

Final Alignment Supplementary: All Amendments

Part 1 - Market Rule Information

All MRP Amendments from current baseline	
Title:	Chapter 0.8 and Appendices – Physical Bilateral Contracts and Financial Markets
Current Market Rules Baseline:	
This document contains a version of the post MRP market rules tracked against the current baseline. For a clean version of this and other chapters, refer to the market rule amendment proposal documents (MR-00481-R00-R12).	

A.1 Chapter Scope and Operation

Introduction

A.1 Chapter Scope and Operation

A.1.1 This Chapter is part of the *renewed market rules*, which pertain to:

A.1.1.1 the period prior to a *market transition* insofar as the provisions are relevant and applicable to the rights and obligations of the *IESO* and *market participants* relating to preparation for operation in the *IESO administered markets* following commencement of *market transition*; and

A.1.1.2 the period following commencement of *market transition* in respect of all the rights and obligations of the *IESO* and *market participants*.

A.1.2 All references herein to chapters or provisions of the *market rules* will be interpreted as, and deemed to be references to chapters and provisions of the *renewed market rules*.

A.1.3 Upon commencement of the *market transition*, the *legacy market rules* will be immediately revoked and only the *renewed market rules* will remain in force.

A.1.4 For certainty, the revocation of the *legacy market rules* upon commencement of *market transition* does not:

A.1.4.1 affect the previous operation of any *market rule* or *market manual* in effect before the *market transition*;

A.1.4.2 affect any right, privilege, obligation or liability that came into existence under the *market rules* or *market manuals* in effect prior to the *market transition*;

A.1.4.3 affect any breach, non-compliance, offense or violation committed under or relating to the *market rules* or *market manuals* in effect prior to the *market transition*, or any sanction or penalty incurred in connection with such breach, non-compliance, offense or violation

A.1.4.4 affect an investigation, proceeding or remedy in respect of,

(a) a right, privilege, obligation or liability described in subsection A.1.4.2, or

(b) a sanction or penalty described in subsection A.1.4.3.

A.1.5. An investigation, proceeding or remedy described in subsection A.1.4.3 may be commenced, continued or enforced, and any sanction or penalty may be imposed, as if the *legacy market rules* had not been revoked.

1. Introductory Rules

1.1 Purpose and Application

1.1.1 This Chapter sets forth the rules governing:

1.1.1.1 the submission of ~~physical bilateral contract data~~ physical bilateral contract data by ~~market participants~~ market participants and the use of such ~~physical bilateral contract data~~ physical bilateral contract data by the *IESO*; and

1.1.1.2 ~~[Intentionally left blank—section deleted]~~

1.1.1.23 the sale and administration of *transmission rights* ~~or TRs~~ by the *IESO*.

1.1.2 The rules in this Chapter apply to:

1.1.2.1 the *IESO*; and

1.1.2.2 any *market participant* submitting *physical bilateral contract data* to the *IESO*, or holding or buying transmission rights ~~or TRs~~.

2. Physical Bilateral Contract Data and Quantities

2.0 Market Transition

2.0.1 Following a *market transition* this section 2 and the relevant provisions of MR. Ch.9 applicable to *physical bilateral contracts* shall not apply to the extent that they apply to *physical bilateral contracts* and the *IESO* shall not administer and settle *physical bilateral contracts*. Such inapplicability shall continue until such time as the *IESO* resolves the relevant software inadequacies and publishes notice that such software inadequacies are resolved and the *IESO* is capable of administering and settling *physical bilateral contracts*.

2.1 Overview

2.1.1 Any *market participant* (or any other person) may, subject to *applicable laws* ~~and regulations~~, enter into, administer and settle *physical bilateral contracts* with another *market participant* (or any other person). Provided that such *physical bilateral contracts* are matters strictly between the parties and are not in any way to affect the operation of the ~~real-time markets or the physical markets to be administered by the IESO pursuant to Chapter 7~~, such *physical bilateral contracts*:

- 2.1.1.1 may but need not be reported to the *IESO* for operational, *settlement* or any other purposes; and
- 2.1.1.2 are not subject in any way to these *market rules*.
- 2.1.2 The *IESO* shall offer a service whereby the *selling market participant* in a *physical bilateral contract* or the *selling market participant* under a financial bilateral contract may assume responsibility for components of the *buying market participant's settlement obligations* other than those for *energy*.
- 2.1.23 Any *selling market participant* selling under a *physical bilateral contract* to a *buying market participant* may submit *physical bilateral contract data* to the *IESO* in respect of the *day-ahead market* and/or the *real-time market*, complying with the requirements of this section 2, and the *IESO* shall:
- 2.1.23.1 use such *physical bilateral contract data* and, if necessary, operational data to determine the *physical bilateral contract quantities* of *energy* sold by the *selling market participant* to the *buying market participant* in each *settlement hour* ~~hour~~ at the location designated in the *physical bilateral contract data* in respect of the *day-ahead market* or the *real-time market*, as the case may be;
- 2.1.23.2 determine for the *physical bilateral contract data* submitted in respect of the *real-time market*, in respect of each of the *selling market participant* and the *buying market participant*, the value of the *physical bilateral contract quantity* referred to in section 2.1.23.1 for each applicable *metering interval* or *settlement hour*, as the case may be, of the relevant *trading day* based:
- a. in the case of ~~each the~~ *buying market participant and the selling market participant*, on the ~~hourly Ontario energy price~~ *day-ahead market Ontario zonal price for energy*, when the location specified pursuant to section 2.2.1 relates to a *non-dispatchable load*, ~~a self-scheduling generation facility, a self-scheduling electricity storage facility, a transitional scheduling generator or an intermittent generator~~;
- b. ~~in the case of the selling market participant, on the 5 minute energy market price, when the location specified pursuant to section 2.2.1 relates to a non-dispatchable load, a self-scheduling generation facility, a self-scheduling electricity storage facility, a transitional scheduling generator or an intermittent generator~~;
- be. in the case of each of the *buying market participant* and the *selling market participant*, on the *applicable locational marginal price of energy in the real-time market* ~~5 minute energy market price~~, when the location specified pursuant to section 2.2.1 relates to a *generation resource, facility or electricity storage resource facility*, ~~other than one referred to in section 2.1.2.2(a) or a dispatchable load facility~~; or

~~dc.~~ in the case of each of the *buying market participant* and the *selling market participant*, on the applicable locational marginal price in the real-time market~~5-minute energy market price~~, at the ~~intertie metering point specified pursuant to section 2.2.1~~, when ~~the such~~ location specified pursuant to section 2.2.1 is an *intertie metering point*;

and apply such value in determining the *selling market participant's* and the *buying market participant's* respective net *energy market settlement credit amount in the real-time market* for the applicable *metering interval* or *settlement hour*, as the case may be, pursuant to ~~MR Ch.9 ss.3.1 and 3.2~~section 3.3 of Chapter 9; and

2.1.23.3 ~~[Intentionally left blank]~~ determine for *physical bilateral contract data* submitted in respect of the *day-ahead market*, in respect of each of the *selling market participant* and the *buying market participant*, the value of the *physical bilateral contract quantity* referred to in section 2.1.3.1 for each applicable *metering interval* or *settlement hour*, as the case may be, of the relevant *trading day* based:

a. in the case of each of the *buying market participant* and the *selling market participant*, on the applicable locational marginal price of energy in the day-ahead market, when the location specified pursuant to section 2.2.1 relates to a *generation resource*, *electricity storage resource*, or a *dispatchable load*; or

b. in the case of each of the *buying market participant* and the *selling market participant*, on the applicable locational marginal price in the day-ahead market, when the location specified pursuant to section 2.2.1 is an *intertie metering point*;

and apply such value in determining the *selling market participant's* and the *buying market participant's* respective net *energy market settlement amount in the day-ahead market* for the applicable *metering interval* or *settlement hour*, as the case may be, pursuant to MR Ch.9 ss.3.1 and 3.2.

