ISO New England Operating Procedure No. 5
Generator, Dispatchable Asset Related Demand and Alternative Technology Regulation Resource Maintenance and Outage Scheduling

Effective Date: **September 9, 2016**

References:

NERC Generating Availability Data System (GADS) - Data Reporting Instructions

ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff, Section III, ISO New England Market Rule 1 - Standard Market Design (Market Rule 1)

ISO New England Inc. Transmission, Markets, and Services Tariff, Attachment D, ISO New England Information Policy

ISO New England Manual for the Forward Capacity Market (FCM), Manual M-20 (M 20)

ISO New England Operating Procedure No. 3 - Transmission Outage Scheduling (OP-3)

ISO New England Operating Procedure No. 4 - Action During a Capacity Deficiency (OP-4)

ISO New England Operating Procedure No. 7 - Action in an Emergency (OP-7)

ISO New England Operating Procedure No. 8 - Operating Reserve and Regulation (OP-8)

ISO New England Operating Procedure No.14 - Technical Requirements for Generators, Demand Resources, Asset Related Demands and Alternative Technology Regulation Resources (OP-14)

Local Control Center Instructions:

CONVEX:	None
Maine:	MAINE OPERATING PROCEDURE NO. 3, Maintenance on Transmission Facilities Operating at 34 kV and Above
New Hampshire:	None
NSTAR:	None
REMVEC II:	OP-3 Scheduling Outages of New England Control Center / REMVEC Transmission Facilities
VELCO:	None

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PART I - INTRODUCTION

The process for submitting and evaluating outages on Import Capacity Resources and Intermittent Capacity Resources shall be the same as for Generators, as defined in this procedure, ISO New England Operating Procedure No. 5 - Generator, Dispatchable Asset Related Demand and Alternative Technology Regulation Resource Maintenance and Outage Scheduling (OP-5). However, Import Capacity Resources backed by a portfolio of Generators shall only submit an Outage Request if the reduction in capability of the portfolio impacts the Capacity Supply Obligation (CSO) of the Import Capacity Resource and the ability of the Market Participant to submit the required daily External Transactions.

Each Market Participant shall, to the fullest extent practicable, cause all generating facilities and other resources owned or controlled by it to be maintained and operated in accordance with Good Utility Practice. To the extent possible, maintenance and outage requirements should be met by planning to prevent Forced Outages and by coordinating known outage requirements through ISO. Since Planned and Maintenance Outages present less operational problems for ISO and generally represent more favorable economics for the Generator operator than Forced Outages, appropriate consideration should be given to avoid the risk of Forced Outages.

Each Generator Planned and Maintenance Outage is to be scheduled according to OP-5. A Generator should **not** be taken out of service for maintenance without ISO approval, unless there is a danger to personnel or a risk of equipment damage. Any Generator Maintenance and Planned Outage that impacts the CSO of the associated Capacity Resource or is associated with a Generator without a CSO that is a Qualified Generator Reactive Resource under Schedule 2 of the ISO OATT is subject to ISO review and approval. A Generator without a CSO that is a Qualified Generator Reactive Resource under Schedule 2 of the ISO OATT is subject to the provisions in PART III, Section 1 E of this OP-5. The Market Participant must notify ISO of each Generator Maintenance and Planned Outage that does **not** impact the CSO of the associated Capacity Resource or is associated with a Generator that does **not** have a CSO. Each Generator outage **not** approved by the ISO shall be categorized as a Forced Outage. If a Generator is forced out of service due to personnel or equipment risk, the ISO Control Room Generation Desk and Forecaster must be notified as soon as practicable. A Market Participant that fails to comply with OP-5 may be subject to sanctions and penalties according to Market Rule 1, Appendix B, Imposition of Sanctions by the ISO. The Market Participant must categorize and report each Generator outage to ISO in accordance with the NERC Generating Availability Data System (GADS) - Data Reporting Instructions and OP-5.

A Market Participant must submit a request for any Planned Outage and Maintenance that would reduce the ability of a Dispatchable Asset Related Demand (DARD) to interrupt without reducing its load by a corresponding amount. A Market Participant, without ISO approval, shall **not** reduce the ability for a DARD to interrupt to its Nominated Consumption Limit (NCL) unless there is a danger to personnel or a risk of equipment damage. A Market Participant that reduces the ability of a DARD to interrupt due to danger to personnel or a risk of equipment damage must notify the ISO Control Room Generation Operator and Forecaster of the reduction as soon as practicable. Any DARD outage **not** approved by ISO shall be categorized as a Forced Outage. A Market Participant that fails to comply with OP-5 may be subject to sanctions and penalties

according to Market Rule 1, Appendix B, Imposition of Sanctions by the ISO. The Market Participant must categorize and report any DARD outage to ISO.

