

Nova Scotia Power System Operator (NSPSO)

**Market Procedure
MP-12**

Forced Outages

Issue: 01
Effective Date: 2015 02 27

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1 Document Control and General Provisions

1.1 Issue and Revision History

Issue	Date	Reason for Issue
01	2015 02 27	Original Procedure

1.2 Contact for Queries and Submissions

For queries concerning the application or interpretation of this Market Procedure, and for submission of documents required under this procedure (unless noted otherwise) contact:

Name: Market Administrator
Phone: 902 428 7719
Address: 5 Long Lake Drive
Halifax, Nova Scotia
B3S 1N8
E-mail: nspsadmin@nspower.ca

1.3 Authority for Market Procedures

The general provisions set out in part 3 of Market Procedure 01, General Market Procedure, are incorporated into this Market Procedure (unless superseded by explicit wording to the contrary in this Market Procedure).

1.4 Document Approval

Paul Casey, Sr. Director, Transmission & Distribution

Signature:  _____

2 Introduction

2.1 Purpose of this Market Procedure

The purposes of this Market Procedure are

- to define the circumstances under which action may or may not be taken by a Market Participant under the authority of section 4.8.1 of the Market Rules,
- to define the process, documents, forms etc to be used by Market Participants in reporting with respect to Forced Outages,
- to define the process for the provision of additional information that the NSPSO may require in accordance with section 4.8.5.3 of the Market Rules, and
- to define the NSPSO 's data collection and reporting with respect to Forced Outages.

2.2 Purpose of Forced Outages and Reporting Thereof

A Forced Outage comprises, in accordance with chapter 1, Appendix 1A of the Market Rules, "the removal from service of equipment for emergency reasons or a condition in which the facility equipment is unavailable, in whole or in part, due to unanticipated failure, and includes a forced de-rating."

Forced Outages are required from time to time within the NSPSO-controlled Grid or within Facilities connected to the NSPSO-controlled Grid for a number of reasons including:

- reasonable action deemed necessary for reasons of safety,
- reasonable action deemed necessary to protect equipment from material harm, and
- reasonable action deemed necessary to prevent serious environmental damage arising from unforeseeable events.

Such reasonable action may include the automatic operation of protection and control systems properly established and operating to perform such actions.

Reporting of Forced Outages is required to enable the NSPSO to direct the operation of the integrated electricity system and maintain the Reliability thereof.

Reporting of Forced Outages, and review by the NSPSO of such reporting, is also required to assist the NSPSO to identify any abuse of those provisions of the Market Rules whereby Market Participants may be relieved of certain obligations in the event of Forced Outages.

2.3 Market Rules - References

Section 4.8 of the Market Rules sets out the basic obligations of Market Participants with respect to Forced Outages.

- Key Market Rules obligations that otherwise result from, or are affected by, the existence of a Forced Outage include:
 - Section 4.8.1, Market Participant Obligations
 - Section 4.8.5, Forced outage Reporting

2.4 Scope and Application

This Market Procedure describes the steps to be taken and the forms to be used by Market Participants in respect of their Facilities in advising the NSPSO of Forced Outages. The Market Procedure describes the steps that may be taken by the NSPSO in securing additional information, reviewing such information, and identifying any lack of compliance with Market Rules in connection therewith.

This Market Procedure applies in the event that a Market Participant:

- Identifies the probable imminent occurrence of a Forced Outage
- Experiences a Forced outage as a result of the automatic operation of protection and control systems
- Implements a Forced Outage

Forced Outages may occur whether or not a Facility or Transmission Element is in service at the time of the occurrence.

In addition to all Facilities in Nova Scotia, this Market Procedure applies with respect to all Capacity Resources and Facilities under contract to provide Ancillary Services outside Nova Scotia.

2.5 Responsibilities of Parties under this Procedure

It is the responsibility of each Market Participant in respect of its Facilities to plan Outages in accordance with good utility practice, and with due regard to the Reliability of the integrated electricity system.

It is the responsibility of each Market Participant to maintain safety and to protect its equipment from harm, including through the use of protection and control systems.

