

# Market Rules

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## Chapter 8

# Physical Bilateral Contracts and Financial Markets

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# 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 by market participants and the use of such physical bilateral contract data by the *IESO*;
- 1.1.1.2 the operation of and participation in the *energy forward market*; and
- 1.1.1.3 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*, buying or selling in the day-ahead *energy forward market*, or holding, buying or selling *transmission rights* or *TRs*.

## 2. Physical Bilateral Contract Data and Quantities

### 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 Any *selling market participant* selling under a *physical bilateral contract* to a *buying market participant* may submit *physical bilateral contract data* to the *IESO* complying with the requirements of this section 2, and the *IESO* shall:
- 2.1.2.1 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 hour at the location designated in the *physical bilateral contract data*;
  - 2.1.2.2 determine, 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 2.1.2.1 for each applicable *metering interval* or *settlement hour*, as the case may be, based:
    - a. in the case of the *buying market participant*, on the *hourly Ontario energy price*, when the location specified pursuant to section 2.2.1 relates to a *non-dispatchable load*, a *self-scheduling generation 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 *transitional scheduling generator* or an *intermittent generator*;
    - c. in the case of each of the *buying market participant* and the *selling market participant*, on the 5-minute *energy market price*, when the location specified pursuant to section 2.2.1 relates to a *generator* other than one referred to in section 2.1.2.2(a) or a *dispatchable load facility*; or
    - d. in the case of each of the *buying market participant* and the *selling market participant*, on the 5-minute *energy market price*, at the *intertie metering point* specified pursuant to section 2.2.1, when such location 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 for the applicable *metering interval* or *settlement hour*, as the case may be, pursuant to section 3.3 of Chapter 9; and

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2.1.2.4 [Intentionally left blank]

2.1.2.5 [Intentionally left blank]

2.1.2.6 in the *settlement process* for each hour, allocate some or all of the various 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*.

2.1.3 The *IESO* shall not, in any of its system operation, *physical market* operation or market *settlement processes*, accept, acknowledge, record or use any 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 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 specified hours and at any location, so long as it is either:

2.2.1.1 a specified *delivery point* associated with an *RWM*; or

2.2.1.2 a specified *intertie metering point*.

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 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 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, is 100% of the applicable *market participant's metering data*, adjusted and summed in accordance with section 2.4.3 of Chapter 9 and determined without regard to any *physical allocation 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 2.2.1.1; and
- b. either the *selling market participant* or the *buying market participant* is the *metered market participant* in respect of the *RWM* or *RWMs* associated with such location; or

2.3.1.2 [Intentionally left blank]

2.3.1.3 the quantity of *energy*, in MWh, that the *selling market participant* is selling to the *buying market participant* in each hour at the location designated in the *physical bilateral contract data* pursuant to section 2.2.1.

2.3.2 A *selling market participant* shall submit *physical bilateral contract data* in only one of the two formats described in section 2.3.1.1 or section 2.3.1.3 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* 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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- 2.4.9 [Intentionally left blank]
- 2.4.10 [Intentionally left blank]
- 2.4.10A [Intentionally left blank]
- 2.4.11 *A selling market participant submitting initial or revised physical bilateral contract data relating to a specified dispatch day for settlement purposes must do so:*
  - 2.4.11.1 no earlier than seven days prior to that *dispatch day*, using forms and procedures specified by the *IESO*;
  - 2.4.11.2 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 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 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*.
- 2.4.11A *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 conforms to the same data submission requirements specified in section 2.4.11. Such standing *physical bilateral contract data* shall:

- 2.4.11A.1 define the *physical bilateral contract data* for each *dispatch hour* of each *dispatch day*;
- 2.4.11A.2 come into effect at the beginning of the second *dispatch day* after such *physical bilateral contract data* is submitted to the *IESO* by the *selling market participant*;
- 2.4.11A.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
- 2.4.11A.4 for the purposes of *settlement*, shall constitute the only *physical bilateral contract* between the *selling market participant* and the *buying market participant* 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 2.4.11B.

2.4.11B Where a *selling market participant* submits *physical bilateral contract data* pursuant to section 2.4.11A or section 2.3 pertaining to the same *buying market participant* at the same location specified in *physical bilateral contract data* previously submitted pursuant to section 2.4.11A or section 2.3, 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.

2.4.12 If the *IESO* issues a *notice of intent to suspend* or a *suspension order* to a *selling market participant*, section 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.

2.4.13 If the *IESO* issues a *notice of intent to suspend* or a *suspension order* to a *buying market participant*, section 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.



## 3. The Energy Forward Market

### 3.1 Interpretation and Participation in the Energy Forward Market

- 3.1.1 Any *market participant*, provided that it is authorized to participate in the *energy forward market* pursuant to section 3 or 4 of Chapter 2 may, but is not required to, participate in the day-ahead *energy forward market*. *Market participants* choosing to participate in the day-ahead *energy forward market* shall comply with the provisions of this section 3.
- 3.1.2 The *energy forward market* is a financial, non-delivery *IESO-administered market*, settled on an hourly basis, in which a *market participant* may commit to pay or receive a *settlement amount*, determined in accordance with section 3.2.1 of Chapter 9, based on the difference between the *energy forward market price* and the *hourly Ontario energy price*. While *EFM offers* and *EFM bids* are expressed in terms of quantities of, and prices relating to, *energy*, no person that participates in the *energy forward market* shall provide or obtain *energy* or any other commodity, or have a right to obtain or an obligation to provide, *energy* or any other commodity, as a result of such participation.