A Market Participant with an Alternative Technology Regulation Resource (ATRR) that is modeled in the ISO New England topology must submit notification for any Planned Outage and Maintenance Outage that would reduce the ability to provide the registered Regulation capability for more than 24 contiguous hours. A Market Participant that fails to comply with OP-5 may be subject to sanctions and penalties according to Market Rule 1, Appendix B, Imposition of Sanctions by the ISO. The Market Participant must categorize and report any ATRR outage to ISO.

The Market Participant must submit a request for any planned and unplanned testing and maintenance outage of a relay protection system that could reduce or impact the normal operation of the New England Reliability Coordinator Area/Balancing Authority Area (RCA/BAA) New England Transmission System in accordance with ISO New England Operating Procedure No. 3 - Transmission Outage Scheduling (OP-3). The scheduling requirements are designed to allow sufficient time for ISO and the Local Control Centers (LCCs) to assess the impact of each protection outage request on reliability. In addition, whenever possible each Transmission, Generator, DARD or ATRR outage shall be coordinated to reduce impact on reliability and economics.

OP-5 defines the process for a Market Participant to request, and ISO to evaluate and approve or deny any Generator and DARD Planned and Maintenance Outage. The two outage-scheduling processes are:

- The Annual Maintenance Schedule
- The Maintenance Outage Request and Evaluation Process

OP-5 is designed to facilitate each Market Participant Planned and Maintenance Outage scheduling. The scheduling requirements are designed to allow (a) each Market Participant to incorporate future maintenance in its budget forecasts, (b) sufficient time for Market Participants to respond to market signals, and (c) sufficient time for ISO and its Local Control Centers (LCCs) to assess the impact of each Generator and DARD outage request on the New England Reliability Coordinator Area/Balancing Authority Area (RCA/BAA) New England Transmission System reliability. In addition, whenever possible, any transmission, Generator and DARD outage shall be coordinated to reduce Congestion Costs. For an importing area, any economic Generator and DARD within the area should **not** be scheduled out simultaneously with transmission facilities that significantly support area import capability. For an exporting area, any Generator and DARD outage within the area should be coordinated coincident with the outage of transmission facilities that significantly support area export capabilities.

OP-5 includes definitions of key terms, responsibilities of Market Participants, ISO, and LCCs, as well as rules for outage evaluation and reporting.

PART II - DEFINITIONS

Congestion Costs: The estimated increased expenses resulting from forecasted real-time commitment or re-dispatch of "out of merit" Generator(s)/DARD(s) or the forecasted real-time re-dispatch or de-commitment of "in merit" Generator(s)/DARD(s) in the Energy & Reserves Markets to respect operating criteria.

Annual Maintenance Schedule (AMS): A capacity assessment report provided and updated on a monthly basis, which is distributed on or about the 5th day of the month. This capacity assessment is intended to convey forecasted capacity margins in order to coordinate generation and transmission outages in a reliable manner. Providing this report with two years of forecast capacity margins affords sufficient lead-time to schedule Planned Outages (POs) for the current and future Capacity Commitment Periods..

Locational Operable Capacity Margin (LOCM): A measure of the long-term projected weekly operable capacity margin on a New England sub-area basis, as described in Appendix 5-A. The sub-area analysis is forecast for up to nineteen (19) months and is performed in addition to the operable capacity margin analysis for the entire New England RCA/BAA.

Long Term Operable Capacity Margin (LTOCM): A measure of New England RCA/BAA projected weekly operable capacity margin looking ahead up to twenty-four (24) months based on the assumptions in Appendix 5-A. A positive value of LTOCM indicates a potential surplus of operable capacity over and above the estimated load plus Operating Reserve requirement without activating Real Time Demand Response. A negative value indicates that Real-Time Demand Response would need to be dispatched and the magnitude of that negative value may indicate potential operable capacity deficiency. The LTOCM formula and its components are defined in Appendix 5-A.

Operable Capacity Margin (OCM): Collectively, the Long Term Operable Capacity Margin (LTOCM), the Locational Operable Capacity Margin (LOCM), the Short Term Operable Capacity Margin (STOCM), and the Short Term Locational Operable Capacity Margin (STLOCM).

Outage Types:

Planned Outage (PO): A PO must be requested with a minimum of 15 calendar days prior to start date and is typically scheduled for the purpose of performing annual maintenance or more significant work that is planned and coordinated well in advance.

Overrun Planned Outage (OPO): An overrun of a Planned Outage may be requested up until the Thursday prior to the scheduled return of a Generator/DARD/ATRR to service. A Planned Outage Overrun is considered a type of Maintenance Outage throughout this document.

