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**Market Manual 4: Market Operations**

**Part 4.4: Transmission**

**Rights Auction**

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**Issue 19.0**

This procedure provides guidance to *Market Participants* on the operation of the *Transmission Rights Auction* process.

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## Related Documents

Document ID	Document Title
MAN-4	Transmission Reliability Margin Implementation Document

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## Table of Changes

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Reference (Paragraph and Section)	Description of Change
Various	Updated various sections to reflect revised calculation of financial upper limit based on per-path balance and implementation of new monthly financial report. The changes have been primarily made to Section 1.3.2 – <i>IESO Determination of TRs for auction</i> .

# Market Manuals

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The *market manuals* consolidate the market procedures and associated forms, standards, and policies that define certain elements relating to the operation of the *IESO-administered markets*. Market procedures provide more detailed descriptions of the requirements for various activities than is specified in the “Market Rules. Where there is a discrepancy between the requirements in a document within a *market manual* and the “Market Rules”, the “Market Rules” shall prevail. Standards and policies appended to, or referenced in, these procedures provide a supporting framework.

## Market Procedures

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The “Market Operations Manual” is Volume 4 of the *market manuals*, where this document forms “Part 4.4: Transmission Rights Auction”.

A list of the other component parts of the “Market Operations Manual” is provided in “Part 4.0: Market Operations Overview, in Section 2”, ‘About This Manual’.

## Structure of Market Procedures

Each market procedure is composed of the following sections:

1. “**Introduction**”, which contains general information about the procedure, including an overview, a description of the purpose and scope of the procedure, and information about roles and responsibilities of the parties involved in the procedure.
2. “**Procedural Workflow**”, which contains a graphical representation of the steps and flow of information within the procedure.
3. “**Procedural Steps**”, which contains a table that describes each step and provides other detail related to each step.
4. “**Appendices**”, which may include such items as forms, standards, policies, and agreements.

## Conventions

The *market manual* standard conventions are defined in the “Market Manual Overview” document. “You” and “your” refer to *TR participants*. “We”, “us” and “our” refer to the *IESO*.

- End of Section -



# 1. Introduction

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## 1.1 Purpose

This document provides registered *Transmission Rights (TR) participants* with the information necessary for the:

- Posting of a *TR market deposit* for the *TR market*; and
- Submitting of *TR bids* in the *TR market*.

It also describes the operation of the *TR market*, the *TR auctions* and the publication of the results of the *TR auction* by us.

## 1.2 Scope

This procedure is intended to provide you with a summary of the steps and interfaces between you, us and other parties for submitting *TR bids*. The procedural workflows and steps described in this document serve as a roadmap for you and us, and reflect the requirements set out in the “Market Rules” and applicable *IESO* policies and standards.

The *settlement* of payments relating to purchases in the *TR auction* is addressed in “Market Manual 5: Settlements Part 5.7: Financial Markets Settlement Statement”.

The *settlement* of payments due to *TR holders* is addressed in “Market Manual 5: Settlements, Part 5.5: Physical Markets Settlement Statement”.

The overview information in Section 1.3, below, is provided for context purposes only, highlighting the main actions that comprise the procedure, as set out in Section 2.

## 1.3 Overview

*TRs* are financial instruments that entitle the holder to a *settlement amount* based on locational differences in *TR settlement prices* between the *IESO control area* and an *intertie zone*. *Market participants* that trade *energy* across an *intertie* may use *TRs* to hedge against zonal price differences between the *IESO control area* and the particular *intertie zone*. A *TR participant*<sup>1</sup> receives a *settlement amount* based on the *TR settlement price* at the *TR withdrawal zone* minus the *TR settlement price* at the *TR injection zone*, where this is greater than zero (Ch.8, S4.4.1 of the *market rules*).

Appendix G contains a summary of some of the characteristics of the *TR market*, including a list of possible *TR withdrawal* and *injection zones*.

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<sup>1</sup> *TR participant* is a *market participant* who is authorized to participate in the *TR market*.

### 1.3.1 The Transmission Rights (TR) Market

In order to participate in any round of a *TR auction*, you must be an authorized participant in the *IESO-administered markets* and have signed a Participation Agreement with us prior to the date of the round of the *TR auction* is to be conducted<sup>2</sup>. In addition, you must provide us with a *TR market deposit*, no less than five *business days* prior to the date the round of the *TR auction* is to be conducted (Ch.8, S.4.8.2 of the *market rules*).

When *TRs* are available, we conduct an auction to sell *TRs* to you. Separate auctions are conducted for *short-term* and *long-term TRs* (see Section 1.4 below). *Bids* submitted to the *TR auction* are subject to the *bidding limits* established as a function of the *TR market deposit* described in Section 1.3.3. *TRs* are auctioned and traded in units of 1 megawatt (MW) (Ch.8, S.4.2.2 of the *market rules*). They convey to the holder the right to a *settlement amount* equal to the greater of zero and 1 MW multiplied by the price difference between the *TR settlement price* at the withdrawal *TR zone* and the *TR settlement price* at the injection *TR zone*<sup>3</sup> (Ch.8, S.4.4.1 of the *market rules*). The total quantity of each type of *TR* reflects a level of *intertie* flows that is expected to be physically possible in each direction under expected system conditions during the period for which the *TRs* are valid. This quantity of *TRs* is auctioned in a competitive process.

You should refer to the *TR Pre-Auction Reports* published on the *IESO* Web site at least 30 days in advance of each *TR auction*. This public information provides historical pricing information relative to *TR zones*, historical zonal interface information, forecast available transfer capability, total *TR* offered, and other related information that may be used by *TR participants* for determination of the appropriate bidding strategy. (Refer to Appendix B for the information to be published) (Ch.8, S.4.12.1 of the *market rules*).

### 1.3.2 IESO Determination of TRs for Auction

To ensure that the congestion rents collected by the IESO are balanced against the IESO's *TR* payment obligations for each path, a confidence level is established on a per path basis. This is achieved by introducing a financial upper limit for the number of *TRs* offered in any month for each path. The financial upper limit is adjusted from one month to the next based on the most-current reported balance between the congestion rents and *TR* payouts on a per path basis and the applicable dead-band for the path

The following sections describe the base quantity, financial upper limit, and the dead-band.

#### Determining TR Base Quantity

The *TR* base quantity is the maximum number of cumulative rights on a path available for long-term auctions. The base quantity of each path is determined as the minimum of the summer and winter *ATCs* with all elements in-service, de-rated for any expected long-term operational constraints on the path, and then dividing by a factor of 4 and rounded to the nearest multiplier of 4.

The base quantities will be reviewed and updated as necessary. The base quantity calculated for each path will be provided in the Long-Term Pre-Auction reports.

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<sup>2</sup> The conducting of a *TR auction* or auction round is a process that occurs over several days. Therefore the conducting of a *TR auction* or auction round commences when the *TR auction* bid submission window opens.

<sup>3</sup> Difference must be a positive.

## Determining Financial Upper Limit

The financial upper limit for each path for each month determines the maximum number of TRs (combined long-term and short-term) that can be offered in the long-term and short-term auctions conducted for that month. It is calculated based on the net cumulative balance between the congestion rents and TR payouts on a per path basis<sup>4</sup>. The financial upper limit will be adjusted to target cumulative per path-based balance of zero (i.e. cumulative congestion rents collected on a specific path are sufficient to cover the cumulative TR payment obligations for the same path). Path-based adjustments to the financial upper limit will be made only when the cumulative difference between congestion rents and TR payments exceeds a specified dead-band for each path.

Monthly and cumulative path-based congestion rents and TR payments will be tracked in the historical TR Monthly Financial Report and will be published on a monthly basis. This report will also specify the dead-band for each path. Details of this report are provided in the Appendix C. Please note that the cumulative congestion rents and cumulative TR payment will be reset as deemed necessary by us and will be highlighted in the applicable monthly financial report.

The financial upper limit for the upcoming month is equal to the minimum of the latest available summer and winter ATCs with all elements in-service, and the financial upper limit for the current month which is adjusted based on the following algorithm:

Transmission Rights Clearing Account (TRCA)	Cumulative Difference between Monthly Congestion Rents Collected and TR Payments (by each TR path)	Impact on Monthly TRs (by TR path)
N/A	Between the upper and lower limits of the dead-band	No change
TRCA balance is greater than the TRCA threshold*	Exceeds upper limit of the dead-band (Congestion rent is greater than TR payout )	Increase financial upper limit by 4%
TRCA balance is less than or equal to the TRCA threshold*	Exceeds upper limit of the dead-band (Congestion rent is greater than TR payout )	No change**
N/A	Less than lower limit of the dead-band (Congestion rent is less than TR payout)	Decrease financial upper limit by 4%
* The Transmission Rights Clearing Account (TRCA) threshold is currently \$20M		
** Transmission Rights (TR) offered will not be increased when TRCA balance is below threshold		

### Dead-band:

The objective of dead-band is to limit the number of manual interventions and it is to allow time for any adjustments to impact the financial balance before further adjustments are made. The dead-band can vary for each path and can be modified when a given path is not achieving a balance between congestion rents and TR payments. For example, if adjustments are being made based on cumulative rents and TR payments ending in October, the adjustment based on that data will appear in the next pre-auction report which is published in November for TRs valid in January. Therefore each

<sup>4</sup> Historically, the financial upper limit was calculated based on the net cumulative balance between the congestion rents and TR payouts aggregated for all paths, starting from October 2014 as reported in the [Monthly Market Report](#). This was an interim process until we implemented calculating the financial upper limit based on net cumulative balance between the congestion rents and TR payouts on a per path basis. During the transition to adjusting the financial upper limit based on a per path basis in March 2017, the financial upper limit for each path was carried from the interim process.

adjustment could take three months to influence the TR payments. As a path approaches financial balance, a dead-band could minimize the number of adjustments required.

