

Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Identification No.: MR-00312-R00						
Subject:	Revenue	Metering				
Title:	Retaining	Retaining Registration Under the Alternative Metering Standard				
Nature of Proposal: Alteration				☐ Deletion		Addition
Chapter:	6			Appendix:		
Sections:	4.4					
Sub-sections proposed for amending:			various			

PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Submit for Technical Panel Review	September 27, 2006
2.0	Revised to reflect Technical Panel comments and Post for Stakeholder Review	October 3, 2006
3.0	Submit for Technical Panel Vote	October 24, 2006
4.0	Recommended by Technical Panel and Submitted for IESO Board Approval	November 7, 2006
Approved Ame	endment Publication Date:	
Approved Ame	endment Effective Date:	

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-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 *IESO-administered markets*.

Summary

It is proposed to provide the IESO with the authority to grant, under specified conditions, metered market participants the right to retain registration of a revenue metering installation under the alternative meter installation standard in the market rules (Chapter 6 section 4.4 and Appendix 6.2). If granted the right to retain registration, the metered market participant would not be required to upgrade the entire metering installation to meet the full Chapter 6 revenue metering standard.

The conditions under which the metered market participant would be allowed to retain registration under the alternative standard would be specified in a market manual and would include factors such as complexity of the upgrade.

A number of revenue metering installations currently registered under the alternative standard are required to undergo substantial, complex and costly upgrades to meet the full Chapter 6 requirements, by the end of 2006. This rule amendment is necessary to ensure that metered market participants with these exceptionally complex metering upgrades registered under section 4.4 of Chapter 6 - Alternative Metering Installation Standard - be granted an opportunity to retain registration before the existing registration expires. This rule amendment also proposes to delete a number of market rules that are no longer in effect.

Background

Chapter 6 of the market rules specifies the wholesale revenue metering standards. There are two standards: a full Chapter 6 standard, and an alternative standard. Section 4.4 of Chapter 6 allows for registration of legacy metering installations under the alternative metering standard.

The expiry of registration under the alternative metering standard is triggered by two events:

- 1. At the earliest expiry date of the seal period of any meter within the metering installation, the market participant loses registration under the alternative standard only with respect to the following sections of Appendix 6.2:
 - section 1.1A Metering Installation Not Comprised of Two Meters
 - section 1.4 Accuracy
 - section 1.5 Functional Requirements
 - section 1.10 Meter Installation Enclosure

In this situation, the metered market participant must upgrade to conforming meters with a meter enclosure. The estimated cost for this upgrade is \$10,000 to \$35,000 per metering installation. Installing conforming main and alternate meters is relatively inexpensive and the market benefits from improved metering accuracy, enhanced data validation and accurate loss adjustment.

2. On the date that the metering installation or the facility in which the metering installation is housed undergoes upgrading or refurbishment that is in the IESO's opinion substantial, the market participant loses registration under the alternative standard only with respect to the following sections of Appendix 6.2:

- section 1.6: Instrument Transformers Power Switching;
- section 1.7: Instrument Transformers Accuracy Requirements;
- section 1.8: Instrument Transformers Secondary Cabling;
- section 1.9: Parallel Current Transformer Secondaries;
- section 1.11: Instrument Transformers Primary Connection Point;
- section 1.12: Instrument Transformers Primary Cable; and
- section 1.13: Instrument Transformers Burdens.

To address this situation, the metered market participant must meet the full chapter 6 requirements. Typically, the estimated cost for this upgrade is \$150,000-\$300,000 per metering installation. The estimated cost for a particularly complex metering installation upgrade to full chapter 6 market rule requirements may be in excess of \$500,000 and has the potential for much greater cost depending on the specific situation.

In 2005, the IESO and Hydro One Networks Inc. in consultation with ten distributors identified a number of issues with upgrading certain metering installations. The primary issue identified was the upgrading of instrument transformers (ITs) for metering installations which are part of a bus-meter installation or are part of a metering installation enclosed in metal-clad switchgear. Most of these metering installations are registered under the alternative metering installation standard. Upgrading these installations to meet the full chapter 6 requirements is particularly complex and costly because the installations are built in a space conscious manner. To bring these installations into compliance with Chapter 6 standards would require rebuilding major components of the facility.

Over 440 of the approximate 1,800 existing metering installations are bus-meter installations or are part of a metering installation enclosed in metal-clad switchgear. Approximately 20-40 of the 1,800 (1%-2%) metering installations would require particularly complex upgrades in order to fully comply with the Chapter 6 requirements.

Discussion

Chapter 6, section 4.4 recognizes and accommodates legacy metering installations that do not meet the full Chapter 6 requirements and allows for registration under an alternative metering standard. This section should be amended to allow qualifying metered market participants to retain registration under the following alternative metering standard sections of Chapter 6, Appendix 6.2:

- 1.2: Compliance with Blondel's Theorem;
- 1.6: Instrument Transformers Power Switching:
- 1.7: Instrument Transformers Accuracy Requirements;
- 1.8: Instrument Transformers Secondary Cabling;
- 1.9: Parallel Current Transformer Secondaries:
- 1.11: Instrument Transformers Primary Connection Point;
- 1.12: Instrument Transformer Primary Cable;
- 1.13: Instrument Transformers Burdens.

This proposed change will provide an opportunity for metered market participants with particularly complex metering installations to apply to the IESO to retain their registration under the alternative metering standard.

In re-writing section 4.4, certain sections specify metered market participant (MMP) actions, while other sections specify metering service provider (MSP) actions. This distinction accentuates that metered market participants are bound by the market rules for their respective metering installations, while metering service providers provides services to the MMP. For instance, the MSP will register the

metering installation on behalf of the MMP, but it is the MMP's responsibility to ensure that the metering installation is in compliance with the market rules.

Section 4.4 has been completely re-written because of a number of expired sections and the addition of the new provision. The new section 4.4 of Chapter 6 is drafted using subtitles to aid readers' understanding. Cross-references in the remainder of the market rules were reviewed and amended as required (see MR-00312-R01-R02).