2.1.2.4 — ~~[Intentionally left blank]~~

2.1.2.5 — ~~[Intentionally left blank]~~

2.1.23.64 in the *settlement process* for each *settlement hour*, allocate ~~some or all of various~~ the components of *hourly uplift* assessed on the *physical bilateral contract quantity* between the *buying market participant* and the *selling market participant* as specified in the *physical bilateral contract data*.

2.1.34 The *IESO* shall not, in any of its system operation, *physical market* operation or ~~market settlement processes~~, accept, acknowledge, record or use any *physical bilateral contract data* with respect to any contracts to which it is not itself a party, except as specified in this section 2.

2.2 The Content of Physical Bilateral Contract Data

- 2.2.1 Any *selling market participant* may submit to the *IESO physical bilateral contract data* defining *physical bilateral contract quantities* of *energy* that it is selling to a specified *buying market participant* in respect of the *day-ahead market* and/or the *real-time market* in specified *settlement* hours and at any location, so long as it ~~is~~ either:
- 2.2.1.1 is either a specified *delivery point* associated with ~~an *RWM*~~ a *registered wholesale meter* or a specified *intertie metering point*; and
- 2.2.1.2 in the context of *physical bilateral contract data* submitted in respect to the *day-ahead market*, does not relate to a *non-dispatchable load*.
- 2.2.2 A *selling market participant* may specify in its *physical bilateral contract data* that it will be responsible for some or all of the components of ~~hourly uplift~~ *hourly uplift*, as further described in the applicable *market manual*, that the *buying market participant* would otherwise pay on the *physical bilateral contract quantities*.
- 2.2.3 ~~A *selling market participant* may identify in its *physical bilateral contract data* a specific *primary RWM* or *intertie metering point* as the seller's location from which it is notionally transporting the *physical bilateral contract quantity*, it being understood that the seller's location shall have no effect on the valuation referred to in section 2.1.2, on operations described in Chapter 7 or on final *settlement amounts* as determined in accordance with Chapter 9.~~

2.3 The Form of Physical Bilateral Contract Data

- 2.3.1 Subject to section 2.3.2, a *selling market participant* shall submit *physical bilateral contract data* in a form that has been approved by the *IESO*. Such *IESO*-approved forms shall include, but are not limited to, data files containing either of the following:
- 2.3.1.1 indication that the quantity of *energy* that the *selling market participant* is selling to a designated *buying market participant* in each ~~hour~~ *settlement hour*, is 100% of the applicable *market participant's metering data* at the location designated in the *physical bilateral contract data* pursuant to section 2.2.1, provided that:
- a. such location is ~~one referred to in section 2.2.1.1a~~ a specified *delivery point* associated with a *registered wholesale meter*; and
- b. either the *selling market participant* or the *buying market participant* is the *metered market participant* in respect of the ~~*RWM* or *RWMs*~~ *registered wholesale meter(s)* associated with such location; or
- 2.3.1.2 ~~[Intentionally left blank]~~

- 2.3.1.32 the quantity of *energy*, in MWh and up to 1 decimal place, that the *selling market participant* is selling to the *buying market participant* in each hour settlement hour at the location designated in the *physical bilateral contract data* pursuant to section 2.2.1.
- 2.3.2 A *selling market participant* submitting physical bilateral contract data in respect of the real-time market shall submit *physical bilateral contract data* in only one of the two formats described in section 2.3.1.1 or section 2.3.1.32 pertaining to a particular location and a particular *buying market participant* for any *settlement hour* or combination of *settlement hours* within a single *trading day*. A selling market participant submitting physical bilateral contract data in respect of the day-ahead market shall submit physical bilateral contract data in only the format described in section 2.3.1.2 pertaining to a particular location and a particular buying market participant for any settlement hour or combination of settlement hours within a single trading day.
- 2.3.3 A *selling market participant* shall only submit a single set of *physical bilateral contract data* pertaining to a particular location and a particular *buying market participant*, for any given *settlement hour* within a single *trading day* in respect of the real-time market and/or the day-ahead market such that the most recent set of *physical bilateral contract data* submitted is the prevailing set used by the *IESO* in the *settlement process*.

2.4 Submitting and Revising Physical Bilateral Contract Data

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~~2.4.10A~~ — [Intentionally left blank]

2.4.11~~1~~ A *selling market participant* submitting initial or revised *physical bilateral contract data* relating to a specified ~~*dispatchtrading*~~ day for *settlement purposes* must do so:

2.4.11~~1~~.1 no earlier than seven days prior to that ~~*dispatchtrading*~~ day, ~~using forms and procedures specified by the IESO;~~ no later than six *business days* after that *trading day*; and

2.4.11~~1~~.2 ~~on the same schedule and~~ using the same *electronic information system* used for the submission of *dispatch data* ~~for that *dispatch day*~~ as described in ~~section MR Ch.7 s.3.2.1 of Chapter 7~~ or, if the *electronic information system* is not available, by such other means as may be specified by the *IESO* pursuant to ~~section MR Ch.7 s.3.2.2.3 of Chapter 7;~~ and,

~~2.4.11.3~~ within six *business days* after that *dispatch day*, using forms and procedures specified by the *IESO*.

2.4.11A2 A *selling market participant* submitting *physical bilateral contract data* that will not change from *trading week* to *trading week*, may, in the same form but in place of its *physical bilateral contract data* described in section 2.3, submit standing *physical bilateral contract data* ~~which~~that conforms to the same data submission requirements specified in section 2.4.11~~1~~.2. Such standing *physical bilateral contract data* shall:

2.4.11A2.1 define the *physical bilateral contract data* for each ~~*dispatch hour*~~ *settlement hour* of each ~~*dispatch-day trading day*~~ and specify whether it is in respect of the *real-time market* and/or the *day-ahead market*;

2.4.11A.2.2 come into effect at the beginning of the second ~~*dispatchtrading*~~ day after such *physical bilateral contract data* is submitted to the *IESO* by the *selling market participant*;

2.4.11A.2.3 remain in effect until the expiration date specified in the standing *physical bilateral contract data* unless earlier withdrawn or earlier revised by the *selling market participant*; and

2.4.11A2.4 for the purposes of *settlement*, shall constitute the only *physical bilateral contract data* between the *selling market participant* and the *buying market participant* specific to the *real-time market* and/or the *day-ahead market* at the particular location specified so long as such standing *physical bilateral contract data* is in effect or until such standing *physical bilateral contract data* is superseded pursuant to section 2.4.11B3.

