions expressed by Affected Entities regarding significant impacts that they believe to be insufficiently addressed.

- 5) After it has been confirmed that the study results adequately support the project, the Governance Participant may submit a letter requesting Section I.3.9 review of the project to the RC Chair. The letter must identify the project, the submitted PPA(s), the level of analysis (Level II/III), the study report(s), and additional related materials that are being submitted. The letter shall be submitted to the ISO by email to ProposedPlans@iso-ne.com.
- 6) ISO Planning staff will provide to the RC Secretary the PPA(s), study report(s) and any additional related materials that were identified in the letter to the RC Chair. The RC Secretary will coordinate the RC review of the project with the project proponent.

General Requirements

- The ISO will send an e-mail to the plan proponent to provide:
 - confirmation of receipt of the project PPA materials or any appropriate modifications to the submitted materials; and
 - verification of the submittal date of the complete project PPA package appropriate for review by the RC.

The appropriate project PPA package will be forwarded to all appropriate ISO personnel, and then distributed to the RC prior to the meeting at which the project is to be considered.

The applicant should provide additional copies of project PPA materials to committee members upon request.