In the event of an actual or expected Forced Outage, it is the responsibility of each affected Market Participant promptly to report to the NSPSO in accordance with sections 4.8.1 and 4.8.5 of the Market Rules, and thereafter to update schedules, Dispatch Instructions etc as appropriate. Full written reporting is required within two Business Days, and additional information is to be provided on request from the NSPSO.

It is the responsibility of the Market Participant promptly to return its Facilities to full service.

The NSPSO is responsible to review reports received, and to identify any non-compliance.

2.6 Other Market Procedures

Market Procedure MP-09 defines the requirements and processes for the planning, coordination and approval of Planned Outages.

2.7 Form and Means of Communication

Communications under this Market Procedure fall into two categories:

- The initial report of a forced outage shall be communicated by phone to the NSPSO Energy System Operator at (902) 428-7704. This communication shall be made as soon as practicable. Electronic communication shall be directed to the NSPSO Market Administrator per Section 1.2 of this Market Procedure. The electronic form to be used is described in section 5 of this Market Procedure.
- Telephone communications between the Market Participant and the market operations group Energy Marketer (902) 474-2122 may be used for the expeditious resolution of problems.
- Other communications, including follow-up reports, shall be in accordance with the following general provision.
 - All documents that are required by this Market Procedure to be signed are required to be delivered to the NSPSO by personal delivery, courier or mail. The NSPSO may accept advance copies by other means of communication, but shall only recognize the document as having been submitted on the date of receipt of the signed original in hard copy. All other documents and information may be communicated by personal delivery, courier, mail, fax, e-mail or voice communications as considered appropriate by the sending person. Where a document or information is provided other than by means of the transmission of an original in hard copy, the NSPSO retains the right to require written confirmation of the document or information by an authorized representative of the sending person or to require that an original be provided in hard copy. Similarly, the NSPSO may require such written confirmation of information already in its possession where the NSPSO intends to use such information in any way under this Market Procedure.

2.8 Confidentiality

The NSPSO shall publish details of Forced Outages of Transmission Elements.

Individual Forced Outages of Market Participants are confidential except to the extent that the NSPSO requires to disclose such events to others in order to

initiate and mediate negotiations in accordance with Market Rules section 3.5.3.6 or to reschedule Planned Outages as set out in Market Procedure MP-09.

Individual Facility Forced Outage information is confidential, except in the form of Forced Outage statistical and rate information used in establishing the Unforced Capacity of Capacity Resources.

3 Process Description

3.1 Advanced Notification

3.1.1 In the event that a Market Participant becomes aware of a circumstance with a high probability of causing a Forced Outage, it shall promptly notify the market operations group Energy Marketer accordingly by telephone at (902) 474-2122. It is envisaged that such circumstances could include:

- equipment condition monitoring that indicates deterioration of equipment towards the point that it would require to be taken out of service or for its operation to be limited;
- identification of physical or regulatory limits that will preclude full operation beyond a certain time;
- unforeseen problems in an approved Planned Outage that cannot be resolved within the duration of the approved Planned Outage or an approved extension thereof; or
- receipt of notice from a regulator having relevant jurisdiction.

3.1.2 The content of advance notification shall include, for a Generation Facility:

- Market Participant
- Facility
- Anticipated timing and probability of Forced Outage
- Cause of anticipated Forced Outage
- Equipment forced out of service or de-rated
- Impact on available capacity
- Anticipated duration, to the extent foreseeable

3.1.3 To the extent that the Market Participant has the means to mitigate the impact of the anticipated Forced Outage, it shall consider such requests from the NSPSO in accordance with section 4.8.1.7 of the Market Rules.

3.1.4 Receipt and acknowledgement by the NSPSO of such notice of anticipated Forced Outage is done without prejudice to any determination by the NSPSO of whether the Outage is indeed a Forced Outage.

3.1.5 The content of advance notification shall include, for a Transmission Element or group of elements:

- Market Participant
- Transmission Elements impacted, and extent of impact
- Anticipated timing and probability of Forced Outage
- Cause of anticipated Forced Outage
- Market Participants impacted, and anticipated extent of impact
- Anticipated duration, to the extent foreseeable

3.2 Prompt Notification

3.2.1 In the event of a Forced Outage, the Market Participant whose facility suffers the Forced Outage shall promptly notify the NSPSO Energy System Operator by telephone at (902) 428-7704.

