

Market Manual 4: Market Operations

Part 4.4: Transmission Rights Auction

Issue 24.0

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

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This document may contain a summary of a particular *market rule*. Where provided, the summary has been used because of the length of the *market rule* itself. The reader should be aware, however, that where a *market rule* is applicable, the obligation that needs to be met is as stated in the *market rules*. To the extent of any discrepancy or inconsistency between the provisions of a particular *market rule* and the summary, the provision of the *market rule* shall govern.

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21.0	Updated to meet accessibility requirements pursuant to the Accessibility for Ontarians with Disabilities Act	December 2, 2020		
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Related Documents

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

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Table of Changes

Reference (Paragraph and Section)	Description of Change
3.1	Improving awareness of system operating conditions with updates on the use of publishing advisory notice; change of the term 'market advisory' to 'advisory notice'.

Market Manuals

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.

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

1. Introduction

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 the *IESO*.

1.2 Scope

This *market manual* is intended to provide a summary of the steps and interfaces between *market participants* and the *IESO* for submitting *TR bids*. The procedures described in this *market manual* 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 <u>Market Manual</u> 5.7: Financial Markets Settlement Statements.

The *settlement* of payments due to *TR holders* is addressed in <u>Market Manual 5.5: Physical Markets</u> Settlement Statements.

1.3 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,
 - O Submitting TR bids in the appropriate timeframe,
 - Correcting invalid TR bids and resubmitting as required,
 - Viewing the TR auction results, and
 - Following IESO published notifications and contingency procedures for TR auctions.
- The *IESO*, which is responsible for:
 - Determining the number of TRs available for each TR auction,
 - o Providing information on upcoming TR auctions,
 - Publishing pre-auction information,
 - Publishing notices when required and conducting TR auctions using contingency procedure,
 - Receiving and processing TR 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.

1.4 Contact Information

Changes to this public *market manual* are managed via the <u>IESO Change Management process</u>. Stakeholders are encouraged to participate in the evolution of this *market manual* via this process.

To contact the *IESO*, you can email *IESO* Customer Relations at <u>customer.relations@ieso.ca</u> or use telephone or mail. Customer Relations staff will respond as soon as possible.

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 Online IESO. If a *market participant* has not identified a specific contact, the IESO will seek to contact the Applicant Representative established in Online IESO during the participant authorization process. The IESO will seek to contact these individuals for activities within this manual, unless alternative arrangements have been established between the IESO and the *market participant*.

Standard forms that participants must complete for this procedure are listed in <u>Appendix A</u>. These forms can be downloaded from <u>Market Rules and Manuals</u> page of the *IESO* website. These forms, as well as the accompanying supporting documentation are emailed to IESO Operations Integration at <u>market.registration@ieso.ca</u>, with *Transmission Rights* Auction stated in the Subject line.

2. Transmission Rights Overview

Transmission Rights (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.

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

2.1 The 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 the *IESO* prior to the date *TR auction* round is to be conducted ¹. Also, a *TR market deposit* must be paid to the IESO no less than five (5) *business days* prior to the date the *TR auction* round is to be conducted (Ch.8, S.4.8.2 of the *market rules*).

The *IESO* conducts separate auctions for *short-term* and *long-term TRs* (see <u>Section 3</u>). *TR Bids* submitted to the *TR auction* are subject to the *bidding limits* established as a function of the *TR market deposit* described in <u>Section 2.3</u>. *TRs* are auctioned and traded in increments of 1 megawatt (MW) (Ch.8, S.4.2.2 of the *market rules*). They convey to the holder i.e. *TR participant*² who acquired *TRs*, the right to a *settlement amount* equal to the greater of zero and the number of *TRs* 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*³ (Ch.8, S.4.4.1 of the *market rules*). The total amount of *short-term and long-term TRs* 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.

Refer to the *TR* Pre-Auction Reports *published* on the *IESO* website at least 30 days in advance of each *TR auction*. This public information provides historical pricing relative to *TR zones*, historical zonal interface, forecast available transfer capability, total *TR offered*, and other related information that may be used by *TR participants* in determining their appropriate bidding strategy. See <u>Appendix</u> B for the information that is *published* (as per Ch.8, S.4.12.1 of the *market rules*).