### Determining Maximum TR Offered for Long-term Auctions

The number of transmission rights offered on each path at a long-term auction is limited to the lowest of the following:

- 25% of the established TR base quantity;
- The Financial upper limit;
- Expected ATC with consideration for outages (single/multiple, internal/external, planned/foreseeable or concurrent/consecutive) that have an impact for more than 30 days;
- Expected ATC with consideration for non-timeline or operational constraints (for example, a constraint on an internal/external interface that imposes a limit on import/export).

Note: The actual number of TRs available for bidding may further be reduced in order to account for the TRs sold in previous three applicable long-term auctions.

### Determining Maximum TR Offered for Short-term Auctions

The number of transmission rights offered on each path at a short-term auction is limited to the lowest of the:

- The Financial upper limit;
- Expected ATC with consideration for outages (single/multiple, internal/external, planned/foreseeable or concurrent/consecutive) that have an impact for more than 2.5 days.
- Expected ATC with consideration for non-timeline or operational constraints (for example, a constraint on an internal/external interface that imposes a limit on import/export).

Note: The actual number of TRs available for bidding may further be reduced in order to account for the TRs sold in previous four applicable long-term auctions.

## 1.3.3 TR Market Deposits for TR Auctions

You must submit a *TR market deposit* in one (or a combination of both) of the following forms:

- Irrevocable commercial letter of credit (as set out in Appendix F) provided by an IESO - approved bank (Ch.8, S.4.8.2A.1 of the *market rules*), OR
- Cash deposits made with us by you or on your behalf (Ch.8, S.4.8.2A.2 of the *market rules*).

You may submit cash *TR market deposits* by Electronic Data Interface or wire transfer, in the same manner as other cash transactions between *market participants* and us, to the nominated account detailed in appendix F<sup>5</sup>. If you are providing a Letter of Credit, you must submit it to us in original hard copy form. Your *bidding limit* for a *TR auction* is normally set at 10 times the amount of the *TR market deposit* you have provided (Ch.8, S.4.14.1 of the *market rules*). If you have previously defaulted on payment for *Transmission Rights* awarded, we may set the *bidding limit* at less than 10 times the level of the *TR market deposit* you have posted (Ch.8, S.4.20.2.2 of the *market rules*). We

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<sup>5</sup> See “Settlements Market Manual: Part 5.9 Settlement Payment Methods and Schedules” for more information on the Electronic Data Interface process

may also require the *TR market deposit* to be provided in the form of cash before you are permitted to participate in the round of the auction (Ch.8, S.4.20.2.1 of the *market rules*).

We will verify your *TR market deposit* for participation in the *Transmission Rights Market* by:

- Reviewing the amount and type of deposit,
- Verifying that it meets the submission timing requirements,
- Ensuring *applicants* are authorized *market participants*, and
- Informing you that the deposit has or has not been successfully processed.

You will be able to view your current *bidding limit* in the Customer Data Management System (CDMS) via *IESO Web Portal* at the end of the *business day* prior to the commencement of an Auction Round. For information on the “CDMS” tool, contact the *IESO Customer Relations* as detailed in Section 1.8 “Contact Information”.

After determining which *TR participants* were awarded *TR rights* in a *TR auction*, we will apply any cash element of a *TR market deposit* against the purchase amount owed to us by the successful *TR bidder* and invoice the *TR bidder* for any outstanding amount where the *TR market deposit* was not sufficient (Ch.8, S.4.14.3 of the *market rules*). Where the cash element of a *TR market deposit* exceeds the amount you owe us, we will (Ch.8, S.4.14.4 of the *market rules*):

- Include the excess as a credit on the financial market *invoice* only if you have previously asked us to do this at the time that you submitted your *TR market deposit*, OR
- Retain the excess as part of your *TR market deposit* for subsequent *TR auctions*.

When we receive full payment of an *invoice* relating to a *TR auction*, where your *TR market deposit* comprises a commercial letter of credit, we will either:

- Return your letter of credit to you only if you had previously asked us to do this (Ch.8, S.4.14.5.1 of the *market rules*), OR
- Retain the letter of credit as part of your *TR market deposit* for subsequent *TR auctions* (Ch.8, S.4.14.5.2 of the *market rules*).

To ensure appropriate bid limits are derived through each auction, *TR participants* who submit a *TR market deposit* in the form of a cash deposit should note that their *TR market deposit* will be reduced by the full amount of the TRs awarded upon completion of each short-term TR auction and for each long-term TR auction, until such time as the invoices are issued and paid in full (Ch.8, S.4.20.1 of the *market rules*). *TR participants* who submit a *TR market deposit* in the form of a commercial letter of credit should note that their *TR market deposit* will be reduced by 10% of the value of the TRs awarded upon completion of each short-term TR auction and for each long-term TR auction, until such time as the invoices are issued and paid in full.(Ch.8, S.4.20.1 of the *market rules*).

The automatic application of the cash deposits to offset any amounts owing to us, and temporary deduction of awards against a letter of credit creates the risk that you will not be able to participate in any subsequent auctions occurring within the next five business days. Therefore, you may wish to submit a *TR market deposit* that is sufficient to cover any TRs that may be awarded, as a result of your bid strategy in all rounds of concurrent TR auctions that occur within five business days.

CDMS will not accept *TR market deposits* of less than \$1.00. Therefore, when updating *bidding limits/market deposits* for successful awards which are not to the nearest dollar, we will round down the value of TRs awarded to the nearest dollar prior to subtracting award value from the participant’s market deposit. The result of this rounding process will be displayed in the CDMS and *TR Trade Limit*.

### 1.3.4 TR Bid Data Requirements

You will submit *TR bids* during a *TR auction* via our *Transmission Rights Auction* system, a web-based system that is accessed through the *IESO Web Portal*. A *TR bid* must include the following information (Ch.8, S.4.13.1 of the *market rules*):

- Name of the *TR bidder*;
- Injection *TR zone* and the withdrawal *TR zone* for each *transmission right* that the *TR bidder* is bidding to purchase;
- Number of *transmission rights* that the *TR bidder* is bidding to purchase;
- Period of validity of each *transmission right* that the *TR bidder* is bidding to purchase;
- Maximum price, in dollars per megawatt (\$/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
- (In the case of a *long-term auction* referred to in Section 1.4) Months of the year for which the *transmission rights* that the *TR bidder* is bidding to purchase must be valid.

We will refuse a *TR bid* from a *TR bidder* where accepting the *TR bid* would result in the aggregate value of all *TRs* awarded to the *TR bidder* exceeding the *TR bidder's bidding limit* (Ch.8, S.4.14.2 of the *market rules*).

Further information on our *Transmission Rights Auction* system is available in the "[Transmission Rights Auction System - A Participant's Guide](#)"<sup>6</sup>.

## 1.4 Auctions of Short-Term and Long-Term TRs

We conduct separate auctions for *long-term* and *short-term TRs*.

We hold a *short-term TR auction* between the first and 15<sup>th</sup> day of each month to sell *TRs* valid for the immediately following one-month period (Ch.8, S.4.10.1 of the *market rules*). Each of these *short-term TR auctions* consists of a single round (Ch.8, S.4.10.2 of the *market rules*).

We hold *long-term auctions* at least 30 days but not more than 90 days prior to the beginning of each quarter for which *long-term TRs* are being auctioned. (Ch.8, S.4.11.1 of the *market rules*). Each *long-term TR auction* will offer *TRs* that are valid for a period of one year, beginning on the first day of the quarter (Ch.8, S.4.11.2 of the *market rules*).

Each *long-term TR auction* consists of multiple rounds. We determine the number of auction rounds. Our experience in operating the long-term auctions reveals that two auction rounds are ideal to achieve a balance between:

- Providing *TR participants* with opportunities for price discovery; and
- Minimizing the burden on *TR participants* and us of conducting varying numbers of rounds.

Each auction round is independent of all other rounds. *TR market clearing prices* are determined independently for each round, with the award of *TRs* based on the *market clearing price* for that round (Ch.8, S.4.11.5 of the *market rules*). The portion of the available transmission capability allocated to each round increases in subsequent rounds, with the portion allocated to the final round being at least three times that allocated to the first round (Ch.8, S.4.11.10 of the *market rules*). Given

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<sup>6</sup> The *TR Auction* system also provides a detailed on-line help functionality.

the two-round configuration of a *long-term auction*, 25% of the TRs are allocated to the first round, and all remaining TRs are auctioned in the second round.

We make available any unsold long-term transmission rights for the applicable monthly *short-term auction*.

Each *TR auction* will have a unique name that reflects the time associated with products being auctioned (Ch.8, S.4.11.2 of the *market rules*). The naming convention will be:

TYPE\_YYYYMMDD,

Where,

- TYPE represents the Auction Type, and
- YYYYYMMDD defines the first day where rights will be available for congestion payments.