2.4.11B3 Where a *selling market participant* submits *physical bilateral contract data* pursuant to section 2.4.11A2 or section 2.34.1 pertaining to the same *buying market participant* at the same location and for the same *physical market for energy* specified in *physical bilateral contract data* previously submitted pursuant to section

2.4.~~11A2~~ or section 2.~~34.1~~, such *physical bilateral contract data* shall supersede any previously submitted *physical bilateral contract data* pertaining to the same *buying market participant* at the same location.

2.4.~~124~~ If the *IESO* issues a *notice of intent to suspend* or a *suspension order* to a *selling market participant*, ~~section MR Ch.3 s.6.3.4 of Chapter 3~~ shall apply and the *IESO* shall notify any *buying market participant* who is counterparty to any of *selling market participant's physical bilateral contracts* registered with the *IESO* of the *IESO's* actions.

2.4.~~135~~ If the *IESO* issues a *notice of intent to suspend* or a *suspension order* to a *buying market participant*, ~~section MR Ch.3 s.6.3.4 of Chapter 3~~ shall apply and the *IESO* shall notify any *selling market participant* who is a counterparty to any of the *buying market participant's physical bilateral contracts* registered with the *IESO* of the *IESO's* actions.

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43. The Transmission Rights Market

43.1 Purpose, Interpretation, and Transition

43.1.1 This section 43 sets forth:

43.1.1.1 the manner in which the *IESO* shall operate the *TR market* established for the purchase of *transmission rights* associated solely with transactions between the *IESO control area* and an adjoining *TR zone*;

43.1.1.2 the procedures pursuant to which persons may apply to the *IESO* for authorization to participate in the *TR market*;

43.1.1.3 the terms and conditions under which *transmission rights* may be assigned by *TR holders*;

43.1.1.4 the manner in which the *IESO* will conduct *TR auctions* for the purchase of *transmission rights* associated with injections and withdrawals between specified *TR zones*; and

43.1.1.5 the manner in which the *IESO* will determine *TR market clearing prices*.

43.1.2 A reference in this section 43 and in ~~Appendices~~Appendix 8.1-and 8.2 to a *transmission right* shall, in the case of *long-term transmission rights* assigned by a *TR holder*, be deemed to include a reference to the right to the *settlement amounts*

relating to one or more periods of one month under that *long-term transmission right*.

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43.1.6 The *IESO* may, for reasons of a failure in *TR participant* or *IESO* software, hardware or communication systems associated with a *TR auction*:

43.1.6.1 conduct a *TR auction* using contingency procedures, including but not limited to the contingency procedures defined in the applicable *market manual*;

43.1.6.2 conduct a *TR auction* and related activities along timelines other than those specified within this section 43; or

43.1.6.3 in the event that the *IESO* cannot conduct an effective *TR auction* in a commercially reasonable manner using contingency procedures and/or modified timelines, cancel all or part of a *TR auction*.

43.1.7 The *IESO* shall, as soon as practicable and prior to taking any action pursuant to section 43.1.6, notify all *TR participants* of any *TR auction* cancellation, and/or any contingency procedures, revised timelines and revised activity schedules which the *IESO* intend to implement.

43.1.8 *TR participants* shall comply with any applicable contingency procedures, revised activity schedules or revised timelines specified by the *IESO* under sections 43.1.6 and 43.1.7.

43.2 Denomination and Validity of Transmission Rights and TR Zones

43.2.1 Each *transmission right* shall be associated with a specified injection *TR zone* and a specified withdrawal *TR zone*, one of which shall be the *IESO control area* and the other of which shall be a *TR zone* other than the *IESO control area*.

43.2.2 Each *transmission right* shall be denominated in terms of 1 MW.

43.2.3 The period of validity of a *transmission right* shall be measured from the first hour in respect of which a *settlement amount* is to be paid to the *TR holder* under that *transmission right* to the last hour in respect of which a *settlement amount* is to be paid to the *TR holder* under that *transmission right*.

43.3 TR Holders

- 43.3.1 Subject to section 43.9.1, the *TR participant* that has purchased a *transmission right* in a *TR auction* shall be recognized by the *IESO* as the *TR holder* in respect of that *transmission right* as of the date on which the *IESO* receives payment for that *transmission right* from that *TR participant*.

43.4 Payments to TR Holders Under Transmission Rights

- 43.4.1 Subject to section 43.4.2, the amount owing by the *IESO* in respect of a *transmission right* that is valid for a given ~~hour~~ *settlement hour* shall be calculated for each applicable *TR holder* ~~by multiplying the amount referred to in section 4.4.1.1 with the amount referred to in section 4.4.1.2 in accordance with MR Ch.9 s.3.8.1.~~

~~4.4.1.1 — the greater of (i) zero and (ii) the *TR settlement price* at the withdrawal *TR zone* minus the *TR settlement price* at the injection *TR zone*; and~~

~~4.4.1.2 — the number of *transmission rights* associated with such *TR zones* that are held by that *TR holder*.~~

- 34.4.2 Notwithstanding MR Ch.9 s.3.8.1, where the *transmission transfer capability* between a withdrawal *TR zone* and an injection *TR zone*, determined for the *day-ahead market*, has been reduced to zero by reason of the *outage* of the relevant *interconnection*, the amount owing by the *IESO* in respect of a *transmission right* associated with such *TR zones* that is valid for ~~an hour~~ *settlement hour* during which such *transmission transfer capability* has been reduced to zero shall be zero. ~~calculated for each applicable *TR holder* as follows:~~

~~4.4.2.1 — for the hour in which the reduction in *transmission transfer capability* first occurs, the amount owing shall be calculated in accordance with section 4.4.1; and~~

~~4.4.2.2 — for each subsequent hour during which the reduction in *transmission transfer capability* subsists, including the hour in which the *transmission transfer capability* returns to an amount greater than zero, the amount owing shall be zero.~~

- 43.4.3 [Intentionally left blank]Notwithstanding MR Ch.9 s.3.8.1, where the *IESO* suspends the *day-ahead market* pursuant to MR Ch.7 s.13, the amount owing by the *IESO* in respect of a *transmission right* that is valid for a *settlement hour* during the time when the *day-ahead market* is suspended shall be zero.

43.5 Awarding of Transmission Rights

- ~~4.3.5.1~~ The total of all *transmission rights* awarded in a given round of a *TR auction* shall not exceed the fixed amount of *transmission rights* available for such round of a *TR auction* that is determined in accordance with

section 43.6, 43.7 and 43.11.10, if applicable. The *IESO* shall determine the number of *transmission rights* awarded to each *TR bidder* in a given round of a *TR auction* using the objective function and other processes described in Appendix 8.1. Such number shall be between zero and the number of *transmission rights* that the *TR bidder* bid to purchase in that round.

- 43.5.2 The objective function described in Appendix 8.1 shall have as its mathematical objective the maximization of the benefit, measured in dollars, of the aggregate willingness of *TR bidders* to pay for *transmission rights* that they have been awarded in a given round of a *TR auction*. Such maximization of benefit will be net of any unawarded *transmission rights* as described in Appendix 8.1, if applicable.

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4.5.6 — [Intentionally left blank section deleted]

43.6 Simultaneous Feasibility

- 43.6.1 The *IESO* shall conduct a simultaneous feasibility test, as further described in the applicable market manual, during each *TR auction* to ensure that the day-ahead market external congestion rent-congestion rents collected by the *IESO* as described in section 4.18.1.1 in respect of all intertie metering points and all settlement hours shall, under most circumstances, be sufficient to cover any payment obligations owing by the *IESO* to *TR holders* under section 43.4.1 in respect of all *transmission rights* outstanding and all *transmission rights* to be offered during the *TR auction*.