2.2 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

.

¹ The conducting of a *TR auction* or auction round occurs over several days. Therefore, the conducting of a *TR auction* or auction round commences when the *TR bid* submission window opens.

² TR participant is a market participant who is authorized to participate in the TR market.

³ Difference must be a positive.

reported balance between the congestion rents and TR payouts on a per path basis and the applicable dead-band for the path.

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

2.2.1 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 Available Transfer Capabilities (ATCs) with all elements in-service, derated 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.

2.2.2 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 basis⁴. The financial upper limit is 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 are 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 are tracked in the historical TR Monthly Financial Report and are published on a monthly basis. This report also specifies the dead-band for each path. Details of this report are provided in <u>Appendix C</u>. Please note that the cumulative congestion rents and cumulative *TR* payment are reset as deemed necessary by the *IESO* and are 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 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 <i>TR</i> 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 <i>TR</i> payout)	No change**

⁴ From March 2017 the IESO started calculating the financial upper limit based on net cumulative balance between the congestion rents and *TR* payouts on a per path basis.

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Transmission Rights Clearing Account (TRCA)	Cumulative Difference between Congestion Rents Collected and TR Payments (by each TR path)	Impact on Monthly TRs (by TR path)
N/A	Less than lower limit of the dead-band (Congestion rent is less than <i>TR</i> 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		

2.2.3 Dead-band

The objective of dead-band is to limit the number of manual interventions and 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 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.

2.2.4 Determining Maximum TR Offered for Long-term Auctions

The number of *TRs* 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-tieline or operational constraints (for example, a constraint on an internal/external interface that imposes a limit on import/export).

The actual number of *TRs* available for bidding may further be reduced in order to ensure the TR base quantity and the financial upper limit are not exceeded when accounting for the *TRs* sold in previous three applicable *long-term auctions*.

2.2.5 Determining Maximum TR Offered for Short-term Auctions

The number of TRs 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-tieline 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 the previous four applicable *long-term auctions*.

2.3 TR Market Deposits for TR Auctions

TR market deposits are submitted in one (or a combination of both) of the following forms:

- Irrevocable commercial Letter of Credit (as set out in <u>Appendix F</u>) provided by an *IESO* approved bank (Ch.8, S.4.8.2A.1 of the *market rules*), or
- Cash deposits made with the *IESO* by the *TR participant*, or on the *TR participant's* behalf (Ch.8, S.4.8.2A.2 of the *market rules*).

TR market deposits made in cash may be submitted by electronic funds transfer to an IESO designated account detailed in Appendix F. TR market deposits provided in the form of a Letter of Credit must be submitted to the IESO in original hard copy form. The bidding limit for a TR auction is normally set at 10 times the amount of the TR market deposit provided by the TR participant (Ch.8, S.4.14.1 of the market rules).

For *TR participants* who have previously defaulted on payment for *TRs* awarded, the *IESO* may set the *bidding limit* at less than 10 times the level of the *TR market deposit* the *TR participant* has posted (Ch.8, S.4.20.2.2 of the *market rules*). The IESO may also require the *TR market deposit* to be paid in cash before the participant is permitted to participate in the round of the auction (Ch.8, S.4.20.2.1 of the *market rules*).

The IESO verifies TR market deposits for participation in the TR market by:

- Reviewing the amount and type of TR market deposit,
- · Verifying that it meets the submission timing requirements, and
- Ensuring applicants are authorized market participants.

TR participants can view their current bidding limit in the Customer Data Management System (CDMS) via IESO Gateway 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 1.4: Contact Information.

After determining which *TR participants* were awarded *TR* rights in a *TR auction*, the *IESO* applies any cash element of a *TR market deposit* against the purchase amount owing 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 owed by the *TR bidder*, the *IESO* (as per Ch.8, S.4.14.4 of the *market rules*) will either:

- Include the excess as a credit on the financial market *invoice* only if the *TR bidder* has previously asked the *IESO* to do this at the time they submitted their *TR market deposit*, or
- Retain the excess as part of the TR bidder's TR market deposit for subsequent TR auctions.