### 3.2 Submission of EFM Offers and EFM Bids

- 3.2.1 *Market participants* shall submit all *EFM offers* and *EFM bids* in the day-ahead *energy forward market* to the *IESO* through the same *electronic information system* used for the submission of *dispatch data* for that *dispatch day* as described in section 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 3.2.2.3 of Chapter 7.
- 3.2.2 The *IESO* shall confirm receipt and validation of *EFM bids* and *EFM offers* through the *electronic information system* or other means referred to in section 3.2.1 within 5 minutes of receipt. If an *EFM bid* or *EFM offer* does not comply with the provisions of this section 3, the *IESO* shall reject it and provide to the relevant *market participant* the reason for such rejection. If the *IESO* fails to provide confirmation of or rejects an *EFM bid* or *EFM offer* without good cause, the matter may be resolved using the dispute resolution process set forth in section 2 of Chapter 3.



- 3.2.3 A *market participant* shall, if it does not receive timely confirmation that the *IESO* has received the *market participant's EFM bid* or *EFM offer*, telephone the *IESO* to establish confirmation and, if necessary, resubmit the *EFM bid* or *EFM offer* to the *IESO* by whatever means may be specified by the *IESO*.
- 3.2.4 The *IESO* shall time-stamp each *EFM offer* and *EFM bid* received, indicating the time it was received.
- 3.2.5 A *market participant* shall submit to the *IESO* its *EFM offers* and its *EFM bids* in the *energy forward market* in respect of each *real-time market dispatch hour* of the *real-time market dispatch day* at any time between 08:00 EST and 09:00 EST of the *real-time market pre-dispatch day*.
- 3.2.6 If the *IESO* rejects an *EFM bid* or *EFM offer* as invalid, the *market participant* may not resubmit that *EFM bid* or *EFM offer* after 09:00 EST of the *pre-dispatch day*.
- 3.2.7 The *IESO* shall not grant exceptions from the deadline described in section 3.2.6 to *market participants* that claim that the *IESO* wrongly rejected valid *EFM offers* or *EFM bids*. Such claims may, however, be adjudicated using the dispute resolution process set forth in section 2 of Chapter 3.
- 3.2.8 A *market participant* may revise or cancel an *EFM bid* or *EFM offer* in the *energy forward market* for a given *real-time market dispatch day* up to 09:00 EST of the *real-time market pre-dispatch day*.
- 3.2.9 A *market participant* may submit a standing *EFM bid* or standing *EFM offer* for the day-ahead *energy forward market* for each hour in a week and may specify a time at which the standing *EFM bid* or standing *EFM offer* expires. Once the standing *EFM bid* or standing *EFM offer* has been accepted by the *IESO*, the standing *EFM bid* or standing *EFM offer* shall take effect on the *real-time market dispatch day* following the date of acceptance provided that the standing *EFM bid* or standing *EFM offer* was submitted between 08:00 EST and 09:00 EST on the day preceding such *real-time market dispatch day*. Otherwise, the standing *EFM bid* or standing *EFM offer* shall take effect on the following *real-time market dispatch day*.
- 3.2.10 Once accepted by the *IESO*, a standing *EFM bid* or standing *EFM offer* shall, as of the time it comes into effect pursuant to section 3.2.9, supersede any previous *EFM bid*, *EFM offer*, standing *EFM bid* or standing *EFM offer*.
- 3.2.11 The *IESO* shall treat valid standing *EFM bids* and standing *EFM offers* for a given day of the week as that *market participant's EFM bid* and *EFM offer* for that day of the week until the *market participant* submits another valid *EFM bid* or *EFM offer*.



*offer*, or the *market participant* informs the *IESO* that it is suspending its standing *EFM bid* or standing *EFM offer*, or the standing *EFM bid* or standing *EFM offer* expires according to its own terms.

- 3.2.12 If the *IESO's electronic information system* for submitting *EFM bids* and *EFM offers* fails, then:
- 3.2.12.1 if other means of communication are adequate for the *IESO* to receive and acknowledge receipt of all *EFM offers* and *EFM bids* by 09:00 EST, the day-ahead *energy forward market* shall proceed on schedule; or
  - 3.2.12.2 in all other cases, the *IESO* may extend by up to two hours the time allowed for submitting valid *EFM offers* and *EFM bids* and for completing all subsequent day-ahead *energy forward market* procedures.
- 3.2.13 If the *energy forward market* market-clearing software fails, the *IESO* may extend by up to two hours the time allowed for determining the *energy forward market* market-clearing prices and quantities and for completing all subsequent day-ahead *energy forward market* procedures.
- 3.2.14 If it is not possible to *publish* day-ahead *energy forward market* results by 11:00 EST, then the *IESO* shall cancel the day-ahead *energy forward market* for the day. The *IESO* shall inform all *market participants* of any such cancellation as soon as possible.

