



## Market Rule Amendment Proposal

### PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00247-R00		
Subject:	Special Protection Systems		
Title:	Amendments to Ensure Proper Operation and Compensation for Special Protection Systems		
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input type="checkbox"/> Addition
Chapter:	5	Appendix:	
Sections:	8.2, 8.3, and 8.4(new) (Chp. 5)		
Sub-sections proposed for amending:	8.2.4, 8.2.6 and 8.2.7(new), 8.3.2(new), 8.4.1(new), 8.4.2(new), and 8.4.3(new) (Chp. 5)		

### PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Technical Panel Review	April 28, 2004
2.0	Posted for Stakeholder Review and Comment	May 4, 2004
Approved Amendment Publication Date:		
Approved Amendment Effective Date:		

### PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IMO-administered markets* if the amendment is not made
- Alternative solutions considered
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IMO-administered markets*.

#### Summary

Amendments to the market rules regarding Special Protection Systems (SPSs) are proposed to address operational and compensation issues raised by market participants. These amendments would:

- Require the IMO to consult with and, where practicable, gain the agreement of the market participant whose facility is part of an SPS regarding changes to the dispatch criteria for that SPS;
- Require the IMO to notify, where practicable, the market participant whose facility is part of the SPS of the arming of that SPS if the market participant determines that the status annunciation provided by the SPS owner/operator is not sufficient notification of arming.
- Allow a market participant whose facility is part of an SPS to reject the request for SPS arming if the SPS arming and subsequent activation would endanger the safety of any person, damage equipment or violate any applicable law;
- Require the SPS owner/operator and market participant whose facility is part of an SPS to agree on the method of market participant status annunciation of SPS arming and activation;
- Require a market participant whose facility is part of an SPS to inform the IMO if the facility is unavailable for SPS arming; and
- Allow a market participant whose dispatchable load or non-quick start dispatchable generation facility is part of an SPS to claim and receive compensation in the event that the facility is tripped off as the result of an SPS activation.

These amendments would allow market participants to better manage the risks associated with their facilities being part of an SPS.

#### Background

Special Protection Systems (SPSs) are designed and intended to:

- Increase the capability of power transfers across the IMO-controlled grid while providing normal security levels; or
- provide additional security for the IMO-controlled grid beyond that required for normal criteria contingencies.

SPSs have been installed historically on the IMO-controlled grid to automatically initiate one or more of the following control actions

- Generation rejection
- Generation runback

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- Load rejection
- Shunt capacitor switching
- Shunt reactor switching
- Cross-tripping

SPSs are used to increase the pre-contingency power transfer capability of the IMO-controlled grid by improving post-contingency IMO-controlled grid performance. In doing so they also increase the efficiency of the Ontario market in that by enhancing transmission capability, they reduce congestion and the resultant CMSC payments to both generators and loads under the current pricing regime.

Market participants have identified a number of issues regarding the operation of SPSs and lack of compensation associated with SPSs. These issues specifically are:

1. Currently, market participants whose facilities form part of an SPS do not receive appropriate information and notification as to when the SPS is armed and activated. Facility operators need to be aware of the status of the SPS on an ongoing basis to assess risk to their facilities.
2. Under some conditions, a market participant may have to reject an SPS arming request for their facility for reasons of safety, possible equipment damage or to not violate an applicable law (e.g. environmental law or regulation). For example, maintenance work at the facility may place market participant staff in an unsafe position or location if the facility was unexpectedly shutdown as the result of SPS activation. The market rules currently allow a market participant to reject a dispatch instruction for the above reasons. Market participants should be permitted to reject the arming of an SPS for similar reasons.
3. Knowledge of the conditions under which the SPS that affects their facility would be armed and activated (i.e. the dispatch criteria for the SPS) permits market participants to better assess and manage the risks associated with the SPS. While the vast majority of SPSs in Ontario have been in-service for many years and the dispatch criteria for each is known and understood by the affected market participants, changes to SPS dispatch criteria should be discussed with and agreed to by the affected market participant.
4. Under the present Uniform Pricing Market Design, a generator who cannot get its lower cost generation to market due to transmission congestion is compensated for its lost profits as a Constrained Off congestion management settlement credit (CMSC) payment. A generator with an SPS system has enhanced transmission capability that allows the generator to get its output to market and recover its implied profit from the market rather than by way of a CMSC payment. In either case the generator is held whole but, with the SPS system in place the market is made more efficient as lower cost power is able to get to market and in turn CMSC payments are reduced.