Auction Types:

- ST – for *short-term auctions*
- LT - for *long-term auctions*

Examples of naming conventions:

- ST\_20170101 represents a *short-term auction* offering *TR* for a one month period beginning January 1, 2017
- LT\_20170101 represents a *long-term TR auction* offering *TR* for a one year period beginning January 1, 2017

### 1.4.1 Submission of TR Bids

*TR bidders* may submit *TR bids* through the *TR auction* system while the *TR auction bid* submission window is open. The *TR auction bid* submission window is normally open from 09.00 EST<sup>7</sup>, two *business days* prior to the *TR auction* and closes no later than 17.00 EST, one *business day* prior to the *TR auction* (Ch.8, S.4.13.5 of the *market rules*). The *TR auction* system validates all *TR bids* that are submitted and will reject a *TR bid* where the:

- Date/time of the *bid* submission is outside the *TR auction bid* submission window (Ch.8, S.4.13.5 of the *market rules*);
- *Bid* would increase the aggregate of all *bids* you have submitted for that *TR auction* to value that exceeds your *bidding limit* (Ch.8, S.4.14.2 of the *market rules*);
- Price submitted is zero or negative (Ch.8, S.4.13.1.5 of the *market rules*); or
- *TR bid*'s MW quantity exceeds the total amount of *TRs* available in that round of the *TR auction*.

The *TR auction* system notifies you whether your *TR bid* has been accepted or rejected (with explanation of rejection) in real-time (Ch.8, S.4.13.9 of the *market rules*). You can also review the status of your accepted *TR bids* during the *TR auction* via the *TR auction* system. See the “Transmission Rights Auction System - A Participant's Guide” for more information on the *TR auction* system.

<sup>7</sup> The *Transmission Rights Auction* system always operates on Eastern Standard Time (EST).

Changes can be made to both the *TR bid* quantity and the *TR bid* price at any time before the *TR auction* round *bid* submission window has closed by submitting the required changes through the *TR auction* system, which overwrites previous submissions. In addition, you can delete a *TR bid* at any time before the *TR auction* round *bid* submission window has closed through the *TR auction* system.

If for any reason your *bid* cannot be submitted or accepted during an active *TR auction* round, and provided that all conditions and requirements for *bid* data submission are met, contact the *IESO Customer Relations* as per Section 1.8.

In the event of a real time contingency that prevents receipt of *TR bids* that significantly delays the start or running of the *TR auction*, we will first issue a Market Advisory via the *IESO* Web site that explains the cause of the delay (if known) and the expected duration. Subsequently, we may, for reasons of a failure in your or our software, hardware or communication systems associated with a *TR auction* (Ch.8, S.4.1.6 of the *market rules*):

- Conduct a *TR auction* using contingency procedures, including but not limited to those detailed in Appendix H (Ch.8, S.4.1.6.1 of the *market rules*);
- Conduct a *TR auction* and related activities along timelines other than those specified in the *market rules* (Ch.8, S.4.1.6.2 of the *market rules*); or
- In the event that we 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* (Ch.8, S.4.1.6.3 of the *market rules*).

We shall notify all *TR participants* who are affected as soon as practicable of any *TR auction* cancellation, and/or contingency procedures, revised timelines and revised activity schedules that we intend to implement (we must notify you before we take any of these steps) (Ch.8, S.4.1.7 of the *market rules*). If you wish to participate in a *TR auction* that is being conducted under contingency procedures and/or revised timelines, you shall comply with any applicable contingency procedure, revised activity schedules or revised timelines that we specify (Ch.8, S.4.1.8 of the *market rules*).

## 1.4.2 Determination and Publication of TR Auction Results

Following the period for accepting *bids* during the *TR auction bid* submission window of a given round of a *TR auction*, we determine the *TR* quantities to be awarded and *TR market clearing price* for each transmission path for that round<sup>8</sup> (Ch.8, S.4.15.1 of the *market rules*).

By the end of the next business day following a *TR auction* round (and prior to the opening of the *TR auction bid* submission window for a subsequent round), we make *TR participant*-specific reports available to each *TR participant* who has purchased *TRs* in the auction round, which details your purchases (Ch.8, S.4.16.1 of the *market rules*). This report is made available through the *IESO* Web Portal. We also *publish* a summary of the *TR auction* results on the *IESO* Web site. (See Appendix E for the information to be provided in the *TR participant*-specific report and public report.)

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<sup>8</sup> It should be noted that under certain tie breaking conditions not all *TRs* available can be allocated without violating the feasibility requirement due to rounding of results. These unallocated *TRs* may be available for future auctions.



## 1.5 Settlement of Awards

The invoicing process for the application of outstanding amounts following the application of the cash *TR market deposit* against the amount owed to us or the full amount owing us where the *TR market deposit* was in the form of a letter of credit, will be detailed in the financial markets *settlement statement*. See “Market Manual 5: Settlements, Part 5.7: Financial Markets Settlement Statements” and “Part 5.8: Financial Market Settlements” for more information on this process.

Payment for all *TRs* must be made in full prior to us assigning any *TRs* to the *TR bidder*. Refer to “Market Manual 5: Settlements, Part 5.9: Settlement Payment Methods and Schedule” for more information on the process of paying your *invoices*.

### 1.5.1 Default in Payment

When a successful *TR bidder* fails to remit to us on the applicable *payment date* all payment due for all *transmission rights* awarded during all rounds of a *TR auction*, no *transmission rights* will be issued (Ch.8, S.4.20.2 of the *market rules*). In addition, the *TR bidder* will forfeit the lesser of the:

- *TR market deposit* (Ch.8, S.4.20.2.1 of the *market rules*, or
- Portion of its *TR market deposit* that is equal to 10% of the value of all *TRs* awarded to the *TR bidder* during the applicable *TR auction* (Ch.8, S.4.20.2.2 of the *market rules*).

If you default on payment, we may impose reductions of the market deposit multiplier for the setting of *TR bid* limits for your future *TR auctions* as follows:

1<sup>st</sup> default – *TR bid* limit multiplier lowered from 10 to 8 times

2<sup>nd</sup> default – *TR bid* limit multiplier lowered from 8 to 5 times

3<sup>rd</sup> default – *TR bid* limit multiplier lowered from 5 to 1 time

Restoration of the multiplier will occur in reverse order of the reduction imposed after each subsequent *TR auction* in which the *TR bidder* pays for the *TRs* on time.

### 1.5.2 Payment of TR Holders

Payments to *TR holders* will occur through the physical markets settlement statement process detailed in “Market Manual 5: Settlements, Part 5.5: Physical Markets Settlement Statements”. A planned or forced outage to an interconnection may reduce the *transmission transfer capability* between a withdrawal *TR zone* and an injection *TR zone* to zero (Ch.8, S.4.4.2 of the *market rules*). In such circumstances, the amount payable to the holder of a *TR* associated with such *TR zones* will be set to zero from the first hour after the hour in which the outage occurred (Ch.8, S.4.4.2.1 of the *market rules*). It will remain at zero through to, and including, the hour in which the outage is resolved and the transfer capability returns to an amount greater than zero, after which payments will resume to the *TR holder* (Ch.8, S.4.4.2.2 of the *market rules*).

*TR holders* do not receive a credit relating to the purchase cost of a *TR* for the period during which the *outage* has occurred (Ch.8, S.4.4.2 of the *market rules*).

## 1.6 IESO and Market Participant Obligations Addressed in This Procedure

Under the “*Market Rules*”, the *IESO* and *market participants* are required to perform certain activities or take certain actions, and these requirements have been recorded and summarized in the *IESO* Obligations List and the *Market Participants* Obligations List. Discretionary powers of the *IESO* are not included in this list. The “*Market Participant*” obligations addressed in this procedure may be found in the “Market Participant Obligations” document posted on the *IESO* Web site.

## 1.7 Roles and Responsibilities

Responsibility for submitting *TR bids* for *transmission rights* and operating the *TR market* is shared among:

- Registered *TR participants*, who are responsible for:
  - Submitting market deposits;
  - Viewing the schedule of upcoming *TR auctions*;
  - Submitting *TR bids* in the appropriate timeframe;
  - Correcting invalid *TR bids* and resubmitting as required; and
  - Viewing the *TR auction* results.
- The *IESO*, which is responsible for:
  - Determining the number of *TRs* available for each *TR auction*;
  - Providing information on upcoming *TR auctions*;
  - Publishing pre-auction information;
  - Receiving and processing *bids* from registered *TR participants*;
  - Determining the results of *TR auctions*;
  - Providing information on *TR auction* results; and
  - Publishing the results of the *TR auctions*.

## 1.8 Contact Information

As part of the participant authorization and registration process, *applicants* are able to identify a range of contacts within their organization that address specific areas of market operations. For the *Transmission Rights* auction, this contact will most likely be the *Market Participant's* Financial *Transmission Rights* Market Contact Type as indicated in CDMS (*Market Participant* Contacts screens). If a *market participant* has not identified a specific contact, we will seek to contact the Main Contact in CDMS that is established during the participant authorization process. We will seek to contact these individuals for activities within this procedure, unless alternative arrangements have been established between us and the *market participant*.