- 43.6.2 For the purposes of the simultaneous feasibility test referred to in section 43.6.1, the *IESO* shall assume that each *transmission right* represents:

43.6.2.1 one MW of power injected at the injection *TR zone* associated with each *transmission right*; and

43.6.2.2 one MW of power withdrawn at the withdrawal *TR zone* associated with each *transmission right*.

- 43.6.3 The *IESO* shall, in conducting each simultaneous feasibility test referred to in section 43.6.1, use a forecast of available *transmission transfer capability* determined on the basis of the operating assumptions described in section 43.7.3.

- 43.6.4 A set of *transmission rights* shall pass the simultaneous feasibility test referred to in section 43.6.1 if all injections and withdrawals associated with such set of *transmission rights*, and every combination of subsets of such injections and withdrawals, could, if they represented power actually injected or withdrawn as

described in section 43.6.2, be accommodated without causing the amount of power that passes over an *interconnection* between the *IESO control area* and an adjoining *TR zone* to exceed any limit applying to that *interconnection*.

43.7 Determination of Transmission Transfer Capabilities

43.7.1 The *IESO Board* shall establish a confidence level reflecting the degree to which the ~~*day-ahead market external congestion rent*~~*congestion rents* collected by the *IESO* in a given period described in section 43.18.1.1 will be sufficient to cover the *IESO's* payment obligations to *TR holders* under section 43.4.1 for that period.

43.7.2 The *IESO* shall, in accordance with section 43.7.3, establish operating assumptions for the purposes of forecasting the *transmission transfer capability* to be used during each *TR auction*. Such *transmission transfer capability* forecasts shall be used to limit the number of *transmission rights* awarded in each auction for the purpose of achieving the confidence level established under section 43.7.1.

43.7.3 The *IESO* shall establish the operating assumptions referred to in section 43.7.2 in accordance with the following:

43.7.3.1 transmission line ratings shall be calculated on a seasonal basis based on *good utility practice*, shall be the same ratings as those used by the *IESO* in its real-time operations and may differ when the *IESO-controlled grid* is undergoing a *contingency event* relative to the ratings that would apply when the *IESO-controlled grid* is in a *normal operating state*;

43.7.3.2 the *facilities*, *interties* and conditions that are monitored by the *IESO* for *security* reasons in its real-time operations shall be emulated;

43.7.3.3 transmission lines, *facilities* and *interties* within the *IESO control area* shall be assumed to be in service except where a prolonged *planned outage* of a transmission line or *facility* is scheduled for the time during which *transmission rights* that are to be sold at the *TR auction* will be valid or where the *IESO* believes that a prolonged *forced outage* of a transmission line or *facility* is likely to occur for the time during which *transmission rights* that are to be sold at the *TR auction* will be valid;

43.7.3.4 phase angle regulators within the *IESO control area* and on *interconnections* between the *IESO control area* and adjoining *control areas* shall be assumed to be operating in a manner consistent with normal operations, having regard to the joint control of such *interconnections*, during the *TR auction*;

43.7.3.5 the transmission limits of the *IESO-controlled grid* shall be adjusted to reflect an estimate of the transmission reliability margin observed by the *IESO* in its real-time operations;

43.7.3.6 the ability of *control area operators* in *control areas* that are not included in the contract path of an *energy* transaction to curtail that transaction in

accordance with applicable *reliability standards* shall be taken into account when estimating the amount of power that can be *reliably* transferred between the *IESO control area* and each adjoining *control area*;

43.7.3.7 parallel flows that result from events outside the *IESO control area* shall be taken into account when estimating the amount of power that can be *reliably* transferred between the *IESO control area* and each adjoining *control area*;

43.7.3.8 estimates of *transmission transfer capability* may be conservative but shall not be reduced below a level sufficient to define all *transmission rights* that have been awarded in previous *TR auctions* and that remain valid as at the date of the *TR auction*; and

43.7.3.9 the operating assumptions shall otherwise be permitted to vary depending on the length of time between the date of a given *TR auction* and the period of validity of the *transmission rights* to be offered in that *TR auction*.

43.8 Participation in TR Markets and Rules Applicable to TR Participants

43.8.1 No person may participate in the *TR market* nor be a *TR holder* unless that person has been authorized by the *IESO* as a *TR participant* in accordance with ~~section 3 of Chapter MR Ch. 2 and s. 3~~ and this section 43.8.

43.8.2 No *TR participant* may be a *TR bidder* in a round of a *TR auction* unless the *TR participant* has, no less than five *business days* prior to the date on which the round of the *TR auction* is to be conducted, provided to the *IESO* a *TR market deposit*, in one or both of the forms set forth in section 43.8.2A3, for the purpose of establishing that person's *bidding limit* in accordance with sections 43.14.1 or 43.20.24.2.

4.8.32A A *TR market deposit* shall be in one or both of the following forms:

43.8.2A3.1 an irrevocable commercial letter of credit provided by a bank named in a Schedule to the *Bank Act*, (Canada) S.C. 1991, c. 46; or

43.8.2A3.2 a cash deposit made with the *IESO* by or on behalf of the *TR participant*.

43.8.2B4 Where all or part of a *TR market deposit* is in the form of a standby letter of credit, the following provisions shall apply:

43.8.2B4.1 the letter of credit shall provide that it is issued subject to either The Uniform Customs and Practice for Documentary Credits,

~~1993~~2007 Revision, ~~ICEICC~~ Publication No. ~~500~~600 or The International Standby Practices 1998;

~~43.8.2B4.2~~ the *IESO* shall be named as beneficiary in the letter of credit, the letter of credit shall be irrevocable and partial draws on the letter of credit shall not be prohibited;

~~43.8.2B4.3~~ the only condition on the ability of the *IESO* to draw on the letter of credit shall be the delivery of a certificate of an officer of the *IESO* that a specified amount is owing by the *TR bidder* to the *IESO* and that, in accordance with the provisions of the *market rules*, the *IESO* is entitled to payment of that specified amount as of the date of delivery of the certificate;

~~43.8.2B4.4~~ the letter of credit shall either provide for automatic renewal (unless the issuing bank advises the *IESO* at least thirty days prior to the renewal date that the letter of credit will not be renewed) or be for a term of at least one (1) year. Where the *IESO* is advised that a letter of credit is not to be renewed or the term of the letter of credit is to expire, the *TR bidder* shall arrange for and deliver additional *TR market deposits* if the *TR bidder* intends to continue to participate in the *TR market*. If such additional *TR market deposits* are not received by the *IESO* ten (10) *business days* before the expiry of a letter of credit, the *IESO* shall be entitled as of that time to payment of the full face amount of the letter of credit which amount, once drawn by the *IESO*, shall be treated as a *TR market deposit* in the form of cash; and

~~43.8.2B4.5~~ by including a letter of credit as part of a *TR market deposit*, the *TR bidder* represents and warrants to the *IESO* that the issuance of the letter of credit is not prohibited in any other agreement, including without limitation, a negative pledge given by or in respect of the *TR bidder*.