Below is a table mapping changes to section 4.4:

Existing Section	Proposed Section	Amended	Deleted	Reason	
4.4.1		✓		Clarify and remove duplication.	
4.4.1.1			✓	Intentionally left blank section.	
4.4.1.2			✓	Intentionally left blank section.	
4.4.1.3			✓	Intentionally left blank section.	
4.4.1A			✓	Expired on May 1, 2006.	
4.4.1B			✓	Expired on May 1, 2006.	
4.4.1C			✓	Expired on May 1, 2006.	
4.4.2		✓		Clarified.	
4.4.2.1		✓		Clarified.	
4.4.2.2		✓		Clarified.	
	4.4.2.3			New section – requirement from 4.4.4 moved to new section.	
4.4.3		✓		Old sections 4.4.3 and 4.4.4 combined.	
				Old sections 4.4.3 and 4.4.4 combined,	
4.4.4	4.4.3	✓		and one obligation moved to 4.4.2.3.	
4.4.5	4.4.4			Old section 4.4.5 renumbered.	
4.4.5.1	4.4.4.1			Old section 4.4.5.1 renumbered.	
4.4.5.2	4.4.4.2			Old section 4.4.5.2 renumbered.	
4.4.5A			✓	Expired on Dec. 31, 2004.	
4.4.5A.1			✓	Expired on Dec. 31, 2004.	
4.4.5A.2			✓	Expired on Dec. 31, 2004.	
4.4.5A.3			✓	Expired on Dec. 31, 2004.	
4.4.6				Unchanged.	
4.4.7				Clarified.	
4.4.8	4.4.5			Old section 4.4.8 renumbered.	
	4.4.8			New section – retaining registration under section 4.4.	
4.4.9		✓		Updated for cross-references.	
4.4.9.1			✓	Intentionally left blank section.	
4.4.9.2			✓	Intentionally left blank section.	
4.4.10-4.4.19			✓	Intentionally left blank section.	

PART 4 – PROPOSED AMENDMENT

4.4 Alternative Metering Installation Standards

4.4.1 Subject to sections 4.4.1A, 4.4.1B and 4.4.1C a metering installation in service on the date of coming into force of this section 4.4 or that is the subject of an application for registration filed prior to the market commencement date and in respect of which the major components were ordered or procured prior to or within 30 days following the date of coming into force of this section 4.4, shall meet the requirements set forth in this Chapter, in the wholesale revenue metering and site specific loss adjustments standards, or in any policy or standard established by the IESO pursuant to this Chapter in respect of a metering installation unless alternative standards are set forth in Appendix 6.2. Metering installations referred to in section 4.4.1 shall meet all of the conditions of registration set forth in Appendix 6.2. The meter service provider seeking to register the metering installation relying on any of the alternative standards in Appendix 6.2 shall provide all of the information required by Appendix 6.2 to be submitted in support of the application for registration.

4.4.1.1 [Intentionally left blank]

4.4.1.2 [Intentionally left blank]

4.4.1.3 [Intentionally left blank]

- 4.4.1A Subject to section 4.4.1C and notwithstanding section 4.4.1, with respect to the expiration of metering installations registered under the alternative standards on the earliest expiry dates of the seal period of any meter within the metering installations as outlined in Appendix 6.2, sections 1.1A.2, 1.4.2, 1.5.3 and 1.10.3, these metering installations may be re registered provided the meters are replaced with meters of a type that are described on the list of conforming meters established by the IESO. These meters may be replaced by either a single main meter or a main and alternate meter from the list of conforming meters.
- 4.4.1B ____Subject to section 4.4.1C and notwithstanding section 4.4.1, with respect to the expiration of *metering installations* registered under the alternative standards on the date that such *metering installations* undergo upgrading or refurbishment that is, in the opinion of the *IESO*, substantial, as outlined in Appendix 6.2, sections 1.6.4, 1.7.4, 1.8.4, 1.9.4, 1.11.4, 1.12.3, and 1.13.3 these *metering installations* may retain their registration under the remaining alternative standards for the portion of the *metering installations* not substantially upgraded or refurbished.
- 4.4.1C ___Sections 4.4.1A and 4.4.1B apply to *metering installations* whose seal expires before May 1, 2006. Sections 4.4.1A and 4.4.1B shall expire on May 1, 2006.

- 4.4.2 A metering service provider that wishes to register a metering installation pursuant to section 4.4.1 shall submit to the *IESO*, as part of its application for registration of the metering installation:
 - 4.4.2.1 identification of the alternative *metering installation* standard in respect of which registration is sought; and
 - 4.4.2.2 all of the information required by Appendix 6.2 to be submitted in support of the application for registration.
- 4.4.3 Where the *IESO* is not satisfied that the requirements of section 4.4.2 have been met, it shall refuse to register the *metering installation*. The *IESO* shall so notify the applicant, together with the reasons for the refusal. Such a refusal is a *reviewable decision*.
- 4.4.4 Where the *IESO* is satisfied that the requirements of section 4.4.2 have been met, and provided that the applicant has provided the information otherwise required by this Chapter 6 and any procedures referred to in section 6.1.2 to be submitted as part of the application for registration of a *metering installation*, the *IESO* shall register the *metering installation*.
- 4.4.5 Subject to section 4.4.5A, registration of a *metering installation* granted by the *IESO* pursuant to section 4.4.4 in respect of a particular alternative standard shall expire on:
 - 4.4.5.1 the date specified in Appendix 6.2 in respect of that alternative standard; or
 - 4.4.5.2 the date on which registration is revoked by the *IESO* in accordance with section 4.4.6, whichever is the earlier.
- 4.4.5A Notwithstanding any other provision within these *market rules*, for *metering installations* that are currently registered pursuant to section 4.4.4 and whose seals
 expires in 2003 and for which Measurement Canada has granted, subject to specified
 conditions, temporary dispensation for the continued use for *settlement* purposes until
 the end of 2004:
 - 4.4.5A.1 registration of those *metering installations* shall continue beyond the expiry of the seal period;
 - 4.4.5A.2 registration of those *metering installations* shall expire on the earlier of December 31, 2004 or the date that the *metering installation* is brought into full compliance by the *metered market participant* with the applicable requirement set forth in this Chapter or in any policy or standard established by the *IESO* pursuant to this Chapter; and
 - 4.4.5A.3 for the period of the continued registration of those *metering installations*, the *metered market participant* shall continue to meet the applicable obligations and alternative metering standard under which those *metering installations* remain registered, except for the requirements set forth in

Appendix 6.2, sections 1.1A.1.3, 1.4.1.3 and 1.5.1.3, and the *IESO* shall determine compliance on that basis.