### **3.3 Structure and Content of EFM Bids and EFM Offers**

- 3.3.1 No *market participant* shall submit more than one *EFM offer* and one *EFM bid* for any hour of the day-ahead *energy forward market*. In the event that a *market participant* submits more than one otherwise valid *EFM offer* or *EFM bid* to the *IESO*, the *IESO* shall use the latest *EFM bid* or latest *EFM offer* submitted.
- 3.3.2 An *EFM bid* or an *EFM offer* shall consist of a number of prices, each with an associated quantity. A price and the associated quantity is a *price-quantity pair* and shall comply with section 3.3.3 and the following:
- 3.3.2.1 the quantity in any *price-quantity pair* shall be cumulative, meaning that it represents the maximum quantity the participant wishes to have cleared in the *energy forward market* at the price in the *price-quantity pair*;



- 3.3.2.2 the price in any *price-quantity pair* shall be expressed in dollars and whole cents per MWh and may have any value less than the *maximum market clearing price* or *MMCP* but greater than negative *MMCP*; and
- 3.3.2.3 the quantity in any *price-quantity pair* shall be expressed in MW to not more than one decimal place and must not be less than 0.0 MW.
- 3.3.3 A *EFM bid* or an *EFM offer* may contain up to 20 *price-quantity pairs* for each hour and:
  - 3.3.3.1 the *price-quantity pairs* in an *EFM offer* must define an increasing supply curve, such that each successive quantity in a *price-quantity pair* must be associated with a non-decreasing price; and
  - 3.3.3.2 the *price-quantity pairs* in a *EFM bid* must indicate a declining demand curve, such that each successive quantity in a *price-quantity pair* must be associated with a non-increasing price.
- 3.3.4 *Market participants* shall submit their *EFM bids* and *EFM offers* using standard forms specified by the *IESO*.

## 3.4 The Energy Forward Market Auction

- 3.4.1 The *IESO* shall conduct an *energy forward market auction* for each *real-time market dispatch day* at 09:15 EST on the *real-time market pre-dispatch day* (or later as permitted by sections 3.2.12 or 3.2.13). To conduct this auction, the *IESO* shall, for each *real-time market dispatch hour* of the *real-time market dispatch day*:
  - 3.4.1.1 form the aggregate forward market demand curve defining the aggregate quantity contained in valid *EFM bids* submitted by *market participants* at each valid *EFM bid* price between negative *MMCP* and *MMCP*;
  - 3.4.1.2 form the aggregate forward market supply curve defining the aggregate quantity contained in valid *EFM offers* submitted by *market participants* at each valid *EFM offer* price between negative *MMCP* and *MMCP*; and
  - 3.4.1.3 define the *energy forward market price* and the *energy forward market quantity* by the point at which the aggregate *energy forward market supply curve* crosses the aggregate *energy forward market demand curve* in accordance with section 3.4.2.



- 3.4.2 If the intersection of the aggregate *energy forward market* supply curve and aggregate *energy forward market* demand curve defines:
- 3.4.2.1 a unique price and a unique quantity, then these are the *energy forward market* price and *energy forward market* quantity cleared;
  - 3.4.2.2 a unique price but a non-unique quantity, then the unique price is the *energy forward market* price and the *energy forward market* quantity cleared shall be the maximum quantity consistent with the *energy forward market* price; or
  - 3.4.2.3 a non-unique price but a unique quantity, then the *energy forward market* quantity cleared is that unique quantity and the *energy forward market* price is the minimum price consistent with the *energy forward market* quantity cleared.
- 3.4.3 To determine the *energy forward market* quantities cleared for each *market participant*:
- 3.4.3.1 all *EFM offer* quantities with prices less than the *energy forward market* price will be deemed to have cleared in the day-ahead *energy forward market*;
  - 3.4.3.2 all *EFM offer* quantities with prices equal to the *energy forward market* price will be cleared on a pro-rata basis such that the total of the *EFM offer* quantities cleared equals the aggregated *energy forward market* quantity;
  - 3.4.3.3 all *EFM bid* quantities with prices greater than the *energy forward market* price will be deemed to have cleared in the day-ahead *energy forward market*; and
  - 3.4.3.4 all *EFM bid* quantities with prices equal to the *energy forward market* price will be cleared on a pro-rata basis such that the total of the *EFM bid* quantities cleared equals the aggregated *energy forward market* quantity.

## 3.5 Settlement of the Energy Forward Market

- 3.5.1 The *IESO* shall, in accordance with the provisions of Chapter 9, establish *settlement amounts* for each *market participant* that has cleared quantities in the day-ahead *energy forward market* as determined pursuant to section 3.4.



## 3.6 Publication of Energy Forward Market Auction Results

- 3.6.1 The *IESO* shall publish the results of the day-ahead energy forward market by 09:30 EST on the day of the auction, or as soon thereafter as any delay in the *energy forward market* allows.
- 3.6.2 The *IESO* shall make public the *energy forward market* price and aggregate *energy forward market* quantities cleared in the *energy forward market*.
- 3.6.3 The *IESO* shall inform each *market participant* of the *energy forward market* prices and its own cleared *energy forward market* quantities.