Generators with an SPS system may occasionally be runback or shutdown when the SPS is activated to address a contingency when transmission circuits would otherwise be overloaded. At present, there are no constrained-off CMSC payments under these conditions for non-quick-start facilities. For fossil and nuclear generators whose facility is part of an SPSs, if a SPS is activated, there is a chance that the generator may be forced to shutdown or runback its facility for a considerable period of time and forego market revenues that it would otherwise have received. The generator whose facility is part of an SPS system is taking the risk of receiving no revenue when the SPS is activated, while the entire market receives the benefit of the SPS which enhances

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transmission system transfer capability.

Some generators agree that under a nodal pricing scheme the generator would have an incentive to use a SPS to maximise its output to the market. Similarly, the elimination of constrained off payments would provide a generator with an incentive to arm a SPS to maximise its output to the market. However, with the present design that includes constrained off payments there is no benefit to the generator to arm SPS systems.

#### **Discussion**

The following amendments are proposed:

- The IMO would be obligated to discuss changes to SPS dispatch criteria and, where practicable, gain the agreement of the market participant whose facility is part of the SPS prior to changing the dispatch criteria. If agreement cannot be reached the IMO would retain the authority to change dispatch criteria if needed to maintain reliable operation of the IMO-controlled grid or to increase the efficiency of the IMO-administered markets. This IMO action may be necessary in situations where there are many market participants that have facilities that are part of an SPS. Gaining multi-party agreement on SPS dispatch criteria changes may be very difficult and at times impossible (section 8.2.4 below). If an affected market participants disagrees with the change to the dispatch criteria they may use the dispute resolution process to resolve the disagreement;
- Status annunciation of arming and activation requirements and implementation of that annunciation will be determined and agreed to by the SPS owner/operator and the market participant whose facility is part of the SPS. If the SPS owner/operator and the market participant cannot agree on the requirements and implementation, the issue will be resolved using the dispute resolution provisions of the market rules. Requiring the use of the dispute resolution process in the event of non-agreement provides a strong incentive to both parties to reach agreement, but also provides a resolution process for those situations where agreement cannot be reached (section 8.3.2 below);
- The IMO would be obligated to notify, where practicable, the market participant whose facility is part of the SPS of the arming of that SPS if the market participant determines that the status annunciation provided by the SPS owner/operator is not sufficient notification of arming. The method of notification will be mutually agreed to by the IMO and the affected market participant.
- Market participants whose facilities are part of a manually armed SPS system shall have the right to reject an arming request where the arming would endanger the safety of any person, damage equipment or violate any applicable law (section 8.4.1 below);
- Market participants whose facilities are part of a SPS system must inform the IMO if the facility is unavailable for arming. This would be done through the IMO's outage management system (IOMS) (section 8.4.4 below);
- Market participants that have non-quick start facilities that are part of an SPS and are tripped off by the activation of the SPS may claim compensation. The compensation shall be the dollar equivalent of two-hours of constrained-off CMSC payments based on the following assumptions:
  - the facility would have continued to be connected to the IMO-controlled grid for two hours after the activation or the period to achieve the dispatch level prior to activation, whichever is less;
  - the market schedule for the facility is set, by the IMO, equal to the energy level from the

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- market schedule in the dispatch interval before activation of the SPS; and
- the facility was constrained to zero MW.

The affected market participant would provide this settlement detail to the IMO for verification and payment. Payment would be allowed only as long as constrained off CMSC payments continue in the IMO-administered markets. The purpose of such compensation is to recognize the market benefits of the SPS and the risks borne by the market participant whose facility is part of the SPS, to partially offset the absence of financial drivers that arise from the existing constrained-off CMSC payments. The compensation is not intended to reimburse the facility for lost market revenue or costs incurred as a result of the SPS activation (section 8.4.2, 8.4.3 and 8.2.6 below).

The above compensation would apply to non-quick start facilities that are either part of new or legacy SPS systems. Only dispatchable resources would be eligible for the above compensation to ensure that the compensation would be transparent to the marketplace, as it would be based on the bids and offers of the facility.

Market participants would submit a claim for compensation on or before the 10<sup>th</sup> business day of the month following the occurrence of an SPS activation. The IMO would verify the compensation claim amount and, if correct, apply the compensation amount to the preliminary settlement statement for the last day of the month in which the submission was received. This detail would be specified in a market manual but it is provided here for information.

### PART 4 – PROPOSED AMENDMENT

## Chapter 5

### 8.2 Responsibilities of the IMO

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8.2.4 The *IMO* shall establish and *publish dispatch* criteria for *SPSs*. Prior to establishing changes to the *dispatch* criteria for an *SPS*, the *IMO* shall consult with, and, where practicable, gain the agreement of, the market participant whose facility is part of the *SPS* as to the intended changes. In the event that agreement cannot be reached, the *IMO* may change the *dispatch* criteria for the *SPS* if necessary to maintain reliable operation of the *IMO-controlled grid* and/or to increase the efficiency of the *IMO-administered markets*.