If the *market participant* wishes to contact us, the *market participant* can contact IESO Customer Relations via email at [customer.relations@ieso.ca](mailto:customer.relations@ieso.ca) or via telephone, mail or courier to the numbers and addresses given on the IESO's Web site ([www.ieso.ca](http://www.ieso.ca) - or click on "Contact Us" to go to the "Contacting the IESO" page). If the IESO Customer Relations Group is closed, telephone messages or emails may be left in relevant physical or electronic IESO mail boxes, which will be answered as soon as possible by Customer Relations staff.

Standard forms that participants must complete for this procedure are listed in Appendix A. These forms are generally available for downloading on the IESO's Web site. These forms as well as the accompanying supporting documentation must be transmitted to us via mail, courier or email. The appropriate mail and courier addresses are located on the IESO's Web site. However, the preferred method for the submittal of *TR Auction* Information form (IMO-FORM-1361) is via email to the address of [market.registration@ieso.ca](mailto:market.registration@ieso.ca). All correspondence relating to this procedure shall identify the **subject: *Transmission Rights Auction***.

– End of Section –

## 2. Procedural Workflow

The diagrams in this section represent the flow of work and information related to *TR auction* process between you, us, and any other parties.

The steps illustrated in the diagrams are described in detail in Section 3.

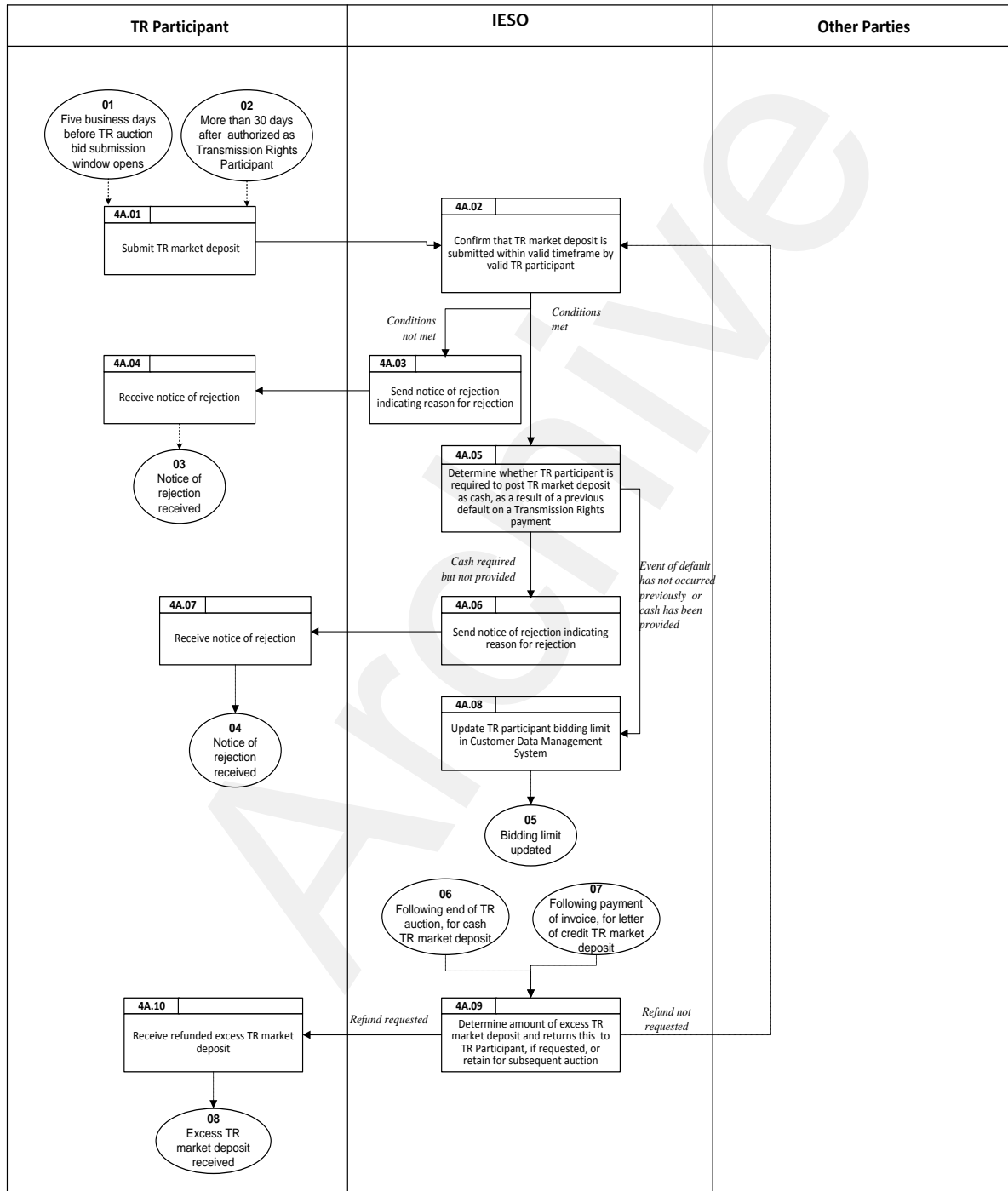
**Table 2–1: Legend for Workflow Diagrams**

Legend	Description
Oval	An event that triggers task or that completes task. Trigger events and completion events are numbered sequentially within procedure (01 to 99)
Task Box	Shows reference number, the party responsible for performing the task (if “other party”), and the task name or brief summary of task. The reference number (e.g., 1A.02) indicates the procedure number within current <i>market manual</i> (1), the sub-procedure identifier (if applicable) (A), and the task number (02)
Solid horizontal line	Shows information flow between the <i>IESO</i> and external parties
Solid vertical line	Shows linkage between tasks
Broken line	Links trigger events and completion events to preceding or succeeding task

## 2.1 TR Market Deposits for Transmission Rights

You must submit a *TR market deposit* to us if you intend to participate in a *TR auction*. We establish your *bidding limit* for the *Transmission Rights auction* based upon the size of your deposit.

Figure 2-1 shows the steps in this process. The steps are described in detail in Section 3.1, Table 3-1.



**Figure 2–1: Workflow for TR Market Deposit Requirements for Transmission Rights**

## 2.2 TR Auctions

You must submit *bids* for *transmission rights* into our *TR auction* system via the *IESO* Web Portal. *TR auctions* that have multiple rounds are conducted by repeating Steps 4B.03 through Step 4B.16. Following payment by the successful *TR participant*, we award the *TR* to you. We also *publish* the results of the *TR auction*.

Figure 2-2 shows the steps in this process. The steps are described in detail in Section 3.2, Table 3-2.