When the *IESO* has received full payment of an *invoice* relating to a *TR auction*, where the *TR market deposit* comprises a commercial Letter of Credit, the *IESO* will either:

- Return the Letter of Credit only if the *TR bidder* had previously requested (Ch.8, S.4.14.5.1 of the *market rules*), or
- Retain the Letter of Credit as part of the *TR bidder's TR market deposit* for subsequent *TR auctions* (Ch.8, S.4.14.5.2 of the *market rules*).

To ensure appropriate bidding 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 auction and for each long-term 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 *TR*s awarded upon completion of each *short-term* auction and for each *long-term* 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 the *IESO*, and temporary deduction of awards against a Letter of Credit creates the risk that a *TR participant* will not be able to participate in any subsequent auctions occurring within the next five (5) business days. Therefore, *TR participants* may wish to submit a *TR market deposit* that is sufficient to cover any *TRs* that may be awarded, as a result of their bid strategy in all rounds of concurrent *TR auctions* that occur within five (5) business days.

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

2.4 TR Bid Data Requirements

TRs bids are submitted during a TR auction via the Transmission Rights Auction system, which is accessed through the IESO Gateway. 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 3) Months of the year for which the *transmission rights* that the *TR bidder* is bidding to purchase must be valid.

The *IESO* will refuse a *TR bid* when accepting it would result in the aggregate value of all *TR*s 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 the *IESO Transmission Rights Auction* system is available in the <u>Transmission Rights Auction System - A Participant's Guide</u>⁵.

2.5 Procedural Steps for TR Market Deposits

Table 2-1: Procedural Steps for TR Market Deposits

Step	Completed by	Action
1	Market Participant	Submit <i>TR market deposit</i> at least five (5) <i>business days</i> prior to the opening of the <i>TR bid</i> submission window.

⁵ The *TR Auction* system also provides a detailed online help functionality.

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Step	Completed by	Action
		Complete and submit IMO_FORM_1361 : TR Auction Information indicating the submission of, or update to, the TR market deposit necessary to bid. The form may be submitted by email or mail. Cash payments can be made by electronic funds transfer. Letters of Credit can be sent by courier or mail.
		• Indicate whether you want the <i>IESO</i> to credit any excess <i>TR market deposit</i> on completion of the <i>TR auction</i> . The <i>IESO</i> will carry forward any excess <i>TR market deposit</i> towards the next <i>TR auction</i> if you do not request a credit.
		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.
2	IESO	Confirm that the <i>TR market deposit</i> was received within five (5) <i>business days</i> prior to the opening of the <i>TR bid</i> submission window and that the <i>market participant</i> is authorized to participate in the <i>Transmission Rights market</i> by having signed a <i>participation agreement</i> (see Section 2.1).
3A	IESO	The <i>IESO</i> to determine if the <i>market participant</i> is required to post a <i>TR market deposit</i> in the form of cash and/or operate with a reduced <i>bidding limit</i> based on previous default(s) on <i>Transmission Rights</i> payments.
		• Where this is a requirement, the <i>IESO</i> confirms whether the <i>market participant</i> has complied with this requirement.
3В	IESO	If the <i>IESO</i> has determined that the <i>market participant</i> is required to post their <i>TR market deposit</i> in cash, and the <i>market participant</i> has NOT done so, then the <i>IESO</i> will set the <i>TR participant</i> 's <i>bidding limit</i> to zero so that the <i>TR participant</i> is not authorized to participate in the auction as requested.
4	IESO	If the <i>IESO</i> has determined that the <i>TR participant</i> has had no previous <i>event of default</i> , or if the <i>market participant</i> has submitted their <i>TR market deposit</i> in cash, the <i>IESO</i> will update the <i>TR participant's bidding limit</i> for <i>TR auctions</i> in CDMS.
		• For <i>TR participants</i> who have NOT previously caused an <i>event of default</i> , the <i>bidding limit</i> will be set at 10 times the amount of <i>TR market deposit</i> that has been posted with the <i>IESO</i> .
		• For <i>TR participants</i> who have previously defaulted on a <i>Transmission Rights</i> payment, the <i>IESO</i> may set the <i>bidding limit</i> to a reduced multiple of the amount of <i>TR market deposit</i> posted.
5	IESO	After the <i>TR auction</i> , the <i>IESO</i> determines the amount of excess <i>TR market deposit</i> , if any.
		• Once amounts owed by the <i>TR participant</i> for <i>TR</i> s are accounted for, in the case of cash <i>TR market deposits</i> , or
		• Once <i>invoices</i> relating to the <i>TR auction</i> have been paid by the <i>TR participant</i> , in the case of <i>TR market deposits</i> submitted by Letter of Credit,
		the <i>IESO</i> credits any excess <i>TR market deposit</i> to the <i>TR participant</i> if they requested to have any excess credited when they submitted their <i>TR market deposit</i> .
		If the TR participant did NOT request a credit, the IESO will include the excess in its assessment of the participant's TR market deposit for future TR auctions.