# 4. The Transmission Rights Market

## 4.1 Purpose, Interpretation, and Transition

- 4.1.1 This section 4 sets forth:
- 4.1.1.1 the manner in which the *IESO* shall operate the *TR market* established for the purchase and sale of *transmission rights* associated solely with transactions between the *IESO control area* and an adjoining *TR zone*;
  - 4.1.1.2 the procedures pursuant to which persons may apply to the *IESO* for authorization to participate in the *TR market*;
  - 4.1.1.3 the terms and conditions under which *transmission rights* may be assigned by *TR holders*;
  - 4.1.1.4 the manner in which the *IESO* will conduct *TR auctions* for the purchase and sale of *transmission rights* associated with injections and withdrawals between specified *TR zones*; and
  - 4.1.1.5 the manner in which the *IESO* will determine *TR market clearing prices*.
- 4.1.2 A reference in this section 4 and in Appendices 8.1 and 8.2 to a *transmission right* shall, in the case of *long-term transmission rights* offered, sold or 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*.



- 4.1.3 If the *IESO* cannot, by reason of software inadequacies, administer the verification process for the assignment of the right to *settlement amounts* under a *transmission right* referred to in section 4.9.2, the *IESO* shall *publish* a notice to that effect no later than thirty days prior to the date of the first *TR auction* that it will conduct pursuant to this section 4. Until such time as the *IESO publishes* a notice to the effect that the software inadequacies have been rectified, sections 4.9.2 to 4.9.5 shall not apply and the *IESO* shall *settle* all amounts relating to the *transmission right* with the *TR participant* that purchased the *transmission right* in a *TR auction*.
- 4.1.4 If the *IESO* cannot, by reason of software inadequacies, administer the sale in a *TR auction of transmission rights* by *TR holders*, the *IESO* shall *publish* a notice to that effect no less than thirty days prior to the date of the first *TR auction* conducted by the *IESO* pursuant to this section 4. In such a case, no *TR holder* shall, notwithstanding any other provision of this section 4, be permitted by the *IESO* to sell a *transmission right* in a *TR auction* until the time referred to in section 4.1.5.
- 4.1.5 Where the software inadequacies referred to in section 4.1.4 have been rectified, the *IESO* shall *publish* a notice to that effect no less than thirty days prior to the date on which the first *TR auction* at which a *TR holder* will be permitted to sell a *transmission right* will be conducted by the *IESO*.
- 4.1.6 The *IESO* may, for reasons of a failure in *TR participant* or *IESO* software, hardware or communication systems associated with a *TR auction*:
- 4.1.6.1 conduct a *TR auction* using contingency procedures, including but not limited to the contingency procedures defined in the applicable *market manual*;
  - 4.1.6.2 conduct a *TR auction* and related activities along timelines other than those specified within this section 4; or
  - 4.1.6.3 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*.
- 4.1.7 The *IESO* shall, as soon as practicable and prior to taking any action pursuant to section 4.1.6, 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.



- 4.1.8 *TR participants* shall comply with any applicable contingency procedures, revised activity schedules or revised timelines specified by the *IESO* under sections 4.1.6 and 4.1.7.

## 4.2 Denomination and Validity of Transmission Rights and TR Zones

- 4.2.1 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*.
- 4.2.2 Each *transmission right* shall be denominated in terms of 1 MW.
- 4.2.3 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*.

## 4.3 TR Holders

- 4.3.1 Subject to section 4.9.1, 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*.

## 4.4 Payments to TR Holders Under Transmission Rights

- 4.4.1 Subject to section 4.4.2, the amount owing by the *IESO* in respect of a *transmission right* that is valid for a given 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:
- 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*.
- 4.4.2 Where the *transmission transfer capability* between a withdrawal *TR zone* and an injection *TR zone* 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 during which such *transmission transfer capability* has been reduced to zero shall be 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.

4.4.3 [Intentionally left blank]

## 4.5 Allocation of Transmission Rights

- 4.5.1 The *IESO* shall determine the number of *transmission rights* awarded to each *TR bidder* and sold by each *TR offeror* in a given round of a *TR auction* using the objective function described in Appendix 8.1. Such number shall be between zero and the number of *transmission rights* that the *TR bidder* bid to purchase or the *TR offeror* offered to sell in that round.
- 4.5.2 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 successful *TR bidders* to pay for *transmission rights* that they have been awarded in a given round of a *TR auction*, net of the amounts that successful *TR offerors* were willing to accept for those *transmission rights*.
- 4.5.3 Where:
  - 4.5.3.1 two or more *TR bidders* submitted *TR bids* with the same maximum price for *transmission rights* relating to the same injection *TR zone* and withdrawal *TR zone*; and
  - 4.5.3.2 not all of the *transmission rights* bid to be purchased in those *TR bids* can be awarded,

the number of *transmission rights* awarded to each such *TR bidder* shall be determined by allocating a share of the maximum available number of *transmission rights* to each such *TR bidder* in proportion to the number of *transmission rights* that each such *TR bidder* bid to purchase in such *TR bid*.



## 4.5.4 Where:

- 4.5.4.1 two or more *TR offerors* submitted *TR offers* with the same minimum price for *transmission rights* relating to the same injection *TR zone* and withdrawal *TR zone*; and
- 4.5.4.2 not all of the *transmission rights* offered to be sold in those *TR offers* can be sold,

the number of *transmission rights* sold by each such *TR offeror* shall be determined by allocating a share of the maximum number of *transmission rights* that can be sold to each such *TR offeror* in proportion to the number of *transmission rights* that each such *TR offeror* offered to sell in such *TR offer*.