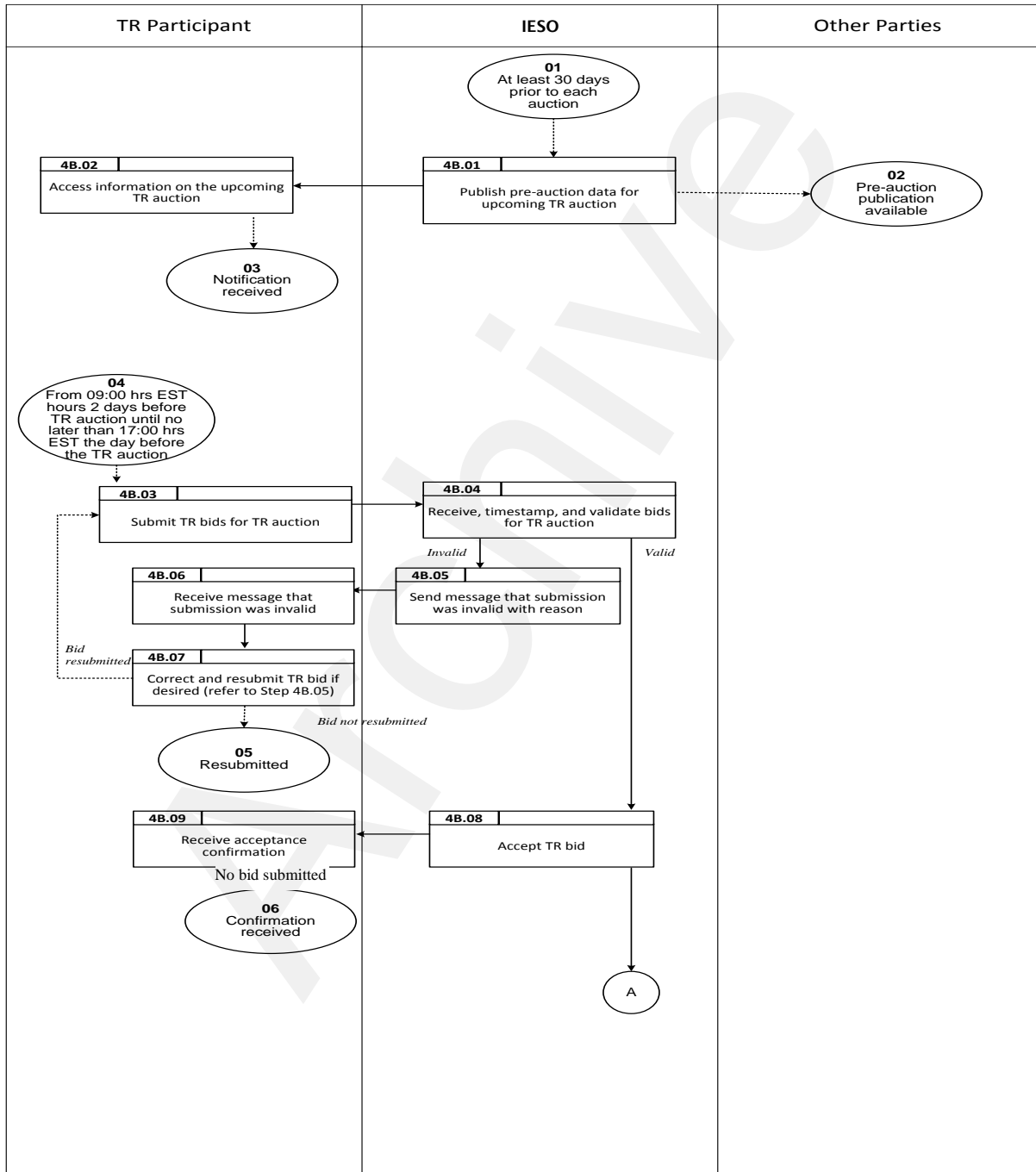
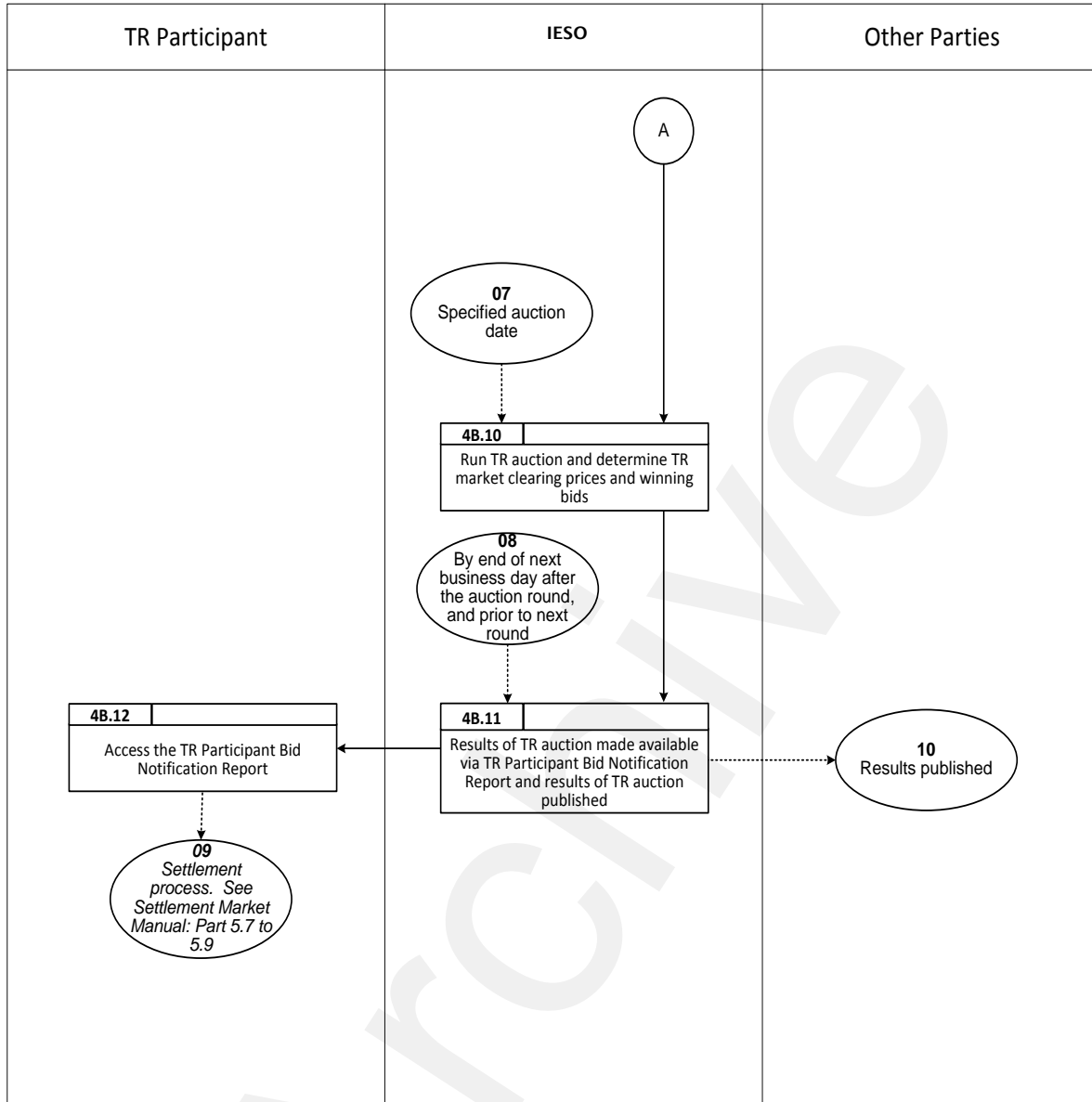


Figure 2–2: Workflow for Submission of Bids for Transmission Rights to the TR Auction



**Figure 2–2: Workflow for Submission of Bids for Transmission Rights to the TR Auction (continued)**

– End of Section –

## 3. Procedural Steps

This section contains detail on the tasks (steps) associated with the amendment and publication of the “Market Rules”.

The following tables contain seven columns, as follows:

Column	Description
Ref	The numerical reference to the task.
Task Name	The task name as identified in Section 2.
Task Detail	Detail about the task.
When	A list of all the events that can trigger commencement of the task.
Resulting Information	A list of the information flows that may or must result from the task.
Method	The format and method for each information flow are specified.
Completion Events	A list of all the circumstances in which the task should be deemed finished.

### 3.1 TR Market Deposits for Transmission Right

You must submit a *TR market deposit* to us if you intend to participate in a *TR auction*. We establish your *bidding limit* for the *Transmission Rights auction* based upon the size of your deposit.

Steps shown in the following table are illustrated in Section 2.1, Figure 2-1.



**Table 3–1: Procedural Steps for Market Deposits for Transmission Rights**

Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
4A.01	Submit <i>TR market deposit</i>	<p>You have decided to <i>bid</i> in an upcoming <i>TR auction</i> and declare this intention to us by submitting the “TR Auction Information” form indicating the submission of, or update to the <i>TR market deposit</i> necessary to <i>bid</i>.</p> <p>You also indicate whether you want us to credit any excess <i>TR market deposit</i> on completion of the <i>TR auction</i> – we will carry forward any excess <i>TR market deposit</i> towards the next <i>TR auction</i> if you do not request a credit.</p> <p>In most cases, the <i>bidding limit</i> of the <i>TR participant</i> in the <i>TR auction</i> will be 10 times the amount of the <i>TR market deposit</i> provided.</p>	At least 5 <i>business days</i> prior to the opening of the <i>TR auction bid</i> submission window.	“TR Auction Information” (IMO-FORM-1361) <i>TR market deposit</i> . (See Appendix A)	<p>Mail, courier or e-mail</p> <p>If cash: Basic <i>Electronic funds transfer</i>, Wire, or EDI-820</p> <p>If letter of credit: Mail or courier</p>	<i>TR market deposit</i> sent to us by you.
4A.02	Confirm that <i>TR market deposit</i> is submitted within valid timeframe by valid <i>TR participant</i>	We confirm that your <i>TR market deposit</i> was received at least 5 <i>business days</i> prior to the opening of the <i>TR auction bid</i> submission window and that you are authorized to participate in the <i>Transmission Rights market</i> by having signed a Participation Agreement (see Section 1.3.1)	After Step 4A.02.	None	None	The <i>IESO</i> determines whether the submission was received within the correct timeframe.

Ref						
4A.03	Send notice of rejection indicating the reason for rejection.	We determine that you were not authorized to participate prior to the round of the <i>TR auction</i> or the <i>TR market deposit</i> was not made <i>5 business days</i> prior to the round of the <i>TR auction</i> . We send a notice to you advising of the reason for the rejection (that the submission was not received within the correct timeframe) (see Section 1.3.1).	After Step 4A.02 if the submission was not received in the correct timeframe.	None	None	Notice of rejection issued to <i>TR participant</i> .
4A.04	Receive notice of rejection.	You receive a notice of rejection from us.	After Step 4A.03.	None	None	Notice of rejection received by <i>TR participant</i>
4A.05	Determine whether you are required to post <i>TR market deposit</i> as cash, as a result of a previous default on a <i>Transmission Rights</i> payment.	We review previous records and determine if you have ever defaulted on a past payment for <i>Transmission Rights</i> and, as a result, are required to post <i>TR market deposit</i> in the form of cash and/or operate with a reduced <i>bidding limit</i> . Where this is a requirement, we confirm that you have complied with this requirement.	After Step 4A.02, if your submittal was received in the proper timeframe.	None	None	Determination of whether the <i>TR participant</i> has ever defaulted on a <i>transmission rights</i> payment and is required to post <i>TR market deposit</i> as cash.
4A.06	Send notice of rejection indicating reason for rejection.	We send you a notice of rejection stating that you are not authorized to participate in the auction as requested because you must post a <i>TR market deposit</i> in the form of cash and have not done so.	After Step 4A.05, if you are required to post a <i>TR market deposit</i> in the form of cash and have not done so.	None	None	Notice of rejection issued to <i>TR participant</i> .

Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
4A.07	Receive notice of rejection.	You receive the notice of rejection.	After Step 4A.06.	None	None	Notice of rejection received by <i>TR participant</i> .
4A.08	Update <i>market participant bidding limit</i> in CDMS.	We update your <i>bidding limit</i> for <i>TR auctions</i> in CDMS. For those <i>TR participants</i> who have not previously caused an <i>event of default</i> , this limit will be set at 10 times the amount of <i>TR market deposit</i> that has been posted with us. Where you have previously defaulted on a <i>Transmission Rights</i> payment, we may have set your <i>bidding limit</i> to a reduced multiple of the amount of <i>TR market deposit</i> posted.	After Step 4A.05, where an <i>event of default</i> has not previously occurred or the <i>TR market deposit</i> is in cash.	Notice of <i>bidding limit</i> .	CDMS via the <i>IESO</i> Web Portal.	The <i>IESO</i> determines whether to reduce the <i>bidding limit</i> of the <i>TR participant</i> .
4A.09	Determine amount of excess <i>TR market deposit</i> and returns this to you, if requested, or retain for subsequent auction.	We determine the amount of excess <i>TR market deposit</i> , if any: <ul style="list-style-type: none"> <li>Once amounts owed for <i>TRs</i> are accounted for, in the case of cash <i>TR market deposits</i>, or</li> <li>Once <i>invoices</i> relating to the <i>TR auction</i> have been paid by you, in the case of <i>TR market deposits</i> consisting of a letter of credit,</li> </ul> and credits any excess <i>TR market deposit</i> to you, where you have previously requested to have any excess credited at the time that	Following end of <i>TR auction</i> .	Credit requested excess <i>TR market deposit</i> : Payment or Letter of credit.	Payment: <i>Electronic funds transfer</i> (EDI-820 or wire transfer) Letter of credit: Certified mail or courier	Excess <i>TR market deposit</i> returned, if requested or excess <i>TR market deposit</i> included in <i>TR market deposit</i> for next <i>TR auction</i>

Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
		the <i>TR market deposit</i> was submitted to us. If you have not requested a credit, we include the excess in our assessment of your <i>TR market deposit</i> for future <i>TR auctions</i> .				
4A.10	Receive credit for excess <i>TR market deposit</i> .	You receive the excess <i>TR market deposit</i> from us.	Following Step 4A.09, if credit requested.	None	None	Excess <i>TR market deposit</i> received, if requested.

## 3.2 TR Auctions

You must submit *bids* for *transmission rights* into our *TR auction* system via the *IESO* Web Portal. *TR auctions* that have multiple rounds are conducted by repeating Steps 4B.03 through Step 4B.16. Following payment by the successful *TR participant*, we award the *TR* to you. We also *publish* the results of the *TR auction*.

Steps shown in the following table are illustrated in Section 2.2, Figure 2-2.

Table 3–2: Procedural Steps for the TR Auction

Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
4B.01	<i>Publish pre-auction data for upcoming TR auction</i>	<p>We:</p> <ul style="list-style-type: none"> <li>Determine and <i>publish</i> the pre-auction publication data to provide information on the upcoming <i>TR auction</i>, AND</li> </ul>	At least 30 days prior to each auction.	Pre-auction publication data (See Appendix B).	<i>IESO</i> Web site.	Pre-auction data published.
		<ul style="list-style-type: none"> <li>Make information on the upcoming <i>TR auction</i> available that you can access through the <i>IESO</i> Web Portal.</li> </ul>	Prior to each auction.	Information on available <i>TR auction</i> round.	<i>TR auction</i> system via <i>IESO</i> Web Portal. (Refer to the “Transmission Rights Auction System Participants Guide” for an overview of the <i>TR auction</i> system).	<i>TR auction</i> available for viewing by <i>TR participants</i> .
4B.02	Access information on the upcoming <i>TR auction</i>	You can access and view information on upcoming <i>TR auction</i> or <i>TR auction</i> rounds through the <i>IESO</i> Web Portal, along with the pre-auction publication data that is also posted on the <i>IESO</i> Web site.	Following Step 4B.01.	None	None	Registered <i>TR participants</i> accesses information.

Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
4B.03	Submit <i>TR bids</i> for <i>TR auction</i> .	You submit <i>TR bids</i> for <i>TRs</i> to the <i>TR auction</i> . See the “TR Auction System – A Participant’s Guide” for information on how the <i>TR auction</i> system informs a <i>TR participant</i> that the bidding window is open.	During the open <i>TR auction bid</i> submission window period for submission of <i>TR bids</i> , which is from 09:00 EST, two <i>business days</i> before the <i>TR auction</i> , until no later than 17:00 EST, on the day before the <i>TR auction</i> .	<i>TR bids</i>	<i>TR auction</i> system via <i>IESO</i> Web Portal.	<i>TR bids</i> submitted to <i>IESO</i> .
4B.04	Receive, timestamp, and validate <i>TR bids</i> for <i>TR auction</i> .	Your <i>TR bids</i> are received, time-stamped, and validated. <i>TR bids</i> are rejected if the: <ul style="list-style-type: none"> <li>• Date/time of the <i>bid</i> submission is outside the <i>TR auction bid</i> submission window,</li> <li>• <i>TR bid</i> would increase the aggregate of all <i>bids</i> you have submitted for that auction to a value that exceeds your <i>bidding limit</i>,</li> <li>• Price submitted is zero or a negative, OR</li> <li>• <i>TR bid</i>’s MW quantity exceeds the total amount of <i>TRs</i> available in that round of the auction.</li> </ul>	After Step 4B.03.	<i>TR bids</i> which have been time stamped and declared accepted (valid) or rejected (invalid)	<i>TR auction</i> system via <i>IESO</i> Web Portal.	<i>Bids</i> have been received and time stamped by the <i>IESO</i> , and declared accepted (valid) or rejected (invalid). This is done in real-time.

Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
4B.05	Send message that submission was invalid, with reason.	You are notified if the <i>TR bid</i> fails validation. The message includes the reason why the <i>TR bid</i> was rejected.	After Step 4B.04 if submission is invalid.	Rejection indicating that submission was invalid with reason.	<i>TR auction</i> system via <i>IESO</i> Web Portal.	Rejection sent to <i>TR participant</i> in real time. Rejected <i>bids</i> will be indicated by messages with the reason stated.
4B.06	Receive message that submission was invalid.	You receive the rejection notification indicating that your <i>TR bid</i> was invalid and the reason for the invalidity if the <i>bid</i> fails validation.	After Step 4B.05.	None	None	Rejection received by <i>TR participant</i> .
4B.07	Correct and resubmit <i>TR bid</i> if desired (refer to Step 4B.05).	If desired, you correct the invalidity problem and resubmit the <i>TR bid</i> (within the bidding window).	After Step 4B.06.	Corrected and resubmitted <i>TR bid</i> .	<i>TR auction</i> system via <i>IESO</i> Web Portal.	Corrected and resubmitted <i>TR bid</i> sent to <i>IESO</i> .
4B.08	Accept <i>TR bid</i> .	You are notified that a valid <i>bid</i> submission was accepted.	After Step 4B.04 if submission is valid.	Confirmation	<i>TR auction</i> system via <i>IESO</i> Web Portal.	Confirmation sent to <i>TR participant</i> .
4B.09	Receive acceptance confirmation.	You receive confirmation that a valid <i>TR bid</i> has been accepted.	After Step 4B.08.	None	None	Confirmation received by <i>TR participant</i> by the indication of the <i>TR bid</i> displayed next to the associated path.
4B.10	Run <i>TR auction</i> and determine <i>TR market clearing prices</i> and winning <i>bids</i> .	We conduct the <i>TR auction</i> , and determine the <i>TR market clearing price</i> for the round and the <i>TR</i> results.	On the specified <i>TR auction</i> day.	<i>TR auction</i> results.	Internal process.	<i>TR auction</i> results determined.

Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
4B.11	Results of <i>TR auction</i> made available via <i>TR Participant Bid Notification Report</i> and the overall results of <i>TR auction</i> published.	We produce a report for each <i>TR participant</i> who was awarded <i>TRs</i> in the <i>TR auction</i> that details these purchases. This report is made available via the <i>IESO</i> Web Portal	By the end of the next business day after the conclusion of the <i>TR auction</i> round, and prior to the opening of the <i>TR market bid</i> window for submitting <i>bids</i> in any subsequent <i>TR auction</i> round.	<i>TR Participant Bid Notification Report</i> .	Via the reports tab workspace of <i>IESO</i> Web Portal.  (Refer to the “Transmission Rights Auction System- A Participant's Guide” for further information).	<i>TR auction</i> results available to successful <i>TR participants</i> through the <i>TR Participant Bid Notification Report</i> .
		At the same time, we <i>publish</i> the overall results of the auction round through the Post Auction <i>TR Market Clearing Price Report</i> . (See Appendix E for the information contained in the reports).	Within 24 hours of the conclusion of the <i>TR auction</i> round, and prior to the opening of the <i>TR market bid</i> window for submitting <i>bids</i> in any subsequent <i>TR auction</i> round.	Overall Auction Round Results via the Post Auction <i>Market Clearing Price Report</i> .	<i>IESO</i> Web site	<i>TR auction</i> results published.
4B.12	Access the <i>TR Participant Bid Notification Report</i> .	Successful <i>TR participants</i> may review their purchases at the auction through accessing the <i>TR Participant Bid Notification Report</i> .	After Step 4B.11.	None	<i>TR auction</i> system via the <i>TR</i> tab in the Workspace in <i>IESO</i> Web Portal.	Successful <i>TR participants</i> access results of <i>TR auction</i> round through the <i>TR participant</i> report See <i>settlement</i> process outlined in “Market Manual 5: Settlements, Parts 5.7 through 5.9”.