As of December 31, 2004, this section shall cease to have effect and shall be noted as "[Intentionally left blank]".

- 4.4.6 The *IESO* may revoke registration granted pursuant to section 4.4.4 in the circumstances described in Appendix 6.2. [NTD: this exact wording is now in the new section 4.4.6, with an updated cross-reference.]
- 4.4.7 Each metered market participant for a metering installation in respect of which registration has been revoked pursuant to section 4.4.6 shall ensure that the metering installation is brought into full compliance with the applicable requirement set forth in this Chapter or in any policy or standard established by the IESO pursuant to this Chapter in respect of a metering installation within the time specified for such purpose in Appendix 6.2 and shall so notify the IESO.
- 4.4.8 Subject to section 4.4.5A, each metered market participant for a metering installation registered pursuant to section 4.4.4 shall ensure that the metering installation is brought into full compliance with the applicable requirement set forth in this Chapter or in any policy or standard established by the IESO pursuant to this Chapter in respect of a metering installation prior to the date on which registration under the alternative standard expires in accordance with Appendix 6.2 and shall so notify the IESO.
- 4.4.9 Where a *metered market participant* fails to comply with section 4.4.7 or 4.4.8, the *IESO* shall take such action with respect to the estimation of *metering data* for *settlement* purposes as may be specified in Appendix 6.2. [NTD: this exact wording is now in the new section 4.4.9, with updated cross-references.]
 - 4.4.9.1 [Intentionally left blank]
 - 4.4.9.2 [Intentionally left blank]
- 4.4.10 [Intentionally left blank]
 - 4.4.10.1 [Intentionally left blank]
 - 4.4.10.2 [Intentionally left blank]
- 4.4.11 [Intentionally left blank]
- 4.4.12 [Intentionally left blank]
- 4.4.13 [Intentionally left blank]
- 4.4.14 [Intentionally left blank]
- 4.4.15 [Intentionally left blank]

4.4.16 [Intentionally left blank]
4.4.17 [Intentionally left blank]
4.4.18 [Intentionally left blank]
4.4.18.1 [Intentionally left blank]
4.4.18.2 [Intentionally left blank]
4.4.19 [Intentionally left blank]
4.4.19.1 [Intentionally left blank]

4.4 Alternative Metering Installation Standards

Obligations of Metered Market Participants

4.4.1 A metered market participant with a metering installation registered under section 4.4.3, shall ensure that the metering installation meets the requirements set forth in the alternative standards specified in Appendix 6.2.

Registration under the Alternative Metering Installation Standard

4.4.19.2 [Intentionally left blank]

- 4.4.2 A *metering service provider* applying to register a *metering installation* under the alternative standards specified in Appendix 6.2 shall submit to the *IESO*:
 - 4.4.2.1 an application for registration specifying the alternative *metering* installation standard(s) for which registration is sought;
 - 4.4.2.2 applicable supporting information as specified in Appendix 6.2; and
 - 4.4.2.3 information otherwise required by Chapter 6 or the applicable *market manual*.
- 4.4.3 The *IESO* shall register the *metering installation* provided that, in the opinion of the *IESO*, the *metering service provider* meets the requirements of section 4.4.2. Where the *IESO* is not satisfied that the requirements of section 4.4.2 have been met, it shall refuse to register the *metering installation*. The *IESO* shall so notify the applicant, together with the reasons for refusal. Such a refusal is a *reviewable decision*.

Expiry and Revocation of Registration

- 4.4.4 Registration granted under section 4.4.3, in respect of a particular alternative standard, shall expire on the earlier of:
 - 4.4.4.1 the date specified in Appendix 6.2 for that alternative standard; and
 - 4.4.4.2 the date on which registration is revoked by the *IESO* under section 4.4.6.
- 4.4.5 Subject to section 4.4.8, prior to the expiry of registration of a metering installation under the alternative standard, the metered market participant for that metering installation shall ensure that the metering installation is brought into full compliance with the applicable requirements set forth in this Chapter and in any policy or standard established by the IESO under this Chapter.
- 4.4.6 The *IESO* may revoke registration granted under section 4.4.3 in the circumstances described in Appendix 6.2.
- 4.4.7 If the *IESO* revokes the registration for a *metering installation* under section 4.4.6, the *metered market participant* for that *metering installation* shall ensure that the *metering installation* is brought into full compliance with the applicable requirements of this Chapter within the time specified in Appendix 6.2 and shall so notify the *IESO*.

Retaining Registration Under the Alternative Standard

4.4.8 Prior to the expiry of registration of a *metering installation* under the alternative standards specified in sections 1.2, 1.6, 1.7, 1.8, 1.9, 1.11, 1.12, and 1.13 of Appendix 6.2, the *metered market participant* may apply to the *IESO* to retain registration under those sections. The *IESO* shall grant the *metered market participant* the right to retain registration if, in the opinion of the *IESO*, the changes required for the *metering installation* meet the criteria specified in the applicable *market manual*. The *IESO* shall recover the cost of processing the application from the *metered market participant* in accordance with the applicable *market manual*.

Estimation of Metering Data for Settlement Purposes

4.4.9 Where a *metered market participant* fails to comply with section 4.4.5 or 4.4.7, the *IESO* shall take such action with respect to the estimation of *metering data* for *settlement* purposes as specified in section 1.14 of Appendix 6.2.