Maintenance Outage (MO): An outage that can be deferred beyond the end of the weekend, but requires that the Generator, DARD or ATRR be removed from service within 14 calendar days of the outage start date. During any particular week, if a Market Participant requests an outage that **cannot** be deferred beyond the weekend, that outage shall be classified as a Forced

Outage. ISO shall attempt to, in accordance with the request, accommodate a MO as soon as possible depending on system conditions, significant increases in Locational Marginal Price (LMP), and Congestion Costs. This outage is coordinated in the Maintenance Outage Request processes. Characteristically, an MO can occur any time during the year, has a flexible start date, may or may **not** have a predetermined duration, and is usually much shorter than a PO.

Forced Outage (FO): Any outage or inability, in whole or in part, of a Generator or DARD to provide its Claimed Capability or Nominated Consumption Limit (NCL) that has **not** been approved by ISO in the form of a PO or MO. An FO incident preceding a PO or MO shall **not** eliminate the requirement of the Market Participant to report an FO for the entire actual/estimated period to repair the component(s) associated with the FO. Among other things, an FO may occur by reason of an Emergency or threatened Emergency, unanticipated failure, or other cause beyond the control of the owner or operator of the facility, as specified in the relevant portions of the Market Rule 1 and ISO New England Manuals.

An FO requires the notification of the ISO Control Room Generation Desk with an appropriate Redeclaration for the current Operating Day. The ISO Generation Coordinator should be contacted at (413) 535-4378 from 0700 to 1600 or the Forecaster by telephone at (413) 535-4340 from 1600 to 0700 for the purpose of providing an expected FO return date, and to provide any necessary Redeclaration of any future days for which the bidding deadline has passed. These notifications should be made as soon as practicable.

Owner Test Request: A request submitted to ISO when Market Participant has owner testing to perform and wants to ensure their Generator/DARD will be able to operate at a predefined schedule during that testing. If a request for owner testing is **not** submitted by a Market Participant, transmission outages may be approved that could prevent the desired testing from occurring in the desired period. The Market Participant shall submit and ISO shall evaluate an Owner Test Request in the same manner as a MO request.

Short Term Locational Operable Capacity Margin (STLOCM): A measure of the projected daily operable capacity margin looking ahead 2 weeks or less on a New England sub-area basis, as described in Appendix 5-A.

Short Term Operable Capacity Margin (STOCM): A measure of New England RCA/BAA projected daily operable capacity margin looking ahead 2 weeks or less based on the assumptions in Appendix 5-A. A positive value of STOCM indicates a potential surplus of operable capacity over and above the estimated load plus Operating Reserve requirement without activating Real Time Demand Response. A negative value indicates that Real-Time Demand Response would need to be dispatched and the magnitude of that negative value may indicate a potential operable capacity deficiency. The STOCM formula and its components are defined in Appendix 5-A.

Sub-Area: A local area within the New England RCA/BAA requiring coordination of Generator, DARD and transmission outages.

PART III - PROCEDURES

I. ISO & LOCAL CONTROL CENTER RESPONSIBILITIES

A. GENERAL

1. Evaluation Principles

ISO shall assign each outage request an outage tracking number upon receipt. Each request shall be time and date stamped for prioritization purposes.

ISO and the LCC shall evaluate each Generator and DARD outage request submitted by a Lead Market Participant for the items listed below. Outages of transmission facilities shall be included as a part of this evaluation. Criteria contained in this Section I.A pertain to each Generator/DARD outage that impacts the CSO of the associated Capacity Resource.

a. Identify if the proposed Generator/DARD outage results in an unacceptable OCM

b. Identify if there are any system or local system reliability impacts resulting from the proposed outage

c. Identify opportunities where the proposed Generator/DARD outage could be adjusted with respect to a pending transmission outage to reduce or eliminate Congestion Costs.

An LCC shall **not** share **either** non-public transmission outage information **or** outage information associated with another Generator/DARD with the any Owner contacted. Additionally, an LCC shall **not** engage in multi-party communications with a Generator/DARD Owner and a Transmission Owner.

Planned Outage Review MORATORIUM

a. Annual Forward Capacity Market Reliability Review

1) During the period when ISO is performing reliability reviews of FCM annual bilateral submissions for the upcoming FCM Capacity Commitment Period; Planned Outage requests for outages that fall within June 1st and September 15th of the FCM Capacity Commitment Period shall be time stamped to establish review priority and held until the FCM bilateral reliability review process is completed.

a) Annual bilateral reliability review period begins immediately following the close of the annual bilateral submission period for the applicable Capacity Commitment Period.

