

# Operating Procedures

ISO New England Operating Procedure No. 5

*Generator and Dispatchable Asset Related  
Demand Maintenance and Outage Scheduling*

Effective Date: March 1, 2011  
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## **ISO New England Operating Procedure No. 5 Generator and Dispatchable Asset Related Demand Maintenance and Outage Scheduling**

**Effective Date:** March 1, 2011

### **References:**

NERC Generating Availability Data System (GADS) - Data Reporting Instructions  
ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff,  
Section III, 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 Market Operations Manual M-11 (M 11)  
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)

### **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 and Dispatchable Asset Related Demand 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 will impact 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.

All Generator Planned and Maintenance Outages are to be scheduled according to OP-5. Generators 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. All Generator Maintenance and Planned Outages that impact the CSO of the associated Capacity Resource or are associated with a Generator without a CSO that is a Qualified Generator Reactive Resource under Schedule 2 of the ISO OATT are subject to ISO review and approval. Generators without a CSO that are Qualified Generator Reactive Resources under Schedule 2 of the ISO OATT are subject to the provisions in PART III, Section 1 E of this OP-5.. Market Participants must notify ISO of all Generator Maintenance and Planned Outages that do not impact the CSO of the associated Capacity Resource or are associated with a Generator that does not have a CSO. All Generator outages 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. Market Participants failing 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. Market Participants must categorize and report all Generator outages to ISO in accordance with the NERC Generating Availability Data System (GADS) - Data Reporting Instructions and OP-5.

Market Participants must submit requests for Planned Outages and Maintenance that would reduce the ability of a Dispatchable Asset Related Demand (DARD) to interrupt without reducing its load by a corresponding amount. Market Participants, 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. All DARD outages not approved by ISO shall be categorized as Forced Outages. Market Participants failing 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. Market Participants must categorize and report all DARD outages to ISO.

OP-5 defines the process for Market Participants to request, and ISO to evaluate and approve or deny, Generator and DARD Planned and Maintenance Outages. The three outage-scheduling processes are:

- The First Future Year - Annual Maintenance Schedule
- The Current Year - 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) bulk power system reliability. In addition, whenever possible, transmission, Generator and DARD outages will be coordinated to reduce Congestion Costs. For importing areas, economic Generators and DARDs within the area should not be scheduled out simultaneously with transmission facilities that significantly support area import capability. For exporting areas, Generator and DARD outages 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.

**Current Year - Annual Maintenance Schedule:** This cycle begins on June 1<sup>st</sup> and covers the outages scheduled from the current publication date to the end of the current Capacity Commitment Period. Updates are provided on a monthly basis in the Current Year - Annual Maintenance Schedule, which is distributed on or about the 5<sup>th</sup> day of the month.

**First Future Year - Annual Maintenance Schedule:** The First Future Year - Annual Maintenance Schedule is published on or about each February 15<sup>th</sup> and covers Generator and DARD outages scheduled for the upcoming Capacity Commitment Period (June 1 - May 31). This schedule is intended to provide Market Participants and ISO sufficient lead-time to schedule all Planned Outages (POs) for the next Capacity Commitment Period. Updates to this schedule are made at least on a bi-monthly basis with distribution on or about the 15<sup>th</sup> day of the month throughout the Capacity Commitment Period. The final update forms the basis for the June release of the Current Year - Annual Maintenance Schedule.

**Locational Operable Capacity Margin:** The Locational Operable Capacity Margin (LOCM) is 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:** The Long Term Operable Capacity Margin (LTOCM) is a measure of New England RCA/BAA projected weekly operable capacity margin looking ahead up to nineteen (19) 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:** The Operable Capacity Margin (OCM) refers to 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):** Means an outage that is scheduled in advance and has a predetermined duration, typically for the purpose of performing annual maintenance. POs should be scheduled well in advance and must be requested with a minimum of 15 calendar days advance notice. These outages are initially coordinated in the First Future Year - Annual Maintenance Schedule and subsequently in the Current Year - Annual Maintenance Schedule.

**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 to service. A Planned Outage Overrun is considered a type of Maintenance Outage throughout this document.

**Maintenance Outage (MO):** Means an outage that can be deferred beyond the end of the weekend, but requires that the Generator or DARD be removed from service within 14 calendar days. During any particular week, if a Market Participant requests an outage that cannot be deferred beyond the weekend, that outage will be classified as a Forced Outage. ISO will attempt to, in accordance with the request, accommodate MOs as soon as possible depending on system conditions, significant increases in Locational Marginal Price (LMP), and Congestion Costs. These outages are 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):** Means 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 also be contacted at (413) 535-4378 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:** 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 will evaluate an Owner Test Request in the same manner as a MO request.