PART 5 – IESO BOARD DECISION RATIONALE

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Market Rule Amendment Proposal

PART 1 _	- MARKET	Rill E	INFORMA	TION
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Identification	entification No.: MR-00312-R01					
Subject:	Revenue Metering					
Title:	Retaining Registration Under Alternative Metering Standard					
Nature of Proposal:		Alteration	Alteration			Addition
Chapter:				Appendix:	6	
Sections:	Appendix 6.2					
Sub-sections proposed for amending: various						

PART 2 - PROPOSAL HISTORY - REFER TO MR-00312-R00

Version	Reason for Issuing	Version Date
Approved Amer	ndment Publication Date:	
Approved Amer	ndment Effective Date:	

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the IESO-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 IESO-administered markets.

Summary

Refer to MR-00312-R00.

This amendment proposes to amend Appendix 6.2 – Alternative Metering Installation Standard to:

- recognize that the IESO could grant qualifying metered market participants the right to retain registration by inserting cross-references to Chapter 6, section 4.4.8;
- delete expired section 1.3;
- update various cross-references resulting from the re-write to Chapter 6, section 4.4; and
- split section 1.1.1 of Appendix 6.2 into two sections to separate the application from the scope.

Background - Refer to MR-00312-R00.

Discussion

It is proposed to delete or amend the cross-references of various sections that refer back to any amended or deleted section of Chapter 6, section 4.4. This will ensure that the deletion and creation of new sections will be successfully integrated into the market rules. Secondly, it is proposed to delete section 1.3 because it expired on April 17, 2006. This will ensure that section 6.2 of the Appendix does not contain market rules that are no longer in effect. Finally, it is proposed to delete the explanation of April 17, 2000 as the date that Chapter 6, section 4.4 came into force, and the explanation of May 17, 2000, being 30 days following the date of coming into force of Chapter 6, section 4.4. The significance of April 17, 2000 is simply that it was Baseline 2.0, and the changes (including the creation of section 4.4 of Chapter 6) are explained in Appendix 1.1 – Staging of the Market Rules.

PART 4 – PROPOSED AMENDMENT

Appendix 6.2 – Alternative Metering **Installation Standards**

Introduction 1.1

1.1.1 This appendix applies to *metering installations*:

- -in service on April 17, 2000, the date that Chapter 6, section 4.4
- that are the subject of an application for registration filed prior to the *market commencement date* and in respect of which the major components were ordered or procured on or before May 17, 2000, being 30 days following the date of coming into force of Chapter 6, section 4.4.

1.1.2 This Appendix sets forth:

- 1.1.<u>42</u>.1 the alternative standards and accompanying conditions that must be met in respect of a *metering installation* registered <u>pursuant under</u> Chapter 6,to section 4.4.3<u>1 of this Chapter</u>;
- 1.1.42.2 the information that must be submitted by a *metering service provider* in support of an application for registration of *metering installations* referred to in Chapter 6, section 4.4.12 of this Chapter;
- 1.1.42.3 the circumstances in which the *IESO* may revoke the registration granted pursuant to Chapter 6, section 4.4.43 of this Chapter; and
- 1.1.12.4 the time at which registration granted by the *IESO* pursuant under Chapter 6, to section 4.4.1 3 of this Chapter expires. Where the time at which registration expires is specified to be the earliest expiry date of the seal period of any *meter* within the *metering installation*, that date shall be the earliest expiry date of the seal period of any *meter* within the *metering installation* on as of the *market commencement date*.

1.1A Metering Installation Not Comprised of Two Meters

- 1.1A.1 Each *metering installation* for which registration is being sought <u>pursuant under</u> <u>Chapter 6, to</u> section 4.4.1–2 that does not comply with the dual *meter* requirement referred to in section 4.1.1.2 of <u>this</u> Chapter <u>6</u> shall meet the following conditions:
 - 1.1A.1.1 the *meter* within the *metering installation* is one in respect of which Measurement Canada has granted approval of type;
 - 1.1A.1.2 a person that is an accredited meter verifier within the meaning of the *Electricity and Gas Inspection Act* (Canada) has verified and sealed the *meter* within the *metering installation*;
 - 1.1A.1.3 the seal period for the *meter*, including the seal period for the *data logger* if sealed separately from the remainder of the *meter*, within the *metering installation* has not expired;
 - 1.1A.1.4 the *metering installation* shall, subject to section 1.1A.1.5, be capable of collating *metering data* into *dispatch intervals*;

- 1.1A.1.5 the metering installation shall, if used in respect of a non-dispatchable load facility, a self-scheduling generation facility with a name-plate rating of less than 10 MW, a transitional scheduling generator or an intermittent generator, be capable of collating metering data into 5 or 15 minute intervals; and
- 1.1A.1.6 the *meter* contained in the *metering installation* shall be capable of time synchronization by the *IESO* to eastern standard time in the Province of Ontario.
- 1.1A.1.7 [Intentionally left blank]
- 1.1A.2 Subject to section 4.4.5A, rRegistration of a metering installation that meets the conditions set out in section 1.1A.1 shall expire on the earliest expiry date of the seal period of the meter within the metering installation, including the expiry date of the seal period of the data logger if sealed separately from the remainder of the meter. Registration of a metering installation shall not expire in instances where there are multiple metering installations served by a single data logger whose seal expires.

1.2 Compliance with Blondel's Theorem

- 1.2.1 Each *metering installation* for which registration is being sought pursuant tounder Chapter 6, section 4.4.1—2that does not comply with Blondel's theorem shall:
 - 1.2.1.1 comply with rulings issued by Measurement Canada on two and one-half element *metering*; and
 - 1.2.1.2 have a magnitude of maximum error satisfactory to the *IESO*.