## 4.5.5 Where:

- 4.5.5.1 two or more *TR bidders* submitted *TR bids* relating to different injection *TR zones* and withdrawal *TR zones* such that the *TR bids* may be optimally awarded in more than one way;
- 4.5.5.2 the injection *TR zones* and withdrawal *TR zones* referred to in section 4.5.5.1, are linked by a common limiting constraint or constraints; and
- 4.5.5.3 not all of the *transmission rights* bid to be purchased in those *TR bids* can be awarded,

the number of *transmission rights* awarded to each such *TR bidder* shall be determined by allocating a share of the maximum value of *transmission rights* to each such *TR bidder* in proportion to the value of *transmission rights* that each such *TR bidder* bid to purchase in each injection *TR zone* and withdrawal *TR zone* referred to in section 4.5.5.1.

## 4.5.6 Where:

- 4.5.6.1 two or more *TR offerors* submitted *TR offers* relating to different injection *TR zones* and withdrawal *TR zones* such that the *TR offers* may be optimally sold in more than one way;
- 4.5.6.2 the injection *TR zones* and withdrawal *TR zones* referred to in section 4.5.6.1, are linked by a common limiting constraint or constraints; and
- 4.5.6.3 not all of the *transmission rights* offered to be sold in those *TR offers* can be sold,



the number of *transmission rights* sold by each such *TR offeror* shall be determined by allocating a share of the maximum value of *transmission rights* to each such *TR offeror* in proportion to the value of *transmission rights* that each such *TR offeror* offered to sell in each injection *TR zone* and withdrawal *TR zone* referred to in section 4.5.6.1.

## 4.6 Simultaneous Feasibility

- 4.6.1 The *IESO* shall conduct a simultaneous feasibility test during each *TR auction* to ensure that the congestion rents collected by the *IESO* as described in section 4.18.1.1 shall, under most circumstances, be sufficient to cover any payment obligations owing by the *IESO* to *TR holders* under section 4.4.1 in respect of all *transmission rights* outstanding and all *transmission rights* to be offered during the *TR auction*.
- 4.6.2 For the purposes of the simultaneous feasibility test referred to in section 4.6.1, the *IESO* shall assume that each *transmission right* represents:
- 4.6.2.1 one MW of power injected at the injection *TR zone* associated with each *transmission right*; and
  - 4.6.2.2 one MW of power withdrawn at the withdrawal *TR zone* associated with each *transmission right*.
- 4.6.3 The *IESO* shall, in conducting each simultaneous feasibility test referred to in section 4.6.1, use a forecast of available *transmission transfer capability* determined on the basis of the operating assumptions described in section 4.7.3.
- 4.6.4 A set of *transmission rights* shall pass the simultaneous feasibility test referred to in section 4.6.1 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 4.6.2, 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*.

## 4.7 Determination of Transmission Transfer Capabilities

- 4.7.1 The *IESO Board* shall establish a confidence level reflecting the degree to which the congestion rents collected by the *IESO* in a given period described in section 4.18.1.1 will be sufficient to cover the *IESO's* payment obligations to *TR holders* under section 4.4.1 for that period.



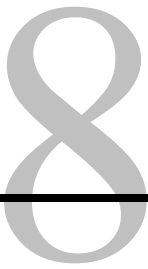
- 4.7.2 The *IESO* shall, in accordance with section 4.7.3, establish operating assumptions for the purposes of forecasting the *transmission transfer capability* to be used during each *TR auction*. Such *transmission transfer capability* forecasts shall be used to limit the number of *transmission rights* awarded in each auction for the purpose of achieving the confidence level established under section 4.7.1.
- 4.7.3 The *IESO* shall establish the operating assumptions referred to in section 4.7.2 in accordance with the following:
- 4.7.3.1 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*;
  - 4.7.3.2 the *facilities, inerties* and conditions that are monitored by the *IESO* for *security* reasons in its *real-time operations* shall be emulated;
  - 4.7.3.3 transmission lines, *facilities* and *inerties* 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;
  - 4.7.3.4 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*;
  - 4.7.3.5 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*;
  - 4.7.3.6 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*;



- 4.7.3.7 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*;
- 4.7.3.8 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
- 4.7.3.9 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*.

## 4.8 Participation in TR Markets and Rules Applicable to TR Participants

- 4.8.1 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 2 and this section 4.8.
- 4.8.2 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 4.8.2A, for the purpose of establishing that person's *bidding limit* in accordance with sections 4.14.1 or 4.20.2.2.
  - 4.8.2A A *TR market deposit* shall be in one or both of the following forms:
    - 4.8.2A.1 an irrevocable commercial letter of credit provided by a bank named in a Schedule to the *Bank Act*, S.C. 1991, c. 46; or
    - 4.8.2A.2 a cash deposit made with the *IESO* by or on behalf of the *TR participant*.
  - 4.8.2B Where all or part of a *TR market deposit* is in the form of a standby letter of credit, the following provisions shall apply:
    - 4.8.2B.1 the letter of credit shall provide that it is issued subject to either The Uniform Customs and Practice for Documentary Credits, 1993



Revision, ICE Publication No. 500 or The International Standby Practices 1998;

- 4.8.2B.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;
  - 4.8.2B.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;
  - 4.8.2B.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
  - 4.8.2B.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]
- 4.8.4 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 4.8.1 to 4.8.3.
- 4.8.5 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]
- 4.8.5.2 Chapters 4, 5, 6 and 7;
- 4.8.5.3 Chapter 8 other than this section 4; and
- 4.8.5.4 Chapter 10.