**Short Term Locational Operable Capacity Margin: The Short Term Locational Operable Capacity Margin (STLOCM)** is 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:** The Short Term Operable Capacity Margin (STOCM) is 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 will assign each outage request a tracking number upon receipt. Each request will be time and date stamped for prioritization purposes.

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

1. Identify if the proposed Generator/DARD outage results in an unacceptable OCM
2. Identify if there are any system or local system reliability impacts resulting from the proposed outage
3. Identify opportunities where the proposed Generator/DARD outage could be adjusted with respect to a pending transmission outage to reduce or eliminate Congestion Costs.

The LCCs will ensure neither non-public transmission outage information nor outage information associated with other Generators/DARDs is shared with the Owners contacted. Additionally, the LCCs will not engage in multi-party communications with the Generator/DARD Owners and Transmission Owners.

**Planned Outage Review MORATORIUM**

## (A) Annual Forward Capacity Market Reliability Review

- a. 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 1<sup>st</sup> and September 15<sup>th</sup> of the FCM Capacity Commitment Period will be time stamped to establish review priority and held until the FCM bilateral reliability review process is completed.
  - (i) Annual bilateral reliability review period begins immediately following the close of the annual bilateral submission period for the applicable Capacity Commitment Period.
- b. During the period when ISO is performing reliability reviews of the FCM 3<sup>rd</sup> annual reconfiguration auction results for the applicable FCM Capacity Commitment Period, Planned Outage requests for outages that fall within June 1<sup>st</sup> and September 15<sup>th</sup> of the FCM Capacity Commitment Period will be time stamped to establish review priority and held until the auction results reliability review is completed.

**(B) Monthly FCM Reliability Review**

- a. During the period when ISO is performing reliability reviews of FCM monthly bilateral submissions and monthly reconfiguration auction results for the applicable month, PO requests for outages that fall within the applicable month will be time stamped to establish review priority and held until the reliability review process is completed.

**2. Outage Request Approval Principles**

Market Participants 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. Market Participants 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 will approve all PO or MO requests to the extent that they would not, in ISO or LCC judgment, cause an unacceptable OCM or violate any NERC, NPCC, or ISO operating criteria, policies or procedures. Once approved, a Market Participant will 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(s) 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.b).

ISO will coordinate with the LCCs regarding any outage repositioning. The monthly distribution of the Current Year – Annual Maintenance Schedule will 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 will 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 will 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. FIRST FUTURE YEAR - ANNUAL MAINTENANCE SCHEDULE**

Where the PO request 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 Participants must request ISO approval to schedule a PO in accordance with OP-5. Where the PO request does not impact 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 II.B, regarding approval of POs that pertain to DARD outages and Generator outages that impact the CSO of the associated Capacity Resources, and to the extent specified in Section I.E Generators without a CSO that are Qualified Generator Reactive Resources.

### **1. First Future Year Outage Request Processing**

- a) ISO and respective LCC will respond to Market Participant First Future Year Planned Outage Requests on a first come, first serve 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 will 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 whether approved transmission outages will interfere with the PO request. An outage will not be approved unless the results of all assessments listed below are acceptable:
  - i. 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.
  - ii. 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 will be deemed 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 activation analysis of Real Time Demand Response Resources, defined in Appendix D is acceptable.
  - iii. 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 unacceptable, ISO will discuss alternate dates with the LCC, when the system reliability conditions are projected to be more favorable. The LCC will work with the TO and the Generator/DARD Lead Participant to reposition the

outage. If the Market Participant is not willing or 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 will 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 will discuss outage rescheduling with the LCC. The LCC will coordinate rescheduling with the respective Transmission Owner and the Generator/DARD Lead Market Participant. (Throughout this process, ISO will work with the respective LCC, as needed, to develop alternative outage schedules.)
  - e) Upon coordination of Generator, DARD and transmission outage schedules, ISO will 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 will:
    - i. 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.
    - ii. Publish the outage in next update of the Annual Maintenance Schedule (AMS).
    - iii. If applicable, revise the transmission outage information in the Transmission Overhaul and Maintenance Schedule which will be issued to the LCCs on a monthly basis concurrent with the Annual Maintenance Schedule. (The LCC will relay any schedule revision information to the Transmission Owner.)
2. First Future Year ISO Reporting

ISO will publish the First Future Year - Annual Maintenance Schedule on or about February 15<sup>th</sup> and will be updated at least on a bimonthly basis thereafter on or about the fifteenth of the month.