1.3 [Intentionally left blank – section deleted] Meter Point Not at Defined Meter Point

- 1.3.1 [Intentionally left blank section deleted] Each metering installation for which registration is being sought pursuant to section 4.4.1 whose meter point is not at the defined meter point and that does not comply with the requirements of section 4.2.2 of this Chapter shall meet the following conditions:
 - 1.3.1.1 [Intentionally left blank section deleted]site specific and other loss adjustment factors have been provided to and approved by the *IESO* in accordance with this Chapter and with any policy or standard established by the *IESO* pursuant to this Chapter; and
 - 1.3.1.2 [Intentionally left blank section deleted] correction factors have been provided to and approved by the *IESO* in accordance with this

Chapter and with any policy or standard established by the *IESO* pursuant to this Chapter.

- 1.3.2 [Intentionally left blank section deleted] Metering data from a metering installation in respect of which registration has been granted under section 4.4.4 that meets the conditions set out in section 1.3.1 shall be the subject of adjustment by the loss adjustment and correction factors referred to in sections 1.3.1.1 and 1.3.1.2 in the manner described in the wholesale revenue metering standard established by the IESO pursuant to this Chapter.
- 1.3.3 [Intentionally left blank section deleted] The IESO may, by notice to the metered market participant, revoke registration of a metering installation granted under section 4.4.4 that meets the conditions set out in section 1.3.1 if the metering service provider fails to provide the loss adjustment or correction factors referred to in sections 1.3.1.1 and 1.3.1.2 in the manner described in the wholesale revenue metering standard established by the IESO pursuant to this Chapter, in which case the metered market participant shall ensure that separate revenue metering is installed for all relevant points of supply and consumption within 8 weeks of the date of notice of such revocation.
- 1.3.4 [Intentionally left blank section deleted] Registration of a *metering installation* that meets the conditions set out in section 1.3.1 shall expire on the date that is six years from the date of coming into force of section 4.4 of this Chapter.

1.4 Accuracy

- 1.4.1 Each *metering installation* for which registration is being sought <u>pursuant under</u> to Chapter 6, section 4.4.1-2 that does not comply with the accuracy requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:
 - 1.4.1.1 the *meters* within the *metering installation* are ones in respect of which Measurement Canada has granted approval of type;
 - 1.4.1.2 a person that is an accredited meter verifier within the meaning of the *Electricity and Gas Inspection Act*, (Canada) has verified and sealed the *meters* within the *metering installation*; and
 - 1.4.1.3 the seal period for the *meters* within the *metering installation* have not expired.
- 1.4.2 Subject to section 4.4.5A, rRegistration of a *metering installation* that meets the conditions set out in section 1.4.1 shall expire on the earliest expiry date of the seal period of any *meter* within the *metering installation*.

1.5 Functional Requirements

- 1.5.1 Each *metering installation* for which registration is being sought <u>pursuant underto</u> <u>Chapter 6</u>, section 4.4.1-2 that does not comply with the functional requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:
 - 1.5.1.1 the *meters* within the *metering installation* are ones in respect of which Measurement Canada has granted approval of type;
 - 1.5.1.2 a person that is an accredited meter verifier within the meaning of the *Electricity and Gas Inspection Act* (Canada) has verified and sealed the *meters* within the *metering installation*;
 - 1.5.1.3 the seal periods for the *meters* within the *metering installation* have not expired;
 - 1.5.1.4 the *metering installation* shall, subject to section 1.5.1.5, be capable of collating *metering data* into *dispatch intervals*;
 - 1.5.1.5 the *metering installation* shall, if used in respect of a *non-dispatchable load facility*, a *self-scheduling generation facility* with a name-plate rating of less than 10 MW, a *transitional scheduling generator* or an *intermittent generator*, be capable of collating *metering data* into 5 or 15 minute intervals; and
 - 1.5.1.6 the *meters* contained in the *metering installation* shall be capable of time synchronization by the *IESO* to eastern standard time in the Province of Ontario.
- 1.5.2 The *IESO* may, by notice to the *metered market participant*, revoke registration of a *metering installation* granted under <u>Chapter 6</u>, section 4.4.4-3 that <u>meets-met</u> conditions set out in section 1.5.1 if the *metering installation* fails to comply with the requirements of any of sections 1.5.1.4 to 1.5.1.6, in which case the *metered market participant* shall ensure that the *meters* within the *metering installation* are replaced with *meters* that comply with the functional requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter within 2 *business days* of the date of notice of such revocation.
- 1.5.3 Subject to section 4.4.5A, rRegistration of a *metering installation* that meets the conditions set out in section 1.5.1 shall expire on the earliest expiry date of the seal period of any *meter* within the *metering installation*.

1.6 Instrument Transformers – Power Switching

1.6.1 Each *metering installation* for which registration is being sought <u>pursuant_underto</u>

<u>Chapter 6</u>, section 4.4.<u>1-2</u> that does not comply with the power system switching requirements for *instrument transformers* set forth in this Chapter and in any

policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:

- 1.6.1.1 all switching devices that may affect the accuracy of any *metering* data recorded in the *metering installation* shall be identified to the *IESO*;
- 1.6.1.2 an alternate source of *metering data* is provided;
- 1.6.1.3 correction factors have been provided to and approved by the *IESO* in accordance with this Chapter and any policy or standard established by the *IESO* pursuant to this Chapter; and
- 1.6.1.4 loss adjustment factors have been provided to and approved by the *IESO* in accordance with this Chapter and any policy or standard established by the *IESO* pursuant to this Chapter.
- 1.6.2 Metering data from a metering installation in respect of which registration has been granted under <u>Chapter 6</u>, section 4.4.4-3 that <u>meets-met</u> the conditions set out in section 1.6.1 shall be the subject of adjustment by the <u>loss adjustment and</u> correction <u>and loss adjustment</u> factors referred to in sections 1.6.1.3 and 1.6.1.4 in the manner described in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter.
- 1.6.3 The *IESO* may, by notice to the *metered market participant*, revoke registration of a *metering installation* granted under <u>Chapter 6</u>, section 4.4.4-3 that <u>meets met</u> the conditions set out in section 1.6.1 if the conditions set forth in any one of sections 1.6.1.1 to 1.6.1.4 are not met or if the *metered market participant* fails to:
 - 1.6.3.1 notify the *IESO*, in the manner set forth in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter, of the duration of any power switching operation relating to the *metering installation* no later than 24 hours after the operation has taken place; or
 - 1.6.3.2 install additional or corrected *metering installations* in circumstances where power switching operations affect the *metering data* in the existing *metering installation* more than twice in any twelve-month period,

in which case the *metered market participant* shall ensure that each *instrument transformer* within the *metering installation* is replaced with an *instrument transformer* that complies with the power switching requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter within 8 weeks of the date of notice of such revocation.