## 4.9 Assignment of Transmission Rights

- 4.9.1 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 4.9.5.
- 4.9.2 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.
- 4.9.3 The *IESO* shall for *settlement purposes* recognize, in accordance with section 4.9.5, an assignment of the right to the *settlement amounts* under a *transmission right* unless the assignee is not a *TR participant*.
- 4.9.4 Where the *IESO* determines in accordance with section 4.9.3 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.
- 4.9.5 Where the *IESO* recognizes, for *settlement* purposes, an assignment of the right to all *settlement amounts* under a *transmission right* in accordance with section 4.9.3, 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 4.9.2 until such time as:
  - 4.9.5.1 the *transmission right* has been sold in a *TR auction*; or
  - 4.9.5.2 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 4.9.2, and 4.9.3 and 4.9.5.

## 4.10 Short-Term Auctions

- 4.10.1 The *IESO* shall conduct a *short-term auction* between the 1<sup>st</sup> and 15<sup>th</sup> day of each month in which *transmission rights* valid for the following month shall be available.
- 4.10.2 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.

## 4.11 Long-Term Auctions

- 4.11.1 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.
- 4.11.2 Each *long-term auction* conducted by the *IESO*;
  - 4.11.2.1 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 auction occurs; and
  - 4.11.2.2 Any residual *transmission rights* from a *long-term auction* shall, subject to section 4.7, be offered as *short-term transmission rights* in the manner described in section 4.10.
- 4.11.3 Subject to section 4.11.4, *long-term auctions* conducted by the *IESO* shall offer *transmission rights* having varying periods of validity of one month or more. The periods of validity of the *transmission rights* awarded during such auctions shall be determined on the basis of a simultaneous consideration of the *TR bids* and the *TR offers* submitted in respect of such *long-term auctions* for all possible combinations of months.



- 4.11.4 If the *IESO* cannot, by reason of software inadequacies, implement any *long-term auctions* so as to offer *transmission rights* having varying periods of validity in excess of one month, the *IESO* shall continue to conduct *long-term auctions* in the manner described in section 4.11.2 until such time as the software inadequacies have been rectified.
- 4.11.5 Each *long-term auction* referred to in section 4.11.2 and 4.11.3 shall consist of multiple rounds. In each case:
- 4.11.5.1 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;
  - 4.11.5.2 each round shall be conducted independently of all others;
  - 4.11.5.3 *TR market clearing prices* shall be determined for each round; and
  - 4.11.5.4 *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 Subject to section 4.11.9, in the fourth and all subsequent *long-term auctions* conducted by the *IESO*, the *IESO* shall use all 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*, to define *transmission rights* having varying periods of validity over the course of the year commencing on the first day of the quarter immediately succeeding the quarter in which the *long-term auction* occurs.
- 4.11.9 If the *IESO* cannot, by reason of software inadequacies, implement the fourth and any subsequent *long-term auction* so as to offer *transmission rights* having varying periods of validity of one month or more, the *IESO* shall continue to use



the methodology set forth in section 4.11.7 until such time as such software inadequacies are rectified.

- 4.11.10 For each *long-term auction* that is conducted in multiple rounds in accordance with section 4.11.5, the *transmission transfer capability* that is used to define the *transmission rights* in accordance with sections 4.11.7 and 4.11.8 shall be allocated within each of the rounds as follows:
- 4.11.10.1 the portion of *transmission transfer capability* allocated to each round shall increase with each successive round; and
  - 4.11.10.2 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.

## 4.12 Pre-auction Publication

- 4.12.1 The *IESO* shall *publish*, at least thirty days prior to each *TR auction*:
- 4.12.1.1 hourly prices determined on the basis of the last projected *market price* for *energy published* for that hour pursuant to section 5.5.1 of Chapter 7 for each *TR zone* 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*;
  - 4.12.1.2 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 date*, since the *market commencement date*;
  - 4.12.1.3 actual and scheduled 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 date*, since the *market commencement date*;
  - 4.12.1.4 the hourly *transmission transfer capability* 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; and



- 4.12.1.5 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 4.7.2.
- 4.12.1.6 [Intentionally left blank]

## 4.13 TR Bids and TR Offers

- 4.13.1 A *TR bid* for the purchase of a *transmission right* in a *TR auction* shall indicate:
  - 4.13.1.1 the name of the *TR bidder*;
  - 4.13.1.2 the injection *TR zone* and the withdrawal *TR zone* for each *transmission right* that the *TR bidder* is bidding to purchase;
  - 4.13.1.3 the number of *transmission rights* that the *TR bidder* is bidding to purchase;
  - 4.13.1.4 the period of validity of each *transmission right* that the *TR bidder* is bidding to purchase;
  - 4.13.1.5 the maximum price, in \$/MW, that the *TR bidder* is willing to pay for each *transmission right* that the *TR bidder* is bidding to purchase, which price must be a positive amount; and
  - 4.13.1.6 in the case of a *long-term auction* referred to in section 4.11.3, the months of the year for which the *transmission rights* that the *TR bidder* is bidding to purchase must be valid.
- 4.13.2 A *TR offer* for the sale of a *transmission right* in a *TR auction* shall indicate:
  - 4.13.2.1 the name of the *TR offeror*;
  - 4.13.2.2 the injection *TR zone* and the withdrawal *TR zone* for each *transmission right* that the *TR offeror* is offering to sell;
  - 4.13.2.3 the number of *transmission rights* that the *TR offeror* is offering to sell;
  - 4.13.2.4 the period of validity of each *transmission right* that the *TR offeror* is offering to sell; and