~~4.8.3~~ —[Intentionally left blank]

~~43.8.45~~ Notwithstanding any other provision of these *market rules*, a person that applies for authorization to participate in the *TR market* and that has not applied for authorization to participate, or is not participating in, any other *IESO-administered market* shall not be required to comply with any requirements for authorization other than those set forth in sections ~~43.8.1~~ to ~~43.8.34~~.

~~43.8.56~~ The following provisions of these *market rules* shall not apply to a person that is authorized by the *IESO* to participate only in the *TR market*:

~~4.8.5.1~~ —[Intentionally left blank]

~~43.8.56.21~~ ~~Chapters 4, 5, 6 and 7~~ MR Ch.4, Ch.5, Ch.6 and Ch.7;

~~43.8.56.32 MR Ch.8 Chapter 8~~ other than this section ~~43~~; and

~~43.8.56.43 MR Ch. Chapter 10.~~

~~43~~.9 Assignment of Transmission Rights

~~43~~.9.1 A *TR holder* may assign to another *TR participant* its right to the *settlement amounts* under a *transmission right*, provided that such assignment shall only be recognized by the *IESO*, for *settlement* purposes, in accordance with section ~~43~~.9.5.

~~43~~.9.2 A *TR holder* that wishes the *IESO* to recognize, for *settlement* purposes, an assignment of its right to the *settlement amounts* under a *transmission right* shall apply to the *IESO* for recognition of the assignment in such form as shall be established by the *IESO*. The *IESO* shall verify whether the assignee is a *TR participant* and shall advise the assigning *TR holder* within two *business days* of the date of receipt of the application as to the results of such verification.

~~43~~.9.3 The *IESO* shall for *settlement purposes* recognize, in accordance with section ~~43~~.9.5, an assignment of the right to the *settlement amounts* under a *transmission right* unless the assignee is not a *TR participant*.

~~43~~.9.4 Where the *IESO* determines in accordance with section ~~43~~.9.3 that it shall not recognize, for *settlement* purposes, an assignment of the right to the *settlement amounts* under a *transmission right*, the *IESO* shall advise the assigning *TR holder* of the reasons for such determination.

~~43~~.9.5 Where the *IESO* recognizes, for *settlement* purposes, an assignment of the right to all *settlement amounts* under a *transmission right* in accordance with section ~~43~~.9.3, the assignee shall be deemed to be the *TR holder* in respect of the *settlement amounts* under that *transmission right* with effect from the *billing period* immediately following the date on which the *IESO* advises the assigning *TR holder* of the results of the *IESO's* verification pursuant to section ~~43~~.9.2 until such time as:

~~43~~.9.5.1 [Intentionally left blank – section deleted]

~~43~~.9.5.2 the right to the *settlement amounts* under the *transmission right* has been assigned to another *TR participant* and the *IESO* has recognized such assignment for *settlement* purposes in accordance with sections ~~43~~.9.2, and ~~43~~.9.3 and ~~43~~.9.5.

~~43~~.10 Short-Term Auctions

~~43~~.10.1 The *IESO* shall conduct a *short-term auction* between the 1st and 15th day of each month in which *transmission rights* valid for the following month shall be available.

~~43~~.10.2 Each *short-term auction* shall consist of only one round and shall offer *short-term transmission rights* valid for the immediately following month.

~~4.10.3 — The first *short-term auction* conducted by the *IESO* shall constitute the *short-term auction* for the month immediately following the month during which the *market commencement date* occurred.~~

43.11 Long-Term Auctions

~~43.11.1 The first *long-term transmission rights* shall commence one month following the availability of the first *short-term transmission rights*. Following the initial *long-term auction*, the *IESO* shall thereafter~~ conduct a *long-term auction* at least thirty days but not more than ninety days prior to the beginning of each ~~subsequent~~ quarter.

~~43.11.2 Each *long-term auction* conducted by the *IESO*;~~

~~43.11.2.1 shall offer *transmission rights* that are valid for a period of one year, commencing on the first day of the quarter immediately succeeding the quarter in which the *long-term auction* occurs; and~~

~~43.11.2.2 Any residual *transmission rights* from a *long-term auction* shall, subject to section 43.7, be offered as *short-term transmission rights* in the manner described in section 43.10.~~

~~43.11.3 [Intentionally left blank – section deleted]~~

~~43.11.4 [Intentionally left blank – section deleted]~~

~~43.11.5 Each *long-term auction* referred to in section 43.11.2 and 4.11.3 shall consist of multiple rounds. In each case:~~

~~43.11.5.1 the number of rounds shall be determined by the *IESO* on the basis of the *IESO's* assessment of the appropriate balance between providing *TR participants* with opportunities for price discovery and the administrative burden on the *IESO* and *TR participants* of conducting varying numbers of rounds;~~

~~43.11.5.2 each round shall be conducted independently of all others;~~

~~43.11.5.3 *TR market clearing prices* shall be determined for each round; and~~

~~43.11.5.4 *transmission rights* shall be awarded in each round on the basis of the *TR market clearing prices* determined for that round.~~

~~4.11.6 — [Intentionally left blank]~~

~~4.11.7 — The *IESO* shall, for each of the first three *long-term auctions* that it conducts, apportion the available *transmission transfer capability* forecasted in accordance with the operating assumptions established in respect of each such *long-term auction* pursuant to section 4.7.2, adjusted to account for all outstanding *transmission rights*, among *transmission rights* having a period of validity of one month and *transmission*~~

rights having a period of validity of one year in such manner as the *IESO* determines appropriate.

~~4.11.8~~ — [Intentionally left blank — section deleted]

~~4.11.9~~ — [Intentionally left blank — section deleted]

~~43.11.106~~ For each *long-term auction* that is conducted in multiple rounds in accordance with section ~~43.11.5~~, the *transmission transfer capability* that is used to define the *transmission rights* ~~in accordance with sections 43.11.76 and 4.11.8~~ shall be allocated within each of the rounds as follows:

~~43.11.106.1~~ the portion of *transmission transfer capability* allocated to each round shall increase with each successive round; and

~~43.11.106.2~~ the portion of *transmission transfer capability* allocated to the final round shall be at least three times the portion of *transmission transfer capability* allocated to the first round.

43.12 Pre-auction Publication

~~43.12.1~~ The *IESO* shall *publish*, at least thirty days prior to each *TR auction*:

~~43.12.1.1~~ ~~hourly prices determined on the basis of DAM PEC_h^i , as defined in MR Ch.9 App.9.2, and the last projected day-ahead market locational marginal price for of energy published for that hour pursuant to section 5.5.1 of Chapter 7~~ for each *TR zone* ~~during for each settlement hour of~~ the preceding twelve months or, in the case of a *TR auction* conducted less than twelve months following the *market commencement transition completion date*, since the *market commencement transition completion date*;

~~43.12.1.2~~ the *TR market clearing price* for each *transmission right* sold during any *TR auctions* conducted in the preceding eighteen months or, in the case of a *TR auction* conducted less than eighteen months following the *market commencement transition completion date*, since the *market commencement transition completion date*;

~~43.12.1.3~~ ~~energy actual and scheduled for injection or withdrawal in the day-ahead market hourly flows~~ over each *interconnection* during the preceding twelve months or, in the case of a *TR auction* conducted less than twelve months following the *market commencement transition completion date*, since the *market commencement transition completion date*;

~~43.12.1.4~~ the hourly *transmission transfer capability* ~~used in the DAM calculation engine~~ of each *interconnection* during the preceding twelve months or, in the case of a *TR auction* conducted less than twelve months following the *market commencement date*, since the *market commencement date* or from such earlier period as such information may be available provided

~~that such information need not cover a period in excess of twelve months~~
~~*market transition completion date*, since the *market transition completion*~~
~~*date*~~; and

- 43.12.1.5 identification of any *transmission transfer capability* limits, parallel flow assumptions and other applicable constraints that may limit the number of *transmission rights* that can be awarded in the *TR auction*, and the operating assumptions established in respect of the *TR auction* pursuant to section 43.7.2.