3.2.2 The content of prompt notification shall include, for a Generation Facility:

- Market Participant
- Facility
- Timing of Forced Outage
- Cause of Forced Outage
- Equipment forced out of service or de-rated
- Impact on available capacity
- Anticipated duration, to the extent foreseeable

If the Forced Outage is caused by operation of a protection system initiated outside the Market Participant's Facility, then the anticipated duration will be the minimum duration required to restore the Generation Facility to its full availability, on an assumption of resolution of the external event that caused initiation of the operation of the protection system.

3.2.3 To the extent that the Market Participant has the means to mitigate the impact of the Forced Outage, it shall propose such means to the NSPSO.

3.2.4 Receipt and acknowledgement by the NSPSO of such notice of Forced Outage, or of any proposal is done without prejudice to any determination by the NSPSO of whether the Outage is indeed a Forced Outage.

3.2.5 The content of prompt notification shall include, for a Transmission Element or group of elements:

- Market Participant

- Transmission Elements impacted, and extent of impact
- Timing of Forced Outage
- Cause of Forced Outage
- Market Participants impacted, and anticipated extent of impact
- Anticipated duration, to the extent foreseeable

3.3 Immediate Return to Service

- 3.3.1 No Market Participant shall re-synchronize a Generation Facility except with the approval of the NSPSO, which approval may be given by phone in response to the prompt notification of the Forced Outage.
- 3.3.2 Except through the operation of auto-reclose breakers, no Market Participant shall return to service a Transmission Element except with the approval of, or under the direction of, the NSPSO, which approval may be given by phone in response to the prompt notification of the Forced Outage.
- 3.3.2 Subject to section 3.3.1 and 3.3.2 above, the Market Participant shall endeavor to resolve immediately the problem causing the Forced Outage and, to the extent that the problem can be resolved, to return the Facility to full service immediately.

3.4 Planning the Return to Service

- 3.4.1 To the extent that the cause of a Forced outage can be quickly identified, the NSPSO and the Market Participant shall discuss and agree to an appropriate plan for ensuring the prompt return to service of the Facility. The NSPSO may establish a multi-party discussion to expedite such planning if the Outage impacts more than one Market Participant.
- 3.4.2 The NSPSO may require submission of a return to service plan, demonstrating appropriate diligence to secure a prompt return to service, in the event of an Outage anticipated to exceed two days in duration.

3.5 Full Written Report

- 3.5.1 Within two Business Days of the commencement of a Forced Outage, the Market Participant for the Generation Facility or Transmission Element shall submit a full written report in accordance with the requirements of section 4.8.5 of the Market Rules. The form to be used for such report is set out in MPF-12-01 (for Generation) and MPF-12-02 (for Transmission Elements).
- 3.5.2 To the extent that a Forced Outage is caused by a trip initiated outside the Facility in question, and that the Facility is promptly returned to full service, the detail of the report may be appropriately brief.
- 3.5.3 To the extent that not all the required information is known at the time of the report submission (e.g. if the Facility has not yet been returned to full service) then the Market Participant shall submit updated information as it becomes available.

3.6 NSPSO Assessment and Additional Information Requests

- 3.6.1 The NSPSO shall review the report(s) received for completeness and adequacy of information, and may request additional information, or access to records, as it considers appropriate for the purposes of its assessment.
- 3.6.2 On receipt of complete reports and additional information, the NSPSO shall assess the reported Forced Outage, taking account of the reports and of information available from its own records and other reports relevant to the Forced Outage.
- 3.6.3 In its assessment of the reported Forced outage, the NSPSO shall give regard to the criteria and considerations set out in Appendix MP-12-A.
- 3.6.4 In the event that the NSPSO is not satisfied from its available information that an Outage was a Forced Outage for the full duration reported, then it shall notify the relevant Market Participant and allow that Market Participant an opportunity to comment on the initial findings of its assessment and to provide additional relevant information.
- 3.6.5 The NSPSO shall take account of such comment or additional information in its final determination based on its assessment of the Forced Outage.