- 4.13.2.5 the minimum price, in \$/MW, that the *TR offeror* is willing to accept for each *transmission right* that the *TR offeror* is offering to sell, which price must be a positive amount.
- 4.13.3 No *TR offeror* may offer to sell, in a given round of a *TR auction*, any *transmission rights* awarded to that *TR offeror* in a preceding round of the same *TR auction*.
- 4.13.4 [Intentionally left blank]
- 4.13.5 *TR bids* and *TR offers* 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.
- 4.13.6 The *IESO* shall not accept a *TR offer* in respect of the sale of a *transmission right* unless the *TR offeror* is the *TR holder* of record of that *transmission right* for the entire period during which that *transmission right* is valid.
- 4.13.7 *TR bids* and *TR offers* shall be submitted to the *IESO* using the *electronic information system* and the communication protocol described in the applicable *market manual*.
- 4.13.8 The *IESO* shall:
- 4.13.8.1 stamp each *TR bid* and *TR offer* with the time that it was received by the *IESO*;
- 4.13.8.2 confirm receipt of each *TR bid* and *TR offer* within the time specified in the applicable *market manual* using the communication protocol referred to in section 4.13.7; and
- 4.13.8.3 *publish* and notify *TR participants* of alternative means of submitting and confirming receipt of *TR bids* and *TR offers* when the communication protocol referred to in section 4.13.7 is unavailable.
- 4.13.9 The *IESO* shall reject any *TR bid* or *TR offer* that does not comply with the rules set forth in this section 4.13 and shall provide the *TR participant* submitting a rejected *TR bid* or *TR offer* of the reasons for such rejection.
- 4.13.10 A *TR participant* that does not receive from the *IESO* confirmation of receipt of a *TR bid* or a *TR offer* in accordance with section 4.13.8.2 shall immediately contact the *IESO* by telephone, facsimile or other means specified in the applicable *market manual* seeking confirmation of receipt.



- 4.13.11 A *TR participant* shall, if requested by the *IESO*, resubmit a *TR bid* or *TR offer* by such means as may be specified by the *IESO* in the request.

## 4.14 Bidding Limits

- 4.14.1 Subject to section 4.20.2.2, 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 4.8.2.
- 4.14.2 The *IESO* shall refuse to accept a *TR bid* from a *TR bidder* where, if the *TR bid* were accepted, the aggregate value of all *transmission rights* awarded to the *TR bidder* in a given *TR auction* would exceed the *TR bidder's bidding limit*.
- 4.14.3 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 4.14.1 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 4.17.1 for the purchase of the *transmission right*.
- 4.14.4 Where the amount of a cash deposit provided by a *TR participant* as a *TR market deposit* pursuant to section 4.14.1 exceeds the amount owing to the *IESO* by that *TR participant* under section 4.17.1 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.
- 4.14.5 Where a *TR participant* has provided to the *IESO* a *TR market deposit*, in a form other than a cash deposit, pursuant to section 4.14.1 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*:
- 4.14.5.1 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
- 4.14.5.2 if the *TR participant* did not make the request referred to in section 4.14.5.1, 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.

## 4.15 TR Market Clearing Prices

- 4.15.1 The *IESO* shall determine a *TR market clearing price* for each *transmission right* in each round of a *TR auction* in accordance with section 4.15.2, independent of the calculation of the *TR market clearing prices* for *transmission rights* in other rounds of the same *TR auction*.
- 4.15.2 The *TR market clearing price* for a given *transmission right* in a given round of a *TR auction* shall:
- 4.15.2.1 be equal to the value of any *transmission rights* that would not be awarded to *TR bidders* in that round if the total number of *transmission rights* made available during that round were to decrease by one;
  - 4.15.2.2 be less than or equal to the maximum price specified in each *TR bid* submitted for the purchase of that *transmission right* if a *TR bidder* was awarded the *transmission right* as a result of that *TR bid*; and
  - 4.15.2.3 be greater than or equal to the minimum price specified in each *TR offer* submitted for the sale of that *transmission right* if a *TR offeror* was awarded the *transmission right* as a result of that *TR offer*.

## 4.16 Post-Auction Notification and Publication

- 4.16.1 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* and *TR offers* may be submitted in respect of the next round of the *TR auction*, notify each *TR bidder* of the following:
- 4.16.1.1 the number of *transmission rights* awarded to the *TR bidder* during that round;
  - 4.16.1.2 the *TR market clearing price* of each *transmission right* awarded to the *TR bidder* during that round;
  - 4.16.1.3 the injection *TR zone* and the withdrawal *TR zone* in respect of each *transmission right* awarded to the *TR bidder* during that round; and