4.12.1.6—[Intentionally left blank]

43.13 TR Bids and TR Laminations

- 43.13.1 A *TR participant* may submit no more than one *TR bid* with respect to a given injection *TR zone* and withdrawal *TR zone* for each round of any *TR auction*. A *TR bid* shall conform to the following requirements:
- 3.13.1.1 The *TR bid* shall indicate the name of the *TR bidder*, the injection *TR zone* and the withdrawal *TR zone* for each *transmission right* that the *TR bidder* is bidding to purchase, and the round of the *TR auction* to which the *TR bid* relates;
 - 43.13.1.2 Each *TR bid* must contain at least 1 and may contain up to 20 *TR laminations* for an injection *TR zone* and withdrawal *TR zone*;
 - 43.13.1.3 the price in each *TR lamination* shall be a positive amount, be expressed in dollars and whole cents per MW, and represent the maximum price that the *TR bidder* is bidding to purchase the quantity of *transmission rights* identified in the *TR lamination*;
 - 43.13.1.4 the quantity in each *TR lamination* shall be a positive amount, not exceed the total amount of *transmission rights* available in the relevant round of the *TR auction*, be expressed in whole numbers, and represent the maximum quantity of *transmission rights* that the *TR bidder* is bidding to purchase at the price identified in the *TR lamination*; and
 - 43.13.1.5 if a *TR bid* is composed of multiple *TR laminations*, such *TR laminations* shall be in monotonically increasing quantities with decreasing prices.
- 43.13.2 [Intentionally left blank – section deleted]
- 43.13.3 [Intentionally left blank – section deleted]
- 43.13.4 [Intentionally left blank – section deleted]

- 43.13.5** *TR bids* shall be submitted to the *IESO* no earlier than 09:00 EST on the date that is two *business days* prior to the date on which a round of a *TR auction* is to be conducted and no later than 17:00 EST on the day before the date on which the round of the *TR auction* is to be conducted.
- 43.13.6** [Intentionally left blank – section deleted].
- 43.13.7** *TR bids* shall be submitted to the *IESO* using the *electronic information system* and the communication protocol described in the applicable *market manual*.
- 43.13.8** The *IESO* shall:
- 43.13.8.1** stamp each *TR bid* with the time that it was received by the *IESO*;
 - 43.13.8.2** confirm receipt of each *TR bid* within the time specified in the applicable *market manual* using the communication protocol referred to in section **43.13.7**; and
 - 43.13.8.3** *publish* and notify *TR participants* of alternative means of submitting and confirming receipt of *TR bids* when the communication protocol referred to in section **43.13.7** is unavailable.
- 43.13.9** The *IESO* shall reject any *TR bid* that does not comply with the rules set forth in this section **43.13** and shall provide the reasons for such rejection to the *TR participant* submitting ~~a rejected~~the *TR bid* ~~of the reasons for such rejection~~.
- 43.13.10** A *TR participant* that does not receive from the *IESO* confirmation of receipt of a *TR bid* in accordance with section **43.13.8.2** shall immediately contact the *IESO* by telephone, ~~facsimile~~ or other means specified in the applicable *market manual* seeking confirmation of receipt.
- 43.13.11** A *TR participant* shall, if requested by the *IESO*, resubmit a *TR bid* by such means as may be specified by the *IESO* in the request.

43.14 Bidding Limits

- 43.14.1** Subject to section **43.20.24.2**, the *IESO* shall establish, for each *TR participant* that intends to be a *TR bidder* in a *TR auction*, a *bidding limit* equal to ten times the amount or value of the *TR market deposit* provided to the *IESO* by that *TR participant* pursuant to section **43.8.2**.
- 43.14.2** The *IESO* shall refuse to accept a *TR bid* from a *TR bidder* where the price multiplied by the quantity of any *TR lamination* within the *TR bid* equals a value which exceeds the *TR bidder's* remaining *bidding limit* after accounting for all other accepted *TR bids* from such *TR bidder* in the relevant *TR auction*.
- 43.14.3** Where a *TR bidder* has been awarded a *transmission right* in a *TR auction* and the *TR market deposit* provided by the *TR bidder* pursuant to section **43.14.1** consists in whole or in part of a cash deposit, the *IESO* shall apply the cash deposit to offset

any amounts owing to the *IESO* by that *TR bidder* under section 43.17.1 for the purchase of the *transmission right*.

43.14.4 Where the amount of a cash deposit provided by a *TR participant* as a *TR market deposit* pursuant to section 43.14.1 exceeds the amount owing to the *IESO* by that *TR participant* under section 43.17.1 for the purchase of *transmission rights* in respect of a given *TR auction*, the *IESO* shall, if so requested by the *TR participant* at the time at which the cash deposit was so provided, include such excess as a credit on the *invoice* submitted to the *TR participant* for that *TR auction*. Where the *TR participant* has not so requested that such a credit be effected, the excess shall be held by the *IESO* and shall form part of that *TR participant's TR market deposit* for purposes of a subsequent *TR auction* in which the *TR participant* wishes to participate.

43.14.5 Where a *TR participant* has provided to the *IESO* a *TR market deposit*, in a form other than a cash deposit, pursuant to section 43.14.1 in respect of a given *TR auction*, the *IESO* shall, upon receipt of payment in full by the *TR participant* of the net amount of any *invoice* submitted to the *TR participant* for that *TR auction* and subject to the terms of the *TR market deposit*:

43.14.5.1 if so requested by the *TR participant* at the time at which the *TR market deposit* was so provided, return the *TR market deposit* to the *TR participant*; or

43.14.5.2 if the *TR participant* did not make the request referred to in section 43.14.5.1, hold the *TR market deposit*, which *TR market deposit* shall form part of that *TR participant's TR market deposit* for purposes of a subsequent *TR auction* in which the *TR participant* wishes to participate.

43.15 TR Market Clearing Prices

43.15.1 The *IESO* shall determine a *TR market clearing price* for each *transmission right* in each round of a *TR auction* in accordance with section 43.15.2, independent of the calculation of the *TR market clearing prices* for *transmission rights* in other rounds of the same *TR auction*.

43.15.2 The *TR market clearing price* for a given *transmission right* in a given round of a *TR auction* shall be equal to the lowest *bid price* of all *TR laminations* that were awarded *transmission rights*, as determined by Appendix 8.1.