2) During the period when ISO is performing reliability reviews of the FCM 3rd annual reconfiguration auction results for the applicable FCM Capacity Commitment Period, Planned Outage requests for outages that fall within June 1st and September 15th of the FCM Capacity Commitment Period shall be time stamped to establish

review priority and held until the auction results reliability review is completed.

b. Monthly FCM Reliability Review

1) During the period when ISO is performing reliability reviews of FCM monthly bilateral submissions and monthly reconfiguration auction results for the applicable month, each PO request for an outage that falls within the applicable month shall be time stamped to establish review priority and held until the reliability review process is completed.

2. Outage Request Approval Principles

The Market Participant must request ISO approval to remove a Generator or DARD from service for a PO or MO in accordance with OP-5 when that Generator outage may impact the CSO of the associated Capacity Resource. The Market Participant must provide notification to ISO in accordance with OP-5 when the Generator outage does **not** impact the CSO of the associated Capacity Resource or if the Generator has **no** CSO.

ISO shall approve any PO or MO request to the extent that it would **not**, in ISO or LCC judgment, cause an unacceptable OCM or violate any NERC, NPCC, or ISO operating criteria, policy or procedure. Once approved, a Market Participant shall **not** subsequently be required to alter its PO request if unacceptable OCM conditions arise as a result of another Generator/DARD or transmission outage. However, ISO can delay the start of an outage for reliability reasons.

ISO shall prioritize the outage requests for any given time period on a first come first served basis.

ISO may reject an outage request if, in ISO judgment, the requested outage would cause an unacceptable LTOCM or LOCM (as defined in Part III Section I.B.1.b, or Part III Section I.C.1) or STOCM or STLOCM (as defined in Part III Section I.D.2).

ISO shall coordinate with the LCCs regarding any outage repositioning. The monthly distribution of the Annual Maintenance Schedule shall provide the LCCs with information regarding any repositioned outages occurring later in the year. For a Maintenance outage request, ISO provides the relevant LCC with the outage information. The LCC shall be responsible to notify ISO if an outage repositioning poses any local system reliability impact within its local area. Additionally, to reduce or eliminate Congestion Costs, the LCCs and ISO shall promote the continuous flow of information between them and the Transmission Owners in an effort to match proposed or forced Generator/DARD outages with pending transmission outage work to the extent practicable.

B. ANNUAL MAINTENANCE SCHEDULE

Where the PO request affects the CSO of associated Capacity Resource or is associated with a Generator without a CSO that is a Qualified Generator Reactive Resource under Schedule 2 of the ISO OATT, the Market Participant must request ISO approval to schedule a PO in accordance with OP-5. Where the PO request does **not** affect the CSO of the associated Capacity Resource or are associated with a Generator that does **not** have a CSO, the Market Participant must notify ISO of its PO schedule in accordance with OP-5. Criteria contained in the rest of this Section I.C regarding approval of a PO that pertains to a DARD outage and Generator outage that impacts the CSO of the associated Capacity Resource, and to the extent specified in Section I.E, Generators without a CSO that are Qualified Generator Reactive Resources.

1. Outage Request Processing

    a. ISO and respective LCC shall respond to Market Participant Planned Outage Requests on a first come, first served basis for any defined submission period and regardless of whether the outage indicates it is requesting to be exempt from FCM penalties during the outage. The respective LCC shall review the outage and promote for ISO review if the impact on local reliability within their area is acceptable.

    b. ISO shall evaluate the impact of the PO request on the Operable Capability Margin (as defined in Appendix A) and evaluate if approved transmission outages shall interfere with the PO request. An outage shall **not** be approved unless the results of all assessments listed below are acceptable:

        1) When performing the OCM evaluation, the PO request does **not** cause a LTOCM or LOCM value that predicts the dispatch of Real Time Demand Response Resources.

        2) When performing the OCM evaluation, if the PO does cause a LTOCM or LOCM value for any week that predicts the dispatch of Real Time Demand Response Resource, it shall be determined to be acceptable if:

            a) The PO request does **not** cause an LTOCM or LOCM value that results in the forecasted implementation of the ISO New England Operating Procedure No. 4 - Action During a Capacity Deficiency (OP-4) Action where a Power Watch is declared, and

            b) The analysis for activation of Real Time Demand Response Resources defined in Appendix D is acceptable.