- 4.16.1.4 the period for which each *transmission right* awarded to the *TR bidder* during that round is valid.
- 4.16.2 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* and *TR offers* may be submitted in respect of the next round of the *TR auction*, notify each *TR offeror* of *transmission rights* of the following:
  - 4.16.2.1 the number of *transmission rights* sold by the *TR offeror* during that round;
  - 4.16.2.2 the *TR market clearing price* of each *transmission right* sold by the *TR offeror* during that round;
  - 4.16.2.3 the injection *TR zone* and the withdrawal *TR zone* in respect of each *transmission right* sold by the *TR offeror* during that round; and
  - 4.16.2.4 the period for which each *transmission right* sold by the *TR offeror* during that round was valid.
- 4.16.3 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* and *TR offers* may be submitted in respect of the next round of the *TR auction*, *publish* the following:
  - 4.16.3.1 the *TR market clearing price* for each *transmission right* sold during that round;
  - 4.16.3.2 the number of *transmission rights* sold during that round;
  - 4.16.3.3 the injection *TR zone* and withdrawal *TR zone* for each *transmission right* sold during that round; and
  - 4.16.3.4 the period of validity of each *transmission right* sold during that round.

## **4.17 Payment for Purchase/Sale of Transmission Rights**

- 4.17.1 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 The amount payable by the *IESO* to a successful *TR offeror* in respect of *transmission rights* sold in a given round of a *TR auction* shall be the aggregate of the *TR market clearing price* of each *transmission right* sold by that successful *TR seller* in that round.

## 4.18 TR Clearing Account

- 4.18.1 The *IESO* shall establish and maintain a *TR clearing account* and shall:
- 4.18.1.1 credit to the *TR clearing account*, in respect of each *settlement hour*, the net congestion rents calculated in accordance with section 3.6.2 of Chapter 9;
  - 4.18.1.1A credit to the *TR clearing account* the amounts referred to in sections 4.20.1A and 4.20.1B;
  - 4.18.1.2 subject to section 4.19.7, credit to the *TR clearing account* the net revenues received from the sale of *transmission rights* in a *TR auction* in accordance with section 4.19.4;
  - 4.18.1.3 debit from the *TR clearing account* any amounts required to be paid to *TR holders* pursuant to section 4.4.1;
  - 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;
  - 4.18.1.5 debit from the *TR clearing account* any amounts authorized to be debited and used to offset *transmission services charges* in accordance with section 4.18.2; 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.
- 4.18.2 Subject to section 4.18.3, the *IESO Board* may, at such times as it determines appropriate, authorize the debit of funds from the *TR clearing account* for the purpose of using those funds to offset the *transmission services charges* referred to in section 3.6.3 of Chapter 9.
- 4.18.3 The *IESO Board* shall establish a reserve threshold for the *TR clearing account*.



## 4.19 Settlement

- 4.19.1 All amounts payable to *TR holders* under *transmission rights* in accordance with section 4.4.1 shall be *settled* by the *IESO* in accordance with section 6 of Chapter 9.
- 4.19.2 Payments required to be made by the *IESO* to *TR holders* in accordance with section 4.4.1 shall be funded by means of debits from the *TR clearing account*. Where the aggregate amount payable to *TR holders* in a given *billing period* under section 4.4.1 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 6.14.4 of Chapter 9.
- 4.19.3 Where the aggregate amount payable to *TR holders* in a given *billing period* under section 4.4.1 is less than the congestion rents 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 4.19.2 and 4.19.6, second, subject to section 4.19.5A, to reimburse *market participants* for funds recovered by the *IESO* under Chapter 9, section 6.14.5.2, 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 4.18.3, and the balance shall remain in the *TR clearing account*.
- 4.19.4 All amounts payable to or by the *IESO* on account of the purchase or sale of *transmission rights* in accordance with sections 4.17.1 and 4.17.2 in respect of all rounds of a given *TR auction* shall be settled by the *IESO* in accordance with section 6 of Chapter 9.
- 4.19.5 Where, in respect of a given *TR auction*, the aggregate amount received by the *IESO* in respect of the purchase of *transmission rights* exceeds the aggregate amount payable by the *IESO* in respect of the sale of *transmission rights* in that *TR auction*, 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 4.19.2 and 4.19.6, second, subject to section 4.19.5A, to reimburse *market participants* for funds recovered by the *IESO* under Chapter 9, section 6.14.5.2, 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 4.18.3, and the balance shall remain in the *TR clearing account*.
- 4.19.5A 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 9, section 6.14.5.2, any amount that would otherwise be distributed to



such *market participants* under sections 4.19.3 and 4.19.5 shall remain in the *TR clearing account*.

- 4.19.6 Where, in respect of a given *TR auction*, the aggregate amount received by the *IESO* in respect of the purchase of *transmission rights* is less than the aggregate amount payable by the *IESO* in respect of the sale of *transmission rights* in that *TR auction*, the shortfall shall be funded first by use of all funds from the *TR clearing account* and then, by the borrowing of short-term funds in accordance with section 6.14.4 of Chapter 9.

## 4.20 Default in Payment

- 4.20.1 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*:

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

4.20.1.2 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.

- 4.20.1A Where section 4.20.1.2 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*.

- 4.20.1B Where section 4.20.1.2 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 4.20.1.2(a) or 4.20.1.2(b), as the case may be, and shall credit to the *TR clearing account* the proceeds of such realization.

- 4.20.2 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*:



- 4.20.2.1 require the *TR bidder* to provide a *TR market deposit* in the form of a cash deposit only; or
- 4.20.2.2 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*.