3.7 Actions in the Event that the NSPSO Assesses that an Outage was not a Forced Outage

- 3.7.1 In the event that the NSPSO determines in its assessment that an Outage does not meet the definition of a Forced Outage, then it shall give notice to the Market Participant.
- 3.7.2 The NSPSO shall then determine whether, treating the Outage as neither a Forced Outage nor an approved Planned Outage, the Market Participant was in breach of any Market Rule.
- 3.7.3 In the event of any breach of a Market Rule, the NSPSO shall determine any specific penalty in accordance section 2.6 of the Market Rules that is applicable to the Market Participant.
- 3.7.4 The provisions of section 2.6 of the Market Rules shall apply with respect to any such penalty or sanction.

3.8 Publication

- 3.8.1 The NSPSO shall publish Forced Outage information as set out in Market Rule 4.10.2.

4 Flow Charts

None

5 Forms

MPF-12-01 Generation Facility Forced Outage Report

MPF-12-02 Transmission Element Forced Outage Report

6 Appendices

Appendix MP-12-A Criteria and Considerations in Determining if an Outage was Forced.

Appendix MP-12-A

Criteria and Considerations in Determining if an Outage was Forced

A.1 Definition of a Forced Outage

A Forced Outage comprises, in accordance with chapter 1, Appendix 1A of the Market Rules, “the removal from service of equipment for emergency reasons or a condition in which the facility equipment is unavailable, in whole or in part, due to unanticipated failure, and includes a forced de-rating.”

A.2 Reasons for Forced Outages

Forced Outages are required from time to time within the NSPSO-controlled Grid or within Facilities connected to the NSPSO-controlled Grid for a number of reasons including:

- reasonable action deemed necessary for reasons of safety,
- reasonable action deemed necessary to protect equipment from material harm, and
- reasonable action deemed necessary to prevent serious environmental damage arising from unforeseeable events.

Such reasonable action may include the automatic operation of protection and control systems properly established and operating to perform such actions.

A.3 Considerations

The following considerations may need to be addressed in the determination of whether an Outage fits the definition of a Forced Outage.

- A.3.1 An outage that commenced as a Forced Outage only continues to be a Forced Outage until the Market Participant for the Facility or Transmission Element could, seeking to return the Facility or Transmission Element promptly to full service, have secured the NSPSO’s approval to do so. The Market Rules do not prescribe any degree of diligence. The NSPSO’s standard in this respect should therefore recognize commercially reasonable efforts given the impact of the Forced Outage, and the obligations with respect to use of good utility practice in the operations and maintenance of Generation Facilities and Transmission Systems.
- A.3.2 An Outage that is initiated by a protection signal from another party (such as in the case of the activation of a Special Protection System) is prima facie a Forced Outage at its commencement.
- A.3.3 An Outage that is initiated by the automatic tripping of a protection device is prima facie a Forced Outage at its commencement unless the trip was caused by the controlled operation of the Facility or Transmission System which suffered the Outage.
- A.3.4 An Outage initiated for safety reasons is prima facie a Forced Outage at its commencement.

- A.3.5 An Outage that is initiated for the avoidance of imminent and material harm to equipment is prima facie a Forced Outage at its commencement.
- A.3.6 An Outage that is initiated for the avoidance of imminent and material harm to the environment, such as for the avoidance of a material spill, is prima facie a Forced Outage at its commencement. On the other hand, the avoidance of predictable exceedance of emission limits of a Generation Facility does not constitute a Forced Outage as this should be addressed through the appropriate scheduling and Dispatch Data for the Facility.
- A.3.7 Delay in the return to service of a Capacity Resource from an approved Planned Outage may in certain circumstances be considered a Forced Outage. Such circumstances are limited to the discovery during the approved Planned Outage of problems that could not reasonably have been foreseen, or the occurrence during an approved Planned Outage of an event that would, during operation of the Facility, have caused a Forced Outage. Forced Outage treatment is only permitted for the additional time necessary to return the Facility to service in a diligent manner, using overtime and / or shift work as appropriate to the circumstances.
- A.3.8 The action of a regulatory body with relevant jurisdiction may cause a Forced Outage if the action in question does not arise from a failure by the Market Participant or Transmitter for the relevant Facility or Transmission System, or the owner or operator of that Facility.