        3) Security analysis considering all approved transmission network element outage does **not** identify any violation(s) of ISO, LCC, NERC or NPCC criteria.

    c. If ISO determines that the requested outage is **not** acceptable, ISO shall discuss alternate dates with the LCC, when the system reliability conditions are projected to be more favorable. The LCC shall work with

the TO and the Generator/DARD Lead Participant to reposition the outage. If the Market Participant is **not** willing or **not** able to move the outage to a period where capacity and security criteria can be met, the outage request shall be denied.

d. In an effort to reduce Congestion Costs, ISO shall also compare the Generator/DARD outage request against approved transmission outage schedules to identify cases where the Generator/DARD outage schedules could be adjusted to meet this objective. If a potential schedule adjustment is identified, ISO shall discuss outage rescheduling with the LCC. The LCC shall coordinate rescheduling with the respective Transmission Owner and the Generator/DARD Lead Market Participant. (Throughout this process, ISO shall work with the respective LCC, as needed, to develop alternative outage schedules.)

e. Upon coordination of Generator, DARD and transmission outage schedules, ISO shall perform their final review to confirm that the New England RCA/BAA and LCC reliability requirements are satisfied, coordination actions are in order, and Congestion Costs have been reduced or eliminated. Following this review, ISO shall:

1) Notify the Lead Market Participant if its request is approved as submitted, or approved with modifications in accordance with the principles in Part III Sections I.A.1 & 2.

2) Publish the outage in next update of the Annual Maintenance Schedule (AMS).

3) If applicable, revise the transmission outage information in the Transmission Overhaul and Maintenance Schedule which is issued to the LCCs on a monthly basis concurrent with the Annual Maintenance Schedule. (The LCC shall relay any schedule revision information to the Transmission Owner.)

2. ISO Reporting

ISO shall publish the Current Year - Annual Maintenance Schedule initially on or about June 5th and subsequently on or about the 5th of each calendar month. If the published schedule poses any local system reliability impact within its local area, each LCC shall notify the Long Term Outage Coordination Group by electronic media (email) at opamoreq@iso-ne.com within five (5) working days. [Local system reliability issues identified at this point should be minimal since each Generator/DARD PO request is forwarded to the respective LCC(s) for local review and approval following initial evaluation by ISO.]

The schedule shall aggregate approved Market Participant outage requests, and ISO shall provide the projected weekly LTOCM for the New England RCA/BAA for two (2) calendar years. The schedule shall also reflect the available and forecast Real-Time Demand Response Resources and the resulting capacity margin considering the full activation of the Real-Time Demand Response Resources. This process provides the Market Participants with a planning tool for reviewing their maintenance

requirements and timing of their own operable capacity needs with the market signals of the New England RCA/BAA. This process provides ISO with a method for coordinating Generator/DARD maintenance requirements to avoid OP-4 or OP-7, and as a result, ISO can identify potential capacity deficient periods. Additionally, the process provides ISO and the LCCs with the necessary information to identify situations where Generator/DARD and transmission outages could potentially be coordinated to reduce Congestion Costs.

3. Resolution of a Reliability Issue

   If a reliability issue is discovered after ISO has approved a PO that is reflected in the Annual Maintenance Schedule, ISO shall work with the LCC and the Lead Participant to reposition a previously approved Generator/DARD PO to avoid or eliminate unacceptable forecasted LTOCM or LOCM, reliability issues that have appeared since that approval was granted.

   Where a reliability issue **cannot** be eliminated through ISO discussions with the each Market Participant by seventy-five (75) days prior to the start of such a period, ISO shall perform the following steps in order:

   a. Within seventy-five (75) days of the start of such a period, ISO shall notify, in writing, all parties requesting an outage during the period where an unacceptable LTOCM or LOCM is projected and request that all parties either voluntarily reposition their outage request or provide ISO with alternatives for repositioning their outage request. The Market Participants shall have fifteen (15) working days to respond to the ISO request.

   b. If the problem is **not** resolved by the next monthly publication of the Annual Maintenance Schedule, ISO may reject one or all of the PO requests as defined in OP-5. In making its determination, ISO shall group the requests by time stamp, and then apply an allocation method. The ISO allocation method is used to allocate the capacity available for a PO. ISO shall notify the Markets Committee that the problem exists, that voluntary repositioning has **not** resolved the problem, and that ISO must implement an allocation process.

      The allocation process starts with the most recent group of PO requests. The allocation method is based on the ratio of a requesting Market Participant total generating Capacity Supply Obligation and DARD NCL compared to the sum of the requesting group total generating CSO and DARD NCL. This ratio is multiplied times the capacity available for maintenance to determine the Market Participant allocation. Previously approved PO requests shall **not** be subjected to the allocation process. If the Market Participant allocation represents at least ninety (90) percent of the Generator capacity or a DARD NCL to be removed from service, the Generator or DARD outage request shall be approved. If the Market Participant allocation represents less than ninety (90) percent of the Generator or DARD capacity to be removed from service, the Generator

or DARD outage shall be relocated. ISO shall notify the Market Participants of the result of the allocation process **no** later than 55 days prior to the start of any outage.

c. Following ISO imposition of the allocation method and by 45 days prior to the commencement of its outage, any Market Participant refusing to relocate its outage for that Generator or DARD for any month included in this allocation process and the outage shall be determined to be a FO.