~~4.15.2.1—[Interntionally left blank—section deleted];~~

~~4.15.2.2—[Interntionally left blank—section deleted]~~

~~4.15.2.3—[Interntionally left blank—section deleted];~~

43.16 Post-Auction Notification and Publication

43.16.1 The *IESO* shall, as soon as practicable and no later than the end of the next *business day* following the conclusion of a round of a *TR auction*, and in any event prior to the time at which *TR bids* may be submitted in respect of the next round of the *TR auction*, notify each *TR bidder* of the following:

43.16.1.1 the number of *transmission rights* awarded to the *TR bidder* during that round;

43.16.1.2 the *TR market clearing price* of each *transmission right* awarded to the *TR bidder* during that round;

43.16.1.3 the injection *TR zone* and the withdrawal *TR zone* in respect of each *transmission right* awarded to the *TR bidder* during that round; and

43.16.1.4 the period for which each *transmission right* awarded to the *TR bidder* during that round is valid.

43.16.2 [Intentionally left blank – section deleted]

43.16.3 The *IESO* shall, as soon as practicable and no later than the end of the next *business day* following the conclusion of a round of a *TR auction*, and in any event prior to the time at which *TR bids* may be submitted in respect of the next round of the *TR auction*, publish the following:

43.16.3.1 the *TR market clearing price* for each *transmission right* sold during that round;

43.16.3.2 the number of *transmission rights* sold during that round;

43.16.3.3 the injection *TR zone* and withdrawal *TR zone* for each *transmission right* sold during that round; and

43.16.3.4 the period of validity of each *transmission right* sold during that round.

43.17 Payment for Purchase of Transmission Rights

43.17.1 The amount payable to the *IESO* by a successful *TR bidder* in respect of *transmission rights* awarded to that successful *TR bidder* in a given round of a *TR auction* shall be the aggregate of the *TR market clearing price* of each *transmission right* awarded to that successful *TR bidder* in that round.

~~4.17.2 [Intentionally left blank – section deleted];~~

43.18 TR Clearing Account

43.18.1 The *IESO* shall establish and maintain a *TR clearing account* and shall:

- 43.18.1.1 credit to the *TR clearing account*, in respect of each *settlement hour*, the ~~net congestion rents amount~~ calculated in accordance with ~~section 3.6.2 of Chapter MR Ch.9 s.3.8.2~~;
- 43.18.1.1A2 credit to the *TR clearing account* the amounts referred to in sections 43.20.1A2 and 43.20.1B3;
- 43.18.1.23 subject to section 43.19.5, credit to the *TR clearing account* the net revenues received from the sale of *transmission rights* in a *TR auction* in accordance with section 43.19.4;
- 43.18.1.34 debit from the *TR clearing account* any amounts required to be paid to *TR holders* pursuant to section 4.4.13.19.2; and
- ~~4.18.1.4 debit from the *TR clearing account* any amounts required to be paid to successful *TR offerors* pursuant to section 4.19.6;~~
- 43.18.1.5 debit from the *TR clearing account* any amounts authorized to be debited and used to offset *transmission services charges* in accordance with section 43.18.2; ~~and~~
- ~~4.18.1.6 credit to the *TR clearing account* any *transmission rights settlement credits* adjusted under section 6.6.10A.2 of Chapter 3.~~
- 43.18.2 Subject to section 43.18.3, the *IESO Board* may, at such times as it determines appropriate, authorize the debit of funds from the *TR clearing account* in accordance with ~~section MR Ch.9 s.3.68.3 of Chapter 9~~ for the purpose of using those funds to offset *transmission services charges*.

43.18.3 The *IESO Board* shall establish a reserve threshold for the *TR clearing account*.

43.19 Settlement

- 43.19.1 All amounts payable to *TR holders* under *transmission rights* in accordance with section 43.4.1 shall be *settled* by the *IESO* in accordance with ~~section MR Ch.9 s.6 of Chapter 9~~.
- 43.19.2 Payments required to be made by the *IESO* to *TR holders* in accordance with section 4.4.1 shall be funded by means of ~~the disbursement of the *day-ahead market external congestion rent* and where the *day-ahead market external congestion rent* for a given *billing period* is insufficient to cover such payments to *TR holders*, by~~ debits from the *TR clearing account*. Where the aggregate amount payable to *TR holders* in a given *billing period* under section 43.4.1 exceeds all funds available in the *TR clearing account*, the shortfall shall be funded by the borrowing of short-term funds in accordance with ~~section MR Ch.9 s.6.16.5 of Chapter 9.~~
- 43.19.3 Where the aggregate amount payable to *TR holders* in a given *billing period* under section 43.4.1 is less than the *day-ahead market external congestion rents rent* collected during that *billing period* ~~as described in section 4.18.1.1~~, the excess shall

be used first, to repay any short-term funds borrowed by the *IESO* on account of a shortfall referred to in sections 43.19.2 and 43.19.67, second, subject to section 43.19.5A6, to reimburse *market participants* for funds recovered by the *IESO* under Chapter MR Ch. 9, section s. 6.16.6.2, on a prorated basis according to, and in an amount that does not exceed, the amount so recovered, third, to replenish the reserve threshold specified in section 43.18.3, and the balance shall remain in the *TR clearing account*.

43.19.4 All amounts payable to the *IESO* on account of the purchase of *transmission rights* in accordance with section 43.17.1 in respect of all rounds of a given *TR auction* shall be settled by the *IESO* in accordance with section MR Ch. 9 s. 6 of Chapter 9.

43.19.5 In respect of a given *TR auction*, the aggregate amount received by the *IESO* in respect of the purchase of *transmission rights* shall be used first to repay any short-term funds borrowed by the *IESO* on account of a shortfall referred to in sections 43.19.2, second, subject to section 43.19.5A6, to reimburse *market participants* for funds recovered by the *IESO* under Chapter MR Ch. 9, section s. 6.16.6.2, on a prorated basis according to, and in an amount that does not exceed, the amount so recovered, third, to replenish the reserve threshold specified in section 43.18.3, and the balance shall remain in the *TR clearing account*.

43.19.5A6 In the event that the *IESO* cannot, after taking all reasonable steps to do so, locate *market participants* from which funds were recovered by the *IESO* under Chapter MR Ch. 9, section s. 6.14.516.6.2, any amount that would otherwise be distributed to such *market participants* under sections 43.19.3 and 43.19.5 shall remain in the *TR clearing account*.

4.19.6 — [Intentionally left blank — section deleted]

43.20 Default in Payment

43.20.1 Where a successful *TR bidder* fails to remit to the *IESO* any payment due on account of a *transmission right* awarded to that *TR bidder* during a *TR auction* on the applicable *market participant payment date*:

43.20.1.1 the *transmission right* shall not be issued to the *TR bidder*; and

43.20.1.2 the *TR bidder* shall forfeit:

- a. its *TR market deposit*; or
- b. that portion of its *TR market deposit* that is equal to 10% of the value of all *transmission rights* awarded to the *TR bidder* during the applicable *TR auction*,

whichever is the lesser.

43.20.1A2 Where section 43.20.1.2 applies and the *TR market deposit* is in the form of a cash deposit, the *IESO* may draw upon the cash deposit and credit the *TR clearing account* with the amount of the penalty or may invoice the *market participant* for the

amount of the penalty, as the case may be, and may remit to the *TR bidder* the difference, if any, between such amount and the amount of the *TR market deposit*.