Ref	Task Name	Task Detail	When	Resulting Information	Method	Completion Events
		All <i>TR participants</i> may review the overall auction results via the Post Auction <i>TR MCP Report</i> .	After Step 4B.11.	Post Auction <i>TR Market Clearing Price Report</i>	<i>IESO</i> Web site	Able to review aggregate results for <i>TR awards</i> , <i>TR Market Clearing Price</i> , injection and withdrawal <i>TR zones</i> , and the <i>TR</i> period of validity

– End of Section –

## Appendix A: Forms

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This appendix contains a list of forms associated with the procedure for *transmission rights auctions*, which are available on the IESO's Web site ([www.ieso.ca](http://www.ieso.ca)). The forms included are as follows:

**Table A-1: Forms Associated with Transmission Rights Auctions**

Form Name	Form Number
TR Auction Information	IMO-FORM-1361
Notice of Revocation of Transmission Rights	IMO-FORM- 1374

– End of Section –

## Appendix B: Pre-auction Publication

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We *publish* the following information, at least thirty days prior to each *TR auction* as part of the *TR Pre-Auction Report* published on the *IESO* Web site (Ch.8, S.4.12.1 of the *market rules*):

- 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 of the “Market Rules”) for each *TR zone*<sup>1</sup> during the preceding twelve months (Ch.8, S.4.12.1.1 of the *market rules*);
- The *TR market clearing price* for each *transmission right* sold during any *TR auctions* conducted in the preceding eighteen months (Ch.8, S.4.12.1.2 of the *market rules*);
- Actual and scheduled hourly flows<sup>2</sup> over each *interconnection* during the preceding twelve months (Ch.8, S.4.12.1.3 of the *market rules*);
- The hourly *transmission transfer capability* of each *interconnection*<sup>3</sup> during the preceding twelve months (Ch.8, S.4.12.1.4 of the *market rules*); and
- 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 of Chapter 8 of the “Market Rules”) (Ch.8, S.4.12.1.5 of the *market rules*).

– End of Section –

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<sup>1</sup> Zonal Prices determined by the last run of the pre-dispatch unconstrained schedule.

<sup>2</sup> The average of scheduled market transactions and average flow in MW during a given hour over each intertie zone.

<sup>3</sup> The maximum import and maximum export scheduling limit used for the last run of the pre-dispatch schedule.

# Appendix C: TR Monthly Financial Report

Every month we will publish the financial report which will summarize the following quantities for the previous month:

*Monthly Congestion Rents:* The amount collected by the IESO on the interties when congested due to a price difference between the Intertie Zone Price and Ontario Market Clearing Price

*Monthly TR Payouts:* The payments made to rights holders

*Manual Adjustment:* These are the adjustments made manually to congestion rents or TR payouts amounts

*Cumulative Congestion Rents:* Sum of congestion rents starting from MM YYYY

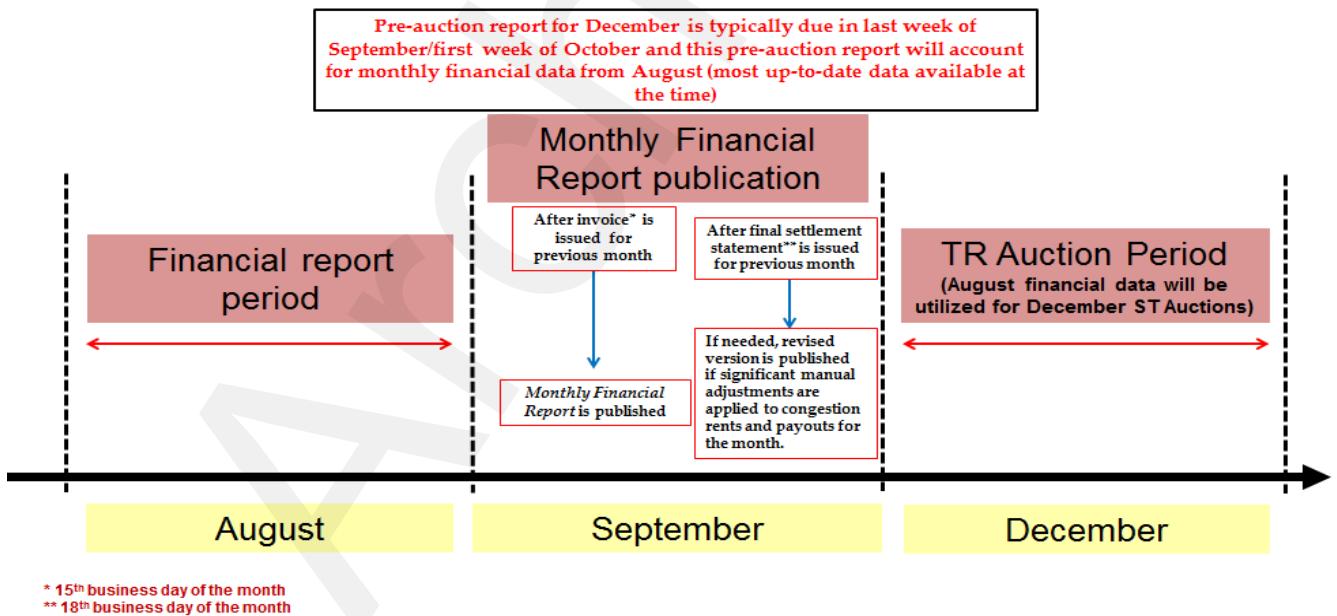
*Cumulative TR Payouts:* Sum of TR payouts starting from MM YYYY

*Cumulative Manual Adjustment:* Sum of manual adjustments starting from MM YYYY

*Cumulative Net Balance:* Sum of Cumulative Congestion Rents and Cumulative Manual Adjustment minus Cumulative TR payouts

*Dead-band:* A range for the cumulative difference between congestion rents and TR payments per path for which no adjustments to the financial upper limit will be necessary.

## Timeline Monthly Financial Report



**Figure 2-3: Timeline – Monthly Financial Report**

Please note that the pre-auction report for the December auction will be published in the last week of September and may not account for the settlement manual adjustments applied to the cumulative rents and TR payments for the period ending in August. Therefore, any significant manual adjustment will be reported as the revised monthly financial report for the applicable month and will be accounted for in the final calculation of TRs offered (before the TR Bid Window).

The monthly financial report will be published after release of financial invoice as per [\*Physical Settlement Schedule and Payments Calendar \(SSPC\)\*](#) and a revised version will be released only when the significant manual adjustments are applied to congestion rents or payouts for the applicable period in the financial settlement statement (released as per *SSPC*).

– End of Section –

Archive

# Appendix D: TR Path Information

The following sections explain how the forecast transmission transfer capabilities presented in pre-auction reports are obtained and how the TRs are constrained for coupled paths.

## D.1 Determining Transmission Transfer Capability

The forecast transmission transfer capability in the TR pre-auction reports reflects the anticipated Total Transfer Capability (TTC) of an intertie with consideration to constraints and outages which may not be considered during pre-dispatch scheduling on the interties.

The following are considered when determining the forecast transmission transfer capability:

- Operating practices;
- Thermal ratings;
- Stability and voltage limits; and
- Anticipated operating conditions including internal or external constraints and limitations such as foreseeable outages.

The combined short-term and long-term TRs offered on any path must not be greater than the path's minimum summer and winter Available Transfer Capability (ATC) at any time.

## D.2 Coupled Transmission Rights

When Michigan PARs do not regulate and are bypassed, a portion of scheduled transactions with Michigan flows over the New York tie-lines, and vice versa. In addressing this coupling, Transmission Rights on these paths are jointly constrained as shown in the example below for exports:

### Variables:

K1 = Maximum TRs offered on exports to Michigan

K2 = Maximum TRs offered on exports to New York

F11 = portion of a 1MW transfer to Michigan which appears on the Michigan interface

F12 = portion of a 1MW transfer to Michigan which appears on the New York interface

F21 = portion of a 1MW transfer to New York which appears on the Michigan interface

F22 = portion of a 1MW transfer to New York which appears on the New York interface

### Constraints on the TRs offered for Export to Michigan and New York:

TRs on Export to Michigan < K1

TRs on Export to New York < K2

$F11 \times \text{TRs on Export to Michigan} + F21 \times \text{TRs on Export to New York} < K1$

$F12 \times \text{TRs on Export to Michigan} + F22 \times \text{TRs on Export to New York} < K2$

The Marketplace Training Workbook on Transmission Rights, available at <http://ieso.ca/imoweb/pubs/training/TRworkbook.pdf>, provides more details and examples on how the maximum TRs offered are calculated for various scenarios.