C. MAINTENANCE OUTAGE REQUEST AND EVALUATION PROCESS

Where the MO or OPO impacts the CSO of the associated Capacity Resource, or is associated with a Generator without a CSO that is a Qualified Generator Reactive Resource under Schedule 2 of the ISO OATT, the Market Participant must request ISO approval to schedule any MO and OPO in accordance with OP-5. Where the MO or OPO does **not** impact the CSO of the associated Capacity Resource or if the Generator has **no** CSO, the Market Participant must notify ISO of the MO or OPO. Criteria contained in this section regarding approval of a MO or an OPO pertains to a DARD outage and Generator outage that impacts the CSO of the associated Capacity Resource, and to the extent specified in Section I.D, (i.e.,a Generator without a CSO that is a Qualified Generator Reactive Resource).

1. MO and OPO Request Processing

   ISO and associated LCC shall respond to each MO and OPO request as follows:

   a. Response time shall be based on the following table:

Response Time Table	
Submission of MO Request or OPO for an Outage Start of:	**Response time by ISO**
7 to 14 calendar days in the future	Within 3 business days
7 calendar days or less in the future	Within 1 calendar day
Overnight or Next Day, Submitted by 0700*****	By 0900
Overnight or Next Day, Submitted/Requested 0700-2400	Within current day**

***An OPO is not applicable in this timeframe**

****Request shall be evaluated considering Day Ahead Market and Reserve Adequacy Assessment results**

   b. If the MO request results in the forecast of any actions of OP-4 or OP-7, including the forecast activation Real-Time Demand Response Resources, ISO shall attempt to relocate the MO request to an acceptable period, when reliability issues would **not** be expected to occur. If a request for an OPO results in any actions of OP-4 or OP-7, including the forecast activation of Real-Time Demand Response Resources, the outage shall be denied.

c. With prospective outage dates identified (that do **not** affect system reliability), the ISO shall provide the MO request information to the respective LCC.

d. The LCC shall notify ISO if the MO request poses a local transmission reliability problem. If it does, ISO shall work with the LCC and the Market Participant to resolve the issue.

e. In an effort to reduce Congestion Costs, ISO shall compare the Generator/DARD outage request against approved transmission outage schedules to identify cases where the Generator/DARD outage schedules could be adjusted to meet this objective. If a potential schedule adjustment is identified, ISO shall discuss outage rescheduling with the LCC. The LCC shall coordinate rescheduling with the respective Transmission Owner and the Generator/DARD Lead Market Participant. (Throughout this process, ISO shall work with the respective LCC, as needed, to develop alternative outage schedules.)

f. ISO, coordinating with the LCC, shall proceed as follows depending on whether the case involves: (1) an importing area, (2) Generator/DARD or exporting area involving a single Lead Participant, or (3) an exporting area involving multiple Generators/DARDs involving multiple Lead Participants.

   1) Importing Area

      For an importing area, the simultaneous outage of transmission supplying the area along with Generator(s)/DARD(s) within the area can increase Congestion Costs and, in severe cases, jeopardize system reliability. To relieve this, the following actions shall be taken to try to position the transmission and Generator(s)/DARD(s) outages so that they occur at different times.

      - The LCC shall contact the applicable Lead Market Participant to determine if there is additional flexibility in their outage position.
      - The LCC shall contact the Transmission Owner for additional flexibility in their schedule. (Generator/DARD outage information can be discussed with the Transmission Owner, as required.)
      - If required, continue to alternately contact the Transmission Owner and the Lead Market Participant until a determination is made on whether or **not** activities can be positioned to reduce/eliminate Congestion Costs. [Note: If actions above are **not** sufficient to relieve congestion, ISO shall dispatch Generators/DARDs in accordance with the congestion management process or change the timing of the transmission outage.]

   2) Generator/DARD or Exporting Area Involving a Single Lead Participant

      This scenario involves a transmission outage that will restrict the commitment or dispatch of Generators/DARDs involving a single

Lead Participant (i.e., a line leaving a Generator/DARD station). The following actions shall be taken as soon as possible to try to change or create outage positions so that Generator/DARD and transmission outages occur simultaneously, thereby relieving the potential locked-in Generator/DARD.