The schedule will aggregate approved Market Participant outage requests and will reflect the projected weekly LTOCM for the New England RCA/BAA for the following calendar year. The schedule will also reflect the available 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 or 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 implementation of 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. First Future Year Resolving Reliability and Security Violations

If a reliability or security violation appears after ISO has approved a PO that is in the First Future Year - Annual Maintenance Schedule, ISO will work with the LCC and Lead Participants to voluntarily reposition scheduled POs to avoid or eliminate unacceptable forecasted LTOCM or LOCM. However, ISO will not force the relocation of an outage during the First Future Year – Annual Maintenance Schedule.

## C. CURRENT YEAR - 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 Participants 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 Participants 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 POs that pertain to DARD outages and Generator outages that impact the CSO of the associated Capacity Resources, and to the extent specified in Section I.E, Generators without a CSO that are Qualified Generator Reactive Resources.

### 1. Current Year Outage Request Processing

The review process for outage requests in the Current Year follows the same process described in Section B.1 for the First Future Year.

### 2. Current Year ISO Reporting

ISO shall publish the Current Year - Annual Maintenance Schedule initially on or about June 5<sup>th</sup> and subsequently on or about the 5<sup>th</sup> 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](mailto: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 will aggregate approved Market Participant outage requests, and ISO will provide the projected weekly LTOCM for the New England RCA/BAA for the remainder of the current year. The schedule will also reflect the available 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. Current Year Resolution of Reliability and Security Violations

ISO will work with the LCC and Lead Participants to reposition previously approved Generator/DARD POs to avoid or eliminate unacceptable forecasted LTOCM or LOCM, reliability or security violations that have appeared since that approval was granted.

Where violation(s) cannot be eliminated through ISO discussions with the Market Participants 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 outages during the period where an unacceptable LTOCM or LOCM is projected and request that all parties either voluntarily reposition their outage requests or provide ISO with alternatives for repositioning their outage request. The Market Participants will 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 Current Year - Annual Maintenance Schedule, ISO may reject one or all of the PO requests as defined in OP-5. In making its determination, ISO will 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 will 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 will 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 will 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 will have to be relocated. ISO will 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 deemed an FO.

#### D. 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 Participants must request the ISO approval to schedule MOs and OPOs 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 MOs or OPOs pertain to DARD outages and Generator outages that impact the CSO of the associated Capacity Resources, and to the extent specified in Section I.E, Generators without a CSO that are Qualified Generator Reactive Resources.

##### 1. MO and OPO Request Processing

ISO and associated LCC will respond to MO and OPO requests as follows:

- a) Response time will be based on the following table:

<b>Response Time Table</b>	
<b>Submission of MO Request and OPOs for an Outage Start of:</b>	<b>Response time by ISO</b>
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 0900*	By 1100

\*OPOs are not applicable in this timeframe

- 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 will 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 will provide the MO request information to the respective LCC.
- d) The LCC will notify ISO if the MO request poses a local transmission reliability problem. If it does, ISO will work with the LCC and the Market Participant to resolve the issue.
- e) In an effort to reduce Congestion Costs, ISO will 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 will discuss outage rescheduling with the LCC. The LCC will coordinate rescheduling with the respective Transmission Owner and the Generator/DARD Lead Market Participant. (Throughout this process, ISO will work with the respective LCC, as needed, to develop alternative outage schedules.)

- f) ISO, coordinating with the LCC, will 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 will be taken to try to position the transmission and Generator(s)/DARD(s) outages so that they occur at different times.

- The LCC will contact the applicable Lead Market Participant to determine if there is additional flexibility in their outage position.
- The LCC will 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 will 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 will 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 will contact the applicable Generator/DARD Lead Market Participant to determine if there is additional flexibility in their

outage application.

- LCC will 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 will 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 will 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 will 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 will 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.
- 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 will be constrained, ISO will 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 will: 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 will aggregate approved Market Participant outage requests and reflect these projections in the STOCM and STLOCM.