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8.2.6 In the event that a market participant applies to the *IMO* for compensation under section 8.4.2, the *IMO* shall, upon verification that the compensation amount being claimed is correct, pay such compensation by crediting the market participant's settlement amounts on the preliminary settlement statement for the last day of the month in which the application for compensation was received.

8.2.7 The IMO shall notify, where practicable, the market participant whose facility is part of the SPS of arming of the SPS, where the market participant has determined that the status announcement provided under 8.3.2 is not sufficient notification of arming. The IMO shall notify the market participant in the manner agreed to by the IMO and the market participant.

### **8.3 Responsibilities of SPS Equipment Owners**

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8.3.2 Status announcement of SPS arming and activation requirements and implementation of that announcement shall be determined and agreed to between an SPS owner/operator and the market participant whose facility is part of the SPS. In the event that they cannot agree on the announcement requirements and implementation, the SPS owner/operator and the market participant shall use the dispute resolution provisions in section 2 of Chapter 3 to resolve the issue.

### **8.4 Responsibilities of Market Participants Whose Facilities are Part of an SPS**

8.4.1 A market participants whose facility is part of a manually armed SPS may reject a request to arm the SPS where the arming would endanger the safety of any person, damage equipment or violate any applicable law.

8.4.2 A market participant with a non-quick start dispatchable facility that is part of an SPS may, in the time and manner specified in the applicable market manual, apply to the IMO for compensation, if that facility is tripped offline as a result of the activation of the SPS. The amount of compensation that may be claimed shall be determined in accordance with the applicable market manual and be the equivalent of up to two hours of constrained off congestion management settlement credit payments that would otherwise be calculated if the facility were a quick start facility or the breaker for the dispatchable facility that was tripped off was closed and the facility was constrained off to zero.

8.4.3 Section 8.4.2 shall apply only as long as section 3.5 of Chapter 9 is in effect.

8.4.4 Market participants whose facility forms part of an SPS shall notify the IMO if the facility is unavailable for SPS arming, in accordance with the applicable market manual.

**PART 5 – IMO BOARD COMMENTS**

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## Market Rule Amendment Proposal

### PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00247-R01		
Subject:	Special Protection Systems		
Title:	Amendments to Ensure Proper Operation and Compensation for Special Protection Systems – Consequential Dispute Resolution Amendment		
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input type="checkbox"/> Addition
Chapter:	3	Appendix:	
Sections:	2.2		
Sub-sections proposed for amending:	2.2.2.1		

### PART 2 – PROPOSAL HISTORY – PLEASE REFER TO MR-00247-R00

Version	Reason for Issuing	Version Date
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**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IMO-administered markets* if the amendment is not made
- Alternative solutions considered
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IMO-administered markets*.

See MR-00247-R00

**PART 4 – PROPOSED AMENDMENT**

2.2.2 The dispute resolution regime provided for in this section 2:

2.2.2.1 shall apply to a dispute between *market participants* referred to in section 2.1A.6A of Chapter 9 [and section 8.3.2 of Chapter 5](#); and

**PART 5 – IMO BOARD COMMENTS**

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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

Identification No.:	MR-00247-R02		
Subject:	Special Protection Systems		
Title:	Amendments to Ensure Proper Operation and Compensation for Special Protection Systems – Consequential Amendment		
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input type="checkbox"/> Addition
Chapter:	9	Appendix:	
Sections:	4.8		
Sub-sections proposed for amending:	4.8.10 (new)		

### PART 2 – PROPOSAL HISTORY – PLEASE REFER TO MR-00247-R00

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**PART 3 – EXPLANATION FOR PROPOSED AMENDMENT**

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- Alternative solutions considered
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IMO-administered markets*.

See MR-00247-R00

**PART 4 – PROPOSED AMENDMENT**

**Chapter 9**

**4.8 Additional Non-Hourly Settlement Amounts**

4.8.1 The *IMO* shall, at the end of each *energy market billing period*, recover from *market participants*, on a pro-rata basis across all allocated quantities of *energy* withdrawn at all *RWMs* and *intertie metering points* during all *metering intervals* and *settlement hours* within that *energy market billing period*, the following amounts:

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4.8.10 any compensation paid in that *energy market billing period* by the *IMO* pursuant to section 8.2.6 of Chapter 5.

**PART 5 – IMO BOARD COMMENTS**

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