- LCC shall contact the applicable Generator/DARD Lead Market Participant to determine if there is additional flexibility in their outage application.
- LCC shall contact the Transmission Owner for additional flexibility in their timing of the outage. (Generator/DARD outage information can be discussed with the Transmission Owner, as required.)
- If the transmission outage involves a radial circuit to a Generator/DARD, this information may be shared with the Lead Participant. Additionally, non-radial transmission outage information can be shared with the Lead Participant if the transmission outage solely affects that Participant.
- If required, continue to alternately contact the Transmission Owner and Generator/DARD Lead Market Participant until a determination is made on whether or **not** activities can be scheduled to reduce/eliminate Congestion Costs.
- The Transmission Owner may contact the Lead Participant directly to facilitate positioning of outages

3) Exporting Area Involving multiple Generators/DARDs and multiple Lead Participants

This case involves a transmission outage that will restrict the commitment or dispatch of Generators/DARDs within an exporting area that contains several Generators/DARDs involving multiple Lead Participants. The following actions shall be taken to try to change or create outage positions so that Generators/DARDs and transmission outages occur simultaneously, thereby relieving the potential locked-in Generators/DARDs.

- LCC shall contact the applicable Lead Participants to determine if there is additional flexibility in their outage position in the order that their outage request was received.
- LCC shall contact the Transmission Owner for additional flexibility in their position. (Generator/DARD outage information can be discussed with the Transmission Owner, as required.)
- If required, continue to alternately contact the Transmission Owner and Lead Participants until a determination is made on whether or **not** activities can be positioned to reduce/eliminate Congestion Costs.
- If Generators/DARDs with outage requests **cannot** be repositioned or **no** outage requests exist, the LCC shall contact

affected Lead Participants and inform each that a transmission outage (**no** details) may result in their Generator/DARD being restricted and determine if they desire to coordinate an outage of their unit with the transmission outage.

- o If required, continue to alternately contact the Transmission Owner and Lead Participants until a determination is made on whether or **not** activities can be positioned to reduce/eliminate Congestion Costs. [Note: If actions above do **not** reduce Generators/DARDs below levels where units shall be constrained, ISO shall dispatch Generators/DARDs in the constrained export area based on its congestion management process or change the position of the transmission outage.

g. Upon agreement between all parties, ISO shall: 1) perform the final review to confirm that the New England RCA/BAA-wide and LCC reliability requirements are satisfied and that Congestion Costs have been reduced or eliminated; 2) notify the Generators/DARDs Lead Market Participant if the request is approved as submitted, or approved with modifications in accordance with the principles in Part III Sections I.A.1 & 2; and 3); if applicable, update short-term transmission outage information on the ISO Web Site.

2. MO and OPO Request ISO Reporting

ISO shall notify the submitter of the MO or OPO request of the decision made by ISO. The Market Participant is responsible for communicating all outage information with Entitlement Holders. ISO shall aggregate approved Market Participant outage requests and reflect these projections in the STOCM and STLOCM.

D. OUTAGE REQUEST ON NON-CSO RESOURCE ENROLLED IN SCHEDULE 2 CAPACITY COST COMPENSATION PROGRAM

The Market Participant with a Qualified Generator Reactive Resource without a CSO that is enrolled in the Schedule 2 Capacity Cost Compensation Program is required to submit the PO and MO request that is subject to ISO and LCC review and approval in accordance with sections I.B.1-3, I.C.1, and I.D.1 with the following exceptions:

1. There shall be **no** Operable Capacity Margin evaluation performed.
2. There shall be **no** Real-time Demand Response activation analysis performed.
3. Security analyses shall be limited to voltage studies.

II. MARKET PARTICIPANT RESPONSIBILITY

A. INFORMATION REQUIREMENTS

1. A Market Participant must submit a schedule for any Generator/DARD/ATRR Outage in accordance with OP-5 and must provide all information required by OP-5, in the time frames indicated.
2. When submitting a PO request, a Market Participant must provide the following information for each request:
   a. Name of Generator, DARD or ATRR
   b. Market Asset ID
   c. Capacity Resource ID, only applicable if outage is associated with an Import Capacity Resource
   d. MW amount of the physical reduction
   e. Preferred outage start date and time
   f. Projected outage end date and time
   g. Outage reason and description of work to be accomplished during the outage
   h. Flexibility of the outage schedule dates
   i. Requestor shall notify ISO whether the PO request is to be considered FCM exempt or **not**; this shall be indicated by a “Yes” or “No”. If requestor selects “Yes” and the outage is approved:
      - The CSO MWs impacted by the PO request are considered for exemption from an FCM availability penalty during a shortage event.
      - The actual duration of this outage shall be included when determining if the planned outage allotment hours for the Generator have been exceeded.
   j. Black Start status during the outage, for black start capable generators only.
3. When submitting an outage request other than a PO, the Market Participant must provide the following information for each request:
   a. Name of Generator, DARD or ATRR
   b. Market Asset ID
   c. Capacity Resource ID, only applicable if outage is associated with an Import Capacity Resource
   d. MW amount of the physical reduction
   e. Preferred outage start date and time
   f. Projected outage end date and time
   g. Outage reason and description of work to be accomplished during the outage
   h. For an MO, whether the outage can be postponed

i. Black Start status during the outage, for black start capable generators only.