– End of Section –

## Appendix E: TR Auction Results

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Following the *TR auction*, the *Transmission Rights auction* system provides the following two types of reports for the auction round by the end of the next business day after the auction has completed:

- Auction Results Bidder Notification Report (via Participant Reporting) for each *TR participant* that details the following information relating to the auction:
  - Number of *transmission rights* awarded to the *TR bidder* during that round (Ch.8, S.4.16.1.1 of the *market rules*);
  - *TR market clearing price* of each *transmission right* awarded to the *TR bidder* during that round (Ch.8, S.4.16.1.2 of the *market rules*);
  - Injection *TR zone* and the withdrawal *TR zone* in respect of each *transmission right* awarded to the *TR bidder* during that round (Ch.8, S.4.16.1.3 of the *market rules*); and
  - Period for which each *transmission right* awarded to the *TR bidder* during that round is valid (Ch.8, S.4.16.4 of the *market rules*).
- A post-auction *TR Market Clearing Price* Report available to the public that aggregates the following information relating to the auction:
  - *TR market clearing price* for each *transmission right* sold during that round (Ch.8, S.4.16.3.1 of the *market rules*);
  - Number of *transmission rights* sold during that round (Ch.8, S.4.16.3.2 of the *market rules*);
  - Injection *TR zone* and withdrawal *TR zone* for each *transmission right* sold during that round (Ch.8, S.4.16.3.3 of the *market rules*); and
  - Period of validity of each *transmission right* sold during that round (Ch.8, S.4.16.3.4 of the *market rules*).

Refer to the “Transmission Rights Auction System Market- A Participant Guide” for more information on these reports.

– End of Section –

# Appendix F: TR Market Deposit

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## F.1 Cash Deposits

Cash deposits for the purpose of establishing all or part of a *TR market deposit* should be paid into the *IESO Transmission Rights* account.

## F.2 Letter of Credit

Where a Letter of Credit is to be submitted as all or part of a *TR market deposit*, it must be in a form that is acceptable to us (as set out in Ch.8, S.4.8.2B of the *market rules*).

– End of Section –



# Appendix G: Summary of Transmission Rights

**Table F–1: Summary of Transmission Rights**

Item	Description
<b>Nature of TR</b>	A contractual right to receive a <i>settlement amount</i> based on the difference between <i>energy prices</i> at different withdrawal and injection locations from and into the Ontario market and the adjacent <i>control area</i> .
<b>Issuer</b>	Independent Electricity System Operator ( <i>IESO</i> )
<b>Notional amount</b>	1 MW per hour
<b>Withdrawal and injection zones</b>	<p>Each <i>Transmission Right (TR)</i> will specify a withdrawal and injection zone, one of which will be the Ontario zone. The other zone will be one of:</p> <ul style="list-style-type: none"> <li>• New York</li> <li>• Michigan</li> <li>• Minnesota</li> <li>• Manitoba</li> <li>• Quebec (9 Zones)</li> </ul>
<b>Pay out on exercise</b>	<p>The payout for any hour will be <b>Max [0, P<sub>w</sub> less P<sub>i</sub>]</b>.</p> <ul style="list-style-type: none"> <li>• P<sub>w</sub> is the <i>IESO-determined TR settlement price</i> (in Cdn \$/MWh) for the withdrawal zone</li> <li>• P<sub>i</sub> is the <i>IESO-determined TR settlement price</i> (in Cdn \$/MWh) for the injection zone.</li> </ul> <p><i>TRs</i> that are “in the money” in any hour will be automatically exercised by us. For all amounts payable with respect to <i>TRs</i> in any calendar month, <i>TR holders</i> will receive cash payments through the physical <i>settlement</i> invoicing and payment process.</p>
<b>Determination of P<sub>w</sub> and P<sub>i</sub></b>	<p>The <i>TR settlement price</i> for each price zone will be the final prices used in the <i>settlement process</i>. In Ontario, the <i>TR settlement price</i> will be the Ontario <i>energy market price</i>, or EMP (uniform prices inside Ontario). For each external price zone the <i>TR settlement price</i> will be the Ontario EMP plus the <i>intertie congestion price</i>. [This is the Ontario EMP minus the EMP at the relevant metering point, and the EMP at the relevant metering point is <i>ICP</i> plus Ontario EMP.] The <i>intertie congestion price</i> is the price difference between the Ontario EMP and the external zone price as determined in the projected hourly <i>market schedule</i>.</p> <p>In the event of a market suspension, <i>administrative pricing</i> details are found in “Market Manual 4: Part 4.5 Market Suspension and Resumption”.</p>
<b>Term</b>	One-calendar-month and one-calendar-year contracts will be available. Each <i>TR</i> will cover all hours in the period. The <i>IESO</i> will not make available <i>TRs</i> for specific hours within a period (such as peak or off-peak hours).

Item	Description
<b>Position limits</b>	Position limits will not be imposed, but you are subject to market surveillance.
<b>Price</b>	The price as determined by competitive auctions to be held monthly and quarterly. Purchase price payable in full after the conclusion of a round of an auction through the financial <i>settlement</i> invoicing and payment process.
<b>Ownership restrictions</b>	Participation in the <i>TR auctions</i> is restricted to entities authorized as <i>TR participants</i> by having signed a Participation Agreement with us before the auction (see Section 1.3.1). <i>Bidding limits</i> for each auction must be established <i>5 business days</i> before the <i>TR auction bid</i> submission window opens. <i>Bidding limits</i> are set at ten times each <i>TR participant's TR market deposits</i> posted for that round of the <i>TR auction</i> , unless we determine otherwise. You choose the deposit amount.
<b>Re-assignment and Re-sale</b>	The following <i>TR market</i> features are not currently available: <ul style="list-style-type: none"> <li>• <i>TR holders</i> may re-assign their <i>TR</i> to another registered participant subject to <i>IESO</i> verification.</li> <li>• <i>TR holders</i> may offer their <i>TRs</i> for re-sale into subsequent <i>TR auctions</i>.</li> </ul>

- End of Section –

# Appendix H: TRA Contingency Procedures

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## H.1 Triggering Events

This Appendix contains information on our contingency procedures for operating the *Transmission Rights* market in the event that the *Transmission Rights Auction System*, accessed through the *IESO* Web Portal is unavailable during an active *TR Auction*. We may:

- Conduct a *TR auction* using these contingency procedures, including but not limited to those detailed in this Appendix (Ch.8, S.4.1.6.1 of the *market rules*);
- Conduct a *TR auction* and related activities along timelines other than those specified in the *market rules* (Ch.8, S.4.1.6.2 of the *market rules*); or
- In the event that we 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* (Ch.8, S.4.1.6.3 of the *market rules*).

Any of the following events may require us to implement contingency procedures:

- Failure in any of the components of the participant network or your *participant workstation* including:
  - Hardware,
  - Software, or
  - Communications components.
- Failure in any of our *TR* and associated systems including:
  - Hardware,
  - Software, or
  - Communications.

## H.2 TRA Process for Contingency Operation

When a failure of a component of the *TR* hardware, software, or communications system has occurred, we will declare that the *TR auction* has experienced a contingency through a public advisory process. Prior to taking any action, we shall notify all *TR participants* who are affected as soon as practicable of any *TR auction* cancellation, and/or contingency procedures, revised timelines and revised activity schedules which may be implemented (Ch.8, S.4.1.7 of the *market rules*). If you wish to participate in a *TR auction* that is being conducted under contingency procedures and/or revised timelines, you shall comply with any applicable contingency procedure, revised activity schedules or revised timelines that we specify (Ch.8, S.4.1.8 of the *market rules*). Depending upon the type of contingency (component failure or a fall back to an alternate server), you may be requested to:

- Hold all *bids* and *offers*;
- Submit *bids* through an alternative method; or

- Review and resubmit *bids* and *offers*.

The *market rules* state that we shall not accept *TR bids / offers* outside a specified time frame. There is no specific duration within the specified time frame for which the *TR bids / offer* window must be open. While it is our intention to accept *TR bids / offers* during the entire *TR bid* window, there may be instances where significant tool failure will not allow this.

### H.3 Overriding Concerns/Principles for Contingency

You are responsible for risk assessment and preparation for contingencies on your side. This includes providing alternative communications pathways, Business Recovery Procedures (BRP) centres, etc.

As a general principle, we will apply the following criteria in assessing if a *TR Auction* should be considered to be valid - the *TR* system must be capable of accepting *TR bids / offers* within the two *business days* prescribed by the *market rules* (Day One 09:00 to Day Two 17:00) for:

- A minimum of eight business hours; and
- The last two hours of the prescribed *TR bid* window.

- End of Section -

## References

Document ID	Document Title
MDP_RUL_0002	Market Rules for the Ontario Electricity Market
MDP_MAN_0004	Market Manual 4: Market Operations, Part 4.0: Market Operations Overview
MDP_PRO_0030	Market Manual 4: Market Operations, Part 4.5: Market Suspension and Resumption
MDP_PRO_0033	Market Manual 5: Settlements, Part 5.5: Physical Markets Settlement Statement
MDP_PRO_0046	Market Manual 5: Settlements, Part 5.7: Financial Markets Settlement Statement
MDP_PRO_0047	Market Manual 5: Settlements, Part 5.8: Financial Market Settlement Invoicing
MDP_PRO_0036	Market Manual 5: Settlements, Part 5.9: Settlement Payment Methods and Schedule
IMO_MAN_0024	Market Manual 6: Participant Technical Reference Manual
N/A	Schedule to the <u>Bank Act</u> , S.C. 1991, C.46
IMO_GDE_0004	Transmission Rights Auction System Participant's Guide

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