1.6.4 <u>If the *IESO* does not -grant the *metered market participant* the right to retain registration under section 4.4.8 of Chapter 6, Rethe registration of a *metering*</u>

installation that meets the conditions set out in section 1.6.1 shall expire on the date that the *metering installation* or the *facility* to which such *metering installation* relates undergoes upgrading or refurbishment that is, in the *IESO's* opinion, substantial.

1.7 Instrument Transformers – Accuracy Requirements

- 1.7.1 Subject to section 1.7.1A, each *metering installation* for which registration is being sought <u>pursuant underto Chapter 6</u>, section 4.4.1-2 that does not comply with the 0.3% accuracy requirements of ANSI standard C57.13, as evidenced by factory test cards complete with serial numbers, for *instrument transformers* set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:
 - 1.7.1.1 the *instrument transformer* shall be of a type approved for use by Measurement Canada;
 - 1.7.1.2 the *instrument transformer* shall:
 - a. [Intentionally left blank]
 - b. be tested on-site for accuracy in the manner described in, and meet the accuracy test point requirements of this Chapter and of any policy or standard established by the *IESO* pursuant to this Chapter with correction factors approved by the *IESO* in the manner described in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter; or
 - c. be demonstrated, to the satisfaction of the *IESO*, by means of the provision to the *IESO* of copies of the manufacturer's records, to be identical to an *instrument transformer* that has been tested onsite for accuracy, provided that installation or other documents have been provided to the *IESO* demonstrating that the applied burden for the *instrument transformer* is either identical to that of the tested *instrument transformer* or within the correction factors applied to that *instrument transformer*; and
 - 1.7.1.3 the *instrument transformer* complies with the security requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter.
- 1.7.1A Notwithstanding section 1.7.1.2, the *IESO* shall accept the following as proof of accuracy of *instrument transformers*:
 - 1.7.1A.1 *instrument transformer* nameplate data, where the nameplate contains the required ANSI accuracy information and is affixed to the *instrument transformer*; and
 - 1.7.1A.2 Measurement Canada-type approval information, where such approval contains the required ANSI accuracy information.

- 1.7.2 *Metering data* from a *metering installation* for which registration has been granted under <u>Chapter 6</u>, section 4.4.4-3 that <u>meets met</u> the conditions set out in section 1.7.1 shall be the subject of adjustment by the correction factors referred to in section 1.7.1.2(b) in the manner described in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter.
- 1.7.3 The *IESO* may, by notice to the *metered market participant*, revoke registration of a *metering installation* granted under <u>Chapter 6</u>, section 4.4.4-3 that <u>meets-met</u> the conditions set out in section 1.7.1 if the conditions set forth in any one of sections 1.7.1.1 to 1.7.1.3 are not met, in which case the *metered market participant* shall ensure that each *instrument transformer* within the *metering installation* is replaced with an *instrument transformer* that complies with the accuracy requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter within 8 weeks of the date of notice of such revocation.
- 1.7.4 If the IESO does not grant the metered market participant the right to retain registration under section 4.4.8 of Chapter 6, the Rregistration of a metering installation that meets-met the conditions set out in section 1.7.1 shall expire on the date that the metering installation or the facility to which such metering installation relates undergoes upgrading or refurbishment that is, in the IESO's opinion, substantial.

1.8 Instrument Transformers – Secondary Cabling

- 1.8.1 Each *metering installation* for which registration is being sought <u>pursuant underto</u> <u>Chapter 6</u>, section 4.4.1–2 that does not comply with the secondary cabling requirements for *instrument transformers* set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:
 - 1.8.1.1 each *meter* shall be connected to the *instrument transformer* in the manner described in the *meter point* documentation submitted in support of the application for registration of the *metering installation*;
 - 1.8.1.2 fixtures, including but not limited to AC outlets and voltage test points, that may allow access to the *instrument transformer* secondaries by persons not authorized by this Chapter to have such access shall be removed, if possible, or disabled or made inaccessible by a sealed cover;
 - 1.8.1.3 the secondary cabling otherwise complies with as many of the requirements described in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter as is practicable and any requirements not so complied with have been identified to the *IESO*;

- 1.8.1.4 where the secondary cabling does not meet all of the requirements described in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter, measurement error correction factors have been provided to and approved by the *IESO* in accordance with this Chapter and with any policy or standard established by the *IESO* pursuant to this Chapter; and
- 1.8.1.5 where the error introduced by the secondary cabling exceeds 0.02%, correction factors have been provided to and approved by the *IESO*.
- 1.8.2 *Metering data* from a *metering installation* in respect of which registration has been granted under <u>Chapter 6</u>, section 4.4.4-3 that meets the conditions set out in section 1.8.1 shall be the subject of adjustment by the correction factors referred to in sections 1.8.1.4 and 1.8.1.5 in the manner described in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter.
- 1.8.3 The *IESO* may, by notice to the *metered market participant* in respect of the *metering installation* to which the registration relates, revoke registration of a *metering installation* granted under <u>Chapter 6</u>, section 4.4.43 that meets the conditions set out in section 1.8.1 if the conditions set forth in any one of sections 1.8.1.1 to 1.8.1.5 are not met, in which case the *metered market participant* shall ensure that each *instrument transformer* within the *metering installation* is replaced with an *instrument transformer* that complies with the secondary cabling requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter within 8 weeks of the date of notice of such revocation.
- 1.8.4 If the *IESO* does not grant the *metered market participant* the right to retain registration under section 4.4.8 of Chapter 6, the Rregistration of a *metering installation* that meets the conditions set out in section 1.8.1 shall expire on the date on which the *metering installation* or the *facility* to which such *metering installation* relates undergoes upgrading or refurbishment that is, in the *IESO's* opinion, substantial.