Auctions of Short-Term and Long-Term TRs

The IESO conducts separate auctions for long-term and short-term TRs.

A *short-term TR auction* is held between the 1st and 15th day of each month to sell *TR*s 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*).

Long-term auctions are held 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).

TR auction schedule for the future auctions is available on the IESO's Market Calendars webpage.

Each *long-term TR* auction consists of multiple rounds. The *IESO* determines the number of auction rounds. 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 the IESO in 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 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.

The IESO makes any unsold long-term transmission rights available for the applicable monthly short-term auction.

Each *TR* auction has a unique name that reflects the time associated with the *TR*s being auctioned (Ch.8, S.4.11.2 of the *market rules*). The naming convention is **TYPE_YYYYMMDD**,

Where,

- TYPE represents the Auction Type, and
- YYYYMMDD 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_20200101 represents a *short-term auction* offering *TR* for a one-month period beginning on January 1, 2020

 LT_20200101 represents a long-term TR auction offering TR for a one-year period beginning on January 1, 2020

3.1 Submission of TR Bids

TR bidders may submit TR bids through the TR auction system while the TR bid submission window is open. The TR bid submission window is normally open from 09:00 EST⁶, two (2) 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 *TR bid* submission is outside the *TR bid* submission window (Ch.8, S.4.13.5 of the *market rules*),
- TR Bid would increase the aggregate of all TR bids submitted for that TR auction to value that exceeds the TR bidder's 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 the *TR bidder* whether their *TR bid* has been accepted or rejected (with explanation of rejection) in real-time (Ch.8, S.4.13.9 of the *market rules*). *TR bidders* can also review the status of their accepted *TR bids* during the *TR auction* via the *TR auction* system. Refer to <u>Transmission</u> <u>Rights Auction System - A Participant's Guide</u> for more information on the *TR auction* system.

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

If for any reason a *TR bid* cannot be submitted or accepted during an active *TR auction* round, and provided that all conditions and requirements for *TR bid* data submission are met, then contact *IESO* Customer Relations as per <u>Section 1.4</u>.

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*, the *IESO* will first issue an advisory notice via the *IESO* website that explains the cause of the delay (if known) and the expected duration. Subsequently, the *IESO* may, for reasons of a failure in the *TR bidder's* or the IESO's software, hardware, or communication systems associated with a *TR auction* (as per 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 <u>Appendix H</u> (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 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* (Ch.8, S.4.1.6.3 of the *market rules*).

⁶ The Transmission Rights Auction system always operates on Eastern Standard Time (EST).

The IESO will 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 the IESO intends to implement (the IESO must notify all TR participants before taking any of these steps) (Ch.8, S.4.1.7 of the market rules). TR participants who wish to participate in a TR auction that is being conducted under contingency procedures and/or revised timelines, shall comply with any applicable contingency procedure, revised activity schedules, or revised timelines specified by the IESO (Ch.8, S.4.1.8 of the market rules).

3.2 Determination and Publication of TR Auction Results

Following the period for accepting *TR bids* during the *TR bid* submission window of a given round of a *TR auction*, the *IESO* determines the *TR* quantities to be awarded and *TR market clearing price* for each transmission path for that round⁷ (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 bid submission window