## **E. OUTAGE REQUESTS ON NON-CSO RESOURCES ENROLLED IN SCHEDULE 2 CAPACITY COST COMPENSATION PROGRAM**

Market Participants with Qualified Generator Reactive Resources without a CSO that are enrolled in the Schedule 2 Capacity Cost Compensation Program are required to submit PO and MO requests that are 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

- a) Market Participants must submit schedules for all Generator/DARD Outages in accordance with OP-5 and must provide all information required by OP-5, in the time frames indicated.
- b) When submitting a PO request for either the Current Year or First Future Year, Market Participants must provide the following information for each request:
  - 1) Name of Generator or DARD
  - 2) Market Asset ID
  - 3) Capacity Resource ID, only applicable if outage is associated with an Import Capacity Resource
  - 4) MW amount of the physical reduction
  - 5) Preferred outage start date and time
  - 6) Projected outage end date and time
  - 7) Description of work to be accomplished during the outage
  - 8) Flexibility of the outage schedule dates
  - 9) 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 will be included when determining if the planned outage allotment hours for the Generator have been exceeded.
  - 10) Black Start status during the outage, for black start capable generators only.
- c) When submitting outage requests other than POs, Market Participants must provide the following information for each request:
  - 1) Name of Generator or DARD
  - 2) Market Asset ID
  - 3) Capacity Resource ID, only applicable if outage is associated with an Import Capacity Resource
  - 4) MW amount of the physical reduction
  - 5) Preferred outage start date and time
  - 6) Projected outage end date and time
  - 7) Description of work to be accomplished during the outage

- 8) For MOs, whether the outage can be postponed
  - 9) Black Start status during the outage, for black start capable generators only.
- d) All Generator outage requests that cross capability period boundaries must be submitted as two separate outage request.
- 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**

All Market Participants must submit the required information as follows:

- a) First Future Year and Current Year Information:
- Submit PO requests for Generators 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 PO requests for DARDs and Import Capacity Resources and for Generators when the outage application software is not available by electronic (email) to [opamoreq@iso-ne.com](mailto: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) All outage requests other than Planned
- Submit outage requests for Generators electronically through the ISO outage application software. However, FOs may not be submitted into the ISO outage application software by the Market Participant after 0900 the day before the start of the outage
    - The timestamp of the outage request will be the time the outage request is last updated by the Market Participant
  - Submit outage requests to the ISO Short Term Outage Coordinator/Forecaster by telephone to (413) 535-4378 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**

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

**D. REQUESTING IMPLEMENTATION OF OUTAGE**

Immediately prior to removing a Generator/DARD from service, Market Participants must obtain ISO control room approval for all requests for Generator/DARD POs and MOs. Such approval 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 will 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:****APPENDIX 5-A - OPERABLE CAPACITY CALCULATIONS****APPENDIX 5-B - OUTAGE REQUEST FORM****APPENDIX 5-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.)

<b>Rev. No.</b>	<b>Date</b>	<b>Reason</b>
Rev 1	7/12/00	
Rev 2	02/01/05	Updated to conform to RTO terminology
Rev 3	03/02/05	Revised for compliance with the March 2 FERC Order
Rev 4	05/27/05	Updated to incorporate unit partial delist language
Rev 5	06/24/05	Deleted Appendix A and REMVEC procedure reference and added VELCO LCC reference
Rev 6	06/02/06	Added Locational Operable Capacity Margin criteria
Rev 7	10/01/06	Updated For ASM Phase 2
Rev 8	10/13/06	Removed Forecaster from Response Time table. Personnel at ISO receiving submitted forms may vary and are covered in the SOPs
Rev 9	04/17/09	Added language that ends the current version of OP 5 for the ICAP market at the end of May, 2010
Rev 10	12/11/09	<p>Updated for FCM, outages occurring on or after June 1, 2010</p> <ul style="list-style-type: none"> <li>• Clarified that the OP-5 process applies to Intermittent Capacity Resources</li> <li>• Import Capacity Resources</li> <li>• Shift from calendar to Power Year (Capacity Commitment Period)</li> <li>• Elimination of Economic Outages</li> <li>• Added blackout period when Monthly Reliability Reviews are being performed.</li> <li>• Updated AMS Reporting )</li> <li>• Clarified Evaluation Principles</li> <li>• Clarified Approval Principles</li> <li>• Modified information requirements for outage request</li> <li>• Added reference to Demand Response Activation Analysis</li> <li>• Added OP5 Appendix D to define DR Activation Analysis</li> <li>• Note: OP-5 Revision 9 will remain effective in parallel with OP-5 Revision 10 through 5/31/2010. Revision 5 applies to outages occurring before 6/1/2010 and Revision 6 applies to outages occurring on or after 6/1/2010.</li> </ul>
Rev 11	12/01/10	<p>Reformatted entire document, changed font, minor editorial and format changes,</p> <p>Clarified blackout dates</p> <p>Clarified requirements for Import Capacity Resources</p> <p>Modified submittal process to address outage application software</p> <p>Added language to outage types definition to indicate how they will be referenced in outage application software</p>
Rev 12	03/01/11	Add language for non-CSO resources receiving Schedule 2 compensation