1.9 Parallel Current Transformer Secondaries

- 1.9.1 Each *metering installation* for which registration is being sought pursuant to under Chapter 6, section 4.4.1–2 that does not comply with the prohibition on parallel current transformer secondaries set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:
 - 1.9.1.1 current transformers shall have the same nominal ratio and the same secondary ampere rating;
 - 1.9.1.2 paralleled secondaries shall be connected to the same phase;

- 1.9.1.3 phasing shall be consistent on both primary and secondary circuits;
- 1.9.1.4 paralleling of secondaries shall be done at the test links directly connected to the *meter*;
- 1.9.1.5 each *meter point* shall have its own current test links;
- 1.9.1.6 paralleled secondaries shall be used to sum currents from no more than two *meter points*;
- 1.9.1.7 a common point shall exist at the primary voltage to which each of the measured flows is connected;
- 1.9.1.8 the primaries of the voltage transformers for the paralleled installation must be connected to the common point referred to in section 1.9.1.7;
- 1.9.1.9 the burden on any current transformer shall not exceed the rated burden;
- 1.9.1.10 the burden shall be kept as low as practicable and shall take into account the effects of common secondary leads and worst-case unbalance as described in section 1.9.1.11;
- 1.9.1.11 worst-case unbalance shall include operation of secondary fusing or single phase primary power;
- 1.9.1.12 the *meter* shall be rated at twice the secondary rating of one current transformer;
- 1.9.1.13 current transformers shall not operate below 10% of the secondary ampere rating under normal or expected operating conditions;
- 1.9.1.14 the primaries of the current transformers shall not be paralleled;
- 1.9.1.15 where a switching device exists between the primary connection point of the current transformers, the *IESO* shall be notified whenever the paralleled current transformers are operated with the switching device open;
- 1.9.1.16 the *metered market participant* shall identify the time, date and duration, and current and voltage readings for both *meter points* before, after, and at regular intervals during any period of disconnection; and
- 1.9.1.17 correction factors shall be provided to and approved by the *IESO* in accordance with this Chapter and with any policy or standard established by the *IESO* pursuant to this Chapter.

- 1.9.2 *Metering data* from a *metering installation* in respect of which registration has been granted <u>under Chapter 6</u>, section 4.4.4-3 that meets the conditions set out in section 1.9.1 shall be the subject of adjustment by the correction factors referred to in section 1.9.1.17 in the manner described in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter.
- 1.9.3 The *IESO* may, by notice to the *metered market participant* in respect of the *metering installation* to which the registration relates, revoke registration of a *metering installation* granted under <u>Chapter 6</u>, section 4.4.43 that meets the conditions set out in section 1.9.1 if the conditions set forth in any one of sections 1.9.1.1 to 1.9.1.17 are not met, in which case the *metered market participant* shall ensure that each parallel current transformer secondary within the *metering installation* is removed within 8 weeks of the date of notice of such revocation.
- 1.9.4 If the *IESO* does not grant the *metered market participant* the right to retain registration under section 4.4.8 of Chapter 6, the Registration of a *metering installation* that meets the conditions set out in section 1.9.1 shall expire on the date on which work or upgrading that is, in the *IESO*'s opinion, substantial is carried out at the *metering installation's meter point*.

1.10 Meter Installation Enclosures

- 1.10.1 Each *metering installation* for which registration is being sought pursuant to under Chapter 6, section 4.4.1—2 that does not comply with the enclosure requirements for *metering installations* set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:
 - 1.10.1.1 the *metering installation* is, in the *IESO's* opinion, secure; and
 - 1.10.1.2 the *metering installation* complies with as many of the enclosure requirements described in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter as is practicable and any requirements not so complied with have been identified to the *IESO*.
- 1.10.2 The *IESO* may, by notice to the *metered market participant*, revoke registration of a *metering installation* granted under <u>Chapter 6</u>, section 4.4.4-3 that meets the conditions set out in section 1.10.1 if the conditions set forth in any one of sections 1.10.1.1 or 1.10.1.2 are not met, in which case the *metered market participant* shall ensure that each *metering installation* complies with the enclosure requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter within 2 *business days* of the date of notice of such revocation.

1.10.3 Subject to section 4.4.5A, rRegistration of a metering installation that meets the conditions set out in section 1.10.1 shall expire on the earliest expiry date of the seal period of any meter within the metering installation.

1.11 Instrument Transformers – Primary Connection Point

- 1.11.1 Each *metering installation* for which registration is being sought pursuant to under Chapter 6, section 4.4.1–2 that does not comply with the primary connection point proximity requirements for *instrument transformers* set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter shall meet the following conditions:
 - 1.11.1.1 in the case of a *metering installation* relating to a *load facility*:
 - a. the *metering installation* shall minimize the voltage drop between the voltage transformer and the current transformer;
 - b. the *metering installation* shall minimize the leakage of current between the voltage transformer and the current transformer; and
 - c. where the maximum error introduced by any physical separation of the primaries of the voltage transformer and the current transformer exceeds 0.02% for either active or reactive power flows, a constant correction factor has been provided to and approved by the *IESO* in the manner described in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter; or
 - 1.11.1.2 in the case of a metering installation relating to a generation facility:
 - a. the *metering installation* shall, where a current transformer is located on the grounded of the *generation facility*, minimize the leakage of current between the voltage transformer and the current transformer; and
 - b. where the maximum error introduced by leakage current between the location of the current transformer and the location of the corresponding voltage transformer exceeds 0.02% for either active or reactive power flows, a constant correction factor has been provided to and approved by the *IESO* in the manner described in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter.
- 1.11.2 *Metering data* from a *metering installation* in respect of which registration has been granted under <u>Chapter 6</u>, section 4.4.4.3 that meets the conditions set out in section 1.11.1 shall be the subject of adjustment by the correction factors referred to in section 1.11.1.1 or 1.11.1.2, as the case may be, in the manner described in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter.