4. A Generator outage request that crosses capability period boundaries must be submitted as two separate outage requests.
   - Summer Capability Period is comprised of the months June through September.
   - Winter Capability Period is comprised of the months of October through May.

B. INFORMATION SUBMITTAL PROCESS

Each Market Participant must submit the required information as follows:

a. Planned Outage request:
   - Submit a PO request for a Generator electronically through the ISO outage application software.
     - The timestamp of the outage request will be the time the outage request is last updated by the Market Participant
   - Submit a PO request for a DARD, ATRR and Import Capacity Resource or Generator when the outage application software is **not** available by electronic (email) to opamoreq@iso-ne.com using the standard form (Outage Request Form, Appendix 5-B).
     - The timestamp of the outage request will be the time the email is received

b. Any outage request other than Planned
   - Submit an outage request for a Generator electronically through the ISO outage application software.
     - The exception is that an MO must **not** be submitted into the ISO outage application software by the Market Participant after 0900 the day before the start of the outage; an MO submission after 0900 hours the day before the start of the outage must be requested through the ISO Short Term Outage Generation Coordinator or Control Room Forecaster.
     - The timestamp of the outage request will be the time the outage request is last updated by the Market Participant
   - Submit an outage request to the ISO Short Term Outage Coordinator by telephone at (413) 535-4378 from 0700 to 1600 or the Forecaster by telephone at (413) 535-4340 from 1600 to 0700 having the information in Section II.A.c. available.
     - The timestamp of outage request will be the time the phone call is received

C. CHANGES TO PREVIOUSLY SUBMITTED OUTAGE REQUESTS

A Market Participant request to modify a previously submitted PO, OPO, or MO request must follow the same process as defined in Section II. A Change request that reduces the scope or duration of the outage shall be accepted without impacting the time stamp of the outage request. A Change request that increases the scope or changes the dates of the outage such that a new outage evaluation is required shall be accepted as a new outage request and shall be time stamped accordingly.

D. REQUESTING IMPLEMENTATION OF OUTAGE

Immediately prior to commencing scheduled work, the Market Participant must obtain ISO control room approval for any Generator/DARD/ATRR PO and MO request. Such approval is **not** to be withheld unless the consequences of granting the approval would result in a risk of the OP-4 Action where a Power Watch is declared or higher or OP-7 or other serious reliability risk. ISO shall inform the appropriate LCC when the Generator/DARD is offline and out of service.

E. NOTIFYING ISO OF RETURN TO SERVICE

The Market Participant must notify the ISO of completion of any outage, and, for Capacity Supply Obligation megawatts, releasing the Generator/DARD to ISO for dispatch. If the Market Participant does **not** expect to return to service on the operating day included on the outage request, the Market Participant shall notify ISO of the expected return date, which may be captured in a new outage request.

ATTACHMENTS:

OP-5 Appendix A - Operable Capacity Calculations

OP-5 Appendix B - Outage Request Form

OP-5 Appendix C - (Retired 09/17/12)

OP-5 Appendix D - Demand Response Activation Analysis

OP-5 REVISION HISTORY

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

Rev. No.	Date	Reason
- -	draft	For previous revision history, refer to Rev 10 available through Ask ISO
Rev 11	12/01/10	Reformatted entire document, changed font, minor editorial and format changes, Clarified blackout dates Clarified requirements for Import Capacity Resources Modified submittal process to address outage application software Added language to outage types definition to indicate how they will be referenced in outage application software
Rev 12	03/01/11	Add language for non-CSO resources receiving Schedule 2 compensation
Rev 13	09/17/12	Corrected Market Rule 1 title; Appendix C, retired (09/17/12) exists only as place holder, no future plan to use;
Rev 14	10/08/13	Biennial review by procedure owner; Modified the Table located before Section I.D.1.a. (update for DAM timeline moving)
Rev 15	05/02/14	Updated for inclusion of Alternative Technology Regulation Resource (ATRR) requirements for outages and maintenance.
Rev 15.1	08/31/15	Periodic review performed requiring no changes
Rev 16	01/11/16	Provided clarification to: • Definitions • Current Year and First Future Year reporting • Part III, I, D. - Added guidance to the Response Time Table Part III, II, B. - Added guidance to the Informational Submittal Process
Rev 17	09/09/16	Completion on the biennial review by the procedure owner; Added required corporate document identity to all Footers; Modify the posting of First Future year and Current year AMS into one report updated monthly. Delete First Future Year process.; Added comment to require resources to include outage reason within outage requests. Clarified Planned outage definition; Globally minor editorial changes consistent with current practices and management expectations; Truncated the Revision History per SOP-RTMKTS.0210.0010 Section 5.6;