43.20.1B3 Where section 43.20.1.2 applies and the *TR market deposit* is in the form of an irrevocable letter of credit, the *IESO* may claim and realize upon the letter of credit in respect of the amount referred to in section 43.20.1.2(a) or 43.20.1.2(b), as the case may be, and shall credit to the *TR clearing account* the proceeds of such realization.

43.20.24 Where a successful *TR bidder* has defaulted in payment of any amount due on account of a *transmission right* awarded to that *TR bidder* during a given *TR auction*, the *IESO* may impose one or both of the following conditions on the participation by that *TR bidder* in a subsequent *TR auction*:

43.20.24.1 require the *TR bidder* to provide a *TR market deposit* in the form of a cash deposit only; or

43.20.24.2 establish the *TR bidder's bidding limit* for that *TR auction* as an amount that is less than ten times the amount or value of the *TR market deposit* provided by that *TR bidder* in respect of that *TR auction*.

Chapter 8

Physical Bilateral Contracts and Financial Markets - Appendices

Appendix 8.1 – Mathematical Formulation of the TR Objective Function

- 1.1 This Appendix describes the objective function and additional processes used to determine the number of *transmission rights* to be awarded to each *TR bidder*, as described ~~in MR Ch.8 s.43.5.1 of Chapter 8,~~ and the *TR market clearing price* in a given round of a *TR auction*.
- 1.2 The objective function, outlined in section 1.3, describes the maximization of the benefit of awarded *TR laminations* net of any unawarded *transmission rights* as determined in accordance with section 1.4(e), if applicable. *Transmission rights* are awarded in quantities to *TR bidders* ranging from zero up to the maximum quantity of their *TR lamination*. The total amount of *transmission rights* awarded to all *TR bidders* in a round of a *TR auction* will not exceed the total number of *transmission rights* available in such round of the *TR auction*. *Transmission rights* will be awarded optimally from highest price to lowest price of the *TR laminations* received for the relevant round of the *TR auction* unless and until such time as there are multiple *TR laminations* that share the same price and cannot all be fully awarded based on the available *transmission rights*, which shall be resolved in accordance with section 1.4. If there are insufficient *transmission rights* available to award the entire quantity of a *TR lamination* and section 1.4 does not apply, such *TR bidder* shall be awarded the remainder of the *transmission rights* available.
- 1.3 The objective for each injection *TR zone* and withdrawal *TR zone* for each round of a given *TR auction* is to maximize the following function:

$$Z = \sum_i p_i * q_i$$

where:

- (a) 'Z' is the benefit as described in ~~section 4.5.2 of Chapter 8~~ MR Ch.8 s.3.5.2 for the relevant round of the *TR auction*;
- (b) 'i' is an index into the set of all *TR laminations* received for the relevant round of the *TR auction*;
- (c) 'p_i' is the price of *TR lamination* 'i', submitted in accordance with ~~section 4.13.1.3 of Chapter 8~~ MR Ch.8 s.3.13.1.3;
- (d) 'q_i' is the quantity of awarded *transmission rights* associated with *TR lamination* 'i', submitted in accordance with ~~section 4.13.1.4. of Chapter 8~~ MR Ch.8 s.3.13.1.4, where the quantity of awarded *transmission rights* is determined as follows, as applicable:

- (i) the sum of all q_i is less than or equal to the fixed amount of *transmission rights* available for such round of a *TR auction* that is determined in accordance with ~~sections 4.6, 4.7 and 4.11.10 of Chapter 8 MR Ch.8 ss.3.6, 3.7, and 3.11.10~~, if applicable;
- (ii) where *TR lamination 'i'* is the highest price *TR lamination* for such *TR bidder* and has an associated price is equal to or greater than the *TR market clearing price* for such round of the *TR auction*, the entire quantity of the *TR lamination* or a portion thereof as determined in accordance with section 1.4, or, where section 1.4 does not apply, the portion that will result in all available *transmission rights* being awarded;
- (iii) for *TR laminations 'i'* with a price that is equal to or greater than the *TR market clearing price* for such round of the *TR auction*, other than the one referred to in (ii) for the same *TR bidder*, the quantity that is incremental to the *TR bidder's* previous *TR lamination*, as ranked from highest to lowest price, or a portion thereof as determined in accordance with section 1.4, or, where section 1.4 does not apply, the portion that will result in all available *transmission rights* being awarded; and
- (iv) for *TR laminations 'i'* with a price that is less than the *TR market clearing price* for such round of the *TR auction*, such quantity shall be zero.

1.4 Where multiple *TR laminations* share the same price and cannot all be fully awarded based on the available *transmission rights*, the awarding of remaining available *transmission rights* will be determined in accordance with the following:

- (a) First, the *IESO* will award to each tied *TR bidder* their proportional share of the remaining *transmission rights* available, rounded down to nearest whole number. Each *TR bidders* proportional share will be determined based on the quantity of their tied *TR lamination* relative to the amount of all tied *TR laminations*, where the quantity of a tied *TR lamination* that is not the *TR bidders* highest priced *TR lamination* will be the quantity that is incremental to the *TR bidder's* previous *TR lamination*, as ranked from highest to lowest price;
- (b) second, if there continues to be a remainder of *transmission rights* within the relevant round of the *TR auction*, such remainder shall be awarded in accordance with the following:
 - (i) The *IESO* will rank all such *TR bidders* from the highest to lowest based on the difference between the proportional quantity determined in section 1.4(a) prior to being rounded down and the proportional quantity determined in section 1.4(a) that was awarded to such *TR bidder*, and

- (ii) The *IESO* will award one *transmission right* to each such *TR bidder* in sequence from highest to lowest ranking until either there are no more remaining *transmission rights* to be awarded or one or more such *TR bidders* is tied in their ranking and there are insufficient remaining *transmission rights* to award to them all;
- (c) third, where there are still remaining *transmission rights* following the completion of section 1.4(b), such remainder shall be awarded in accordance with the following:
 - (i) The *IESO* will rank the *TR bidders* whom tied, as contemplated under section 1.4(b)(ii), from highest to lowest based on the quantity of *transmission rights* in their *TR lamination* that is incremental to the *TR bidder's* previous *TR lamination*, as ranked from highest to lowest price, if applicable; and
 - (ii) The *IESO* will award one *transmission right* to each such *TR bidder* in sequence from highest to lowest ranking until either there are no more remaining *transmission rights* to be awarded or one or more such *TR bidders* is tied in their ranking and there are insufficient remaining *transmission rights* to award to them all;
- (d) fourth, where there are still remaining *transmission rights* following the completion of section 1.4(c), such remainder shall be awarded in accordance with the following:
 - (i) The *IESO* will rank the *TR bidders* whom tied, as contemplated under section 1.4(c)(ii), from earliest to latest based on the timestamps of the date and time, to the second, reflecting the time when the *TR bidder* submits the relevant *TR laminations*, and
 - (ii) The *IESO* will award one *transmission right* to each such *TR bidder* in sequence from earliest to latest ranking until either there are no more remaining *transmission rights* to be awarded or one or more such *TR bidders* is tied in their ranking and there are insufficient remaining *transmission rights* to award to them all;
- (e) finally, where the remainder of *transmission rights* within the relevant round of the *TR auction* are unable to be awarded in accordance with section 1.4(d), such remainder shall not be awarded to any *TR bidder*.

Appendix 8.2

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