- 1.11.3 The *IESO* may, by notice to the *metered market participant* in respect of the *metering installation* to which the registration relates, revoke registration of a *metering installation* granted under <u>Chapter 6</u>, section 4.4.4.3 that meets the conditions set out in section 1.11.1 if the conditions set forth in section 1.11.1.1 or 1.11.2 are not met, in which case the *metered market participant* shall ensure that each *instrument transformer* within the *metering installation* is replaced with an *instrument transformer* that complies with the primary connection point proximity requirements requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter within 8 weeks of the date of notice of such revocation.
- 1.11.4 If the *IESO* does not grant the *metered market participant* the right to retain registration under section 4.4.8 of Chapter 6, the Rregistration of a *metering installation* that meets the conditions set out in section 1.11.1 shall expire on the date on which the *metering installation* or the *facility* to which such *metering installation* relates undergoes upgrading or refurbishment that is, in the *IESO*'s opinion, substantial.

1.12 Instrument Transformer – Primary Cable

- 1.12.1 A metering service provider that seeks to register a metering installation-pursuant to under Chapter 6, section 4.4.1-2 that does not comply with the permissible primary cable error factor requirements for instrument transformers set forth in this Chapter and in any policy or standard established by the IESO pursuant to this Chapter shall provide to the IESO, for the IESO's approval, a constant correction factor.
- 1.12.2 *Metering data* from a *metering installation* in respect of which registration has been granted under <u>Chapter 6</u>, section 4.4.4-3 that meets the conditions set out in section 1.12.1 shall be the subject of adjustment by the correction factor referred to in section 1.12.1 in the manner described in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter.
- 1.12.3 If the *IESO* does not grant the *metered market participant* the right to retain registration, under section 4.4.8 of Chapter 6, the Registration of a *metering installation* that meets the conditions set out in section 1.12.1 shall expire on the date on which the *metering installation* or the *facility* to which such *metering installation* relates undergoes upgrading or refurbishment that is, in the *IESO's* opinion, substantial.

1.13 Instrument Transformers – Burdens

1.13.1 A metering service provider that seeks to register a metering installation pursuant to under Chapter 6, section 4.4.1—2 that does not comply with the prohibition against errors resulting from calculated burdens for instrument transformers set forth in this Chapter and in any policy or standard established by the IESO

- pursuant to this Chapter shall provide to the *IESO*, for the *IESO*'s approval, a correction factor.
- 1.13.2 *Metering data* from a *metering installation* in respect of which registration has been granted under <u>Chapter 6</u>, section 4.4.4.3 that meets the conditions set out in section 1.13.1 shall be the subject of adjustment by the correction factor referred to in section 1.13.1 in the manner described in the wholesale revenue metering standard established by the *IESO* pursuant to this Chapter.
- 1.13.3 If the IESO does not grant the metered market participant the right to retain registration under section 4.4.8 of Chapter 6, the Rregistration of a metering installation that meets the conditions set out in section 1.13.1 shall expire on the date on which the metering installation or the facility to which such metering installation relates undergoes upgrading or refurbishment that is, in the IESO's opinion, substantial.

PART 5 – IESO BOARD DECISION RATIONALE



Market Rule Amendment Proposal

PART 1 – N	IARKET I	RUL	E INFORMATIO	ON			
Identificati	on No.: MR-00312-R01						
Subject:	Revenue	Revenue Metering					
Title:	Retainin	g R	egistration Unde	er Alternati	ive Metering St	tandard	
Nature of F	Proposal:		Alteration		☐ Deletion		Addition
Chapter:	3, 11				Appendix:	6	
Sections:	Chapter	3 (s) 2.7.29; Appen	dix 6.1 (s)	1.2.1.3	•	
Sub-section	ns propose	d fo	r amending:				
PART 2 – P	ROPOSAL	Н	STORY– R efei	R TO MR-	00312-R00		
Version Reason for Issuing					Versio	on Date	

Approved Amendment Publication Date:

Approved Amendment Effective Date:

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-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 *IESO-administered markets*.

Summary

Refer to MR-00312-R00.

This amendment proposes to amend cross-references to amended or deleted sections of the alternative metering standard in Chapter 6 proposed under MR-00312-R00.

Background

Refer to MR-00312-R00.

Discussion

Refer to MR-00312-R01.

PART 4 – PROPOSED AMENDMENT

Chapter 3

2.7 Arbitration

2.7.29 In the case of a dispute referred to in section 2.2.1.4:

2.7.29.4 where the dispute relates to the *reviewable decision* referred to in section 4.4.3, 4.4.12 or 6.1.5 of Chapter 6, the *arbitrator* may confirm the order or decision of the *IESO* or set aside the order or decision of the *IESO* and order the *IESO* to register the *metering installation* on such terms and conditions, if any, which the *arbitrator* determines are just and reasonable, and such award of the *arbitrator* may include the direction to the *IESO* referred to in section 2.7.25.

Appendix 6.1 - Metering Obligations

1.2 Obligations of Metered Market Participants

- 1.2.1 Each metered market participant shall:
 - 1.2.1.3 ensure that each *meter* forming part of a *metering installation* in respect of which it is the *metered market participant* that may be used for *settlement* purposes has been shop tested, verified and/or re-verified for accuracy in accordance with the requirements set forth in this Chapter and in any policy or standard established by the *IESO* pursuant to this Chapter, and subject to section 4.4.5A of this Chapter, sealed and/or re-sealed in accordance with all applicable *federal metering requirements* by a person that is an accredited meter verifier within the meaning of the *Electricity and Gas Inspection Act* (Canada);

Chapter 11

reviewable decision means a decision of the *IESO* referred to in section 2.1.2, 4.4.3, 4.4.12, 5.1.12, 5.3.9 or 6.1.5 of Chapter 6;

PART 5 – IESO BOARD DECISION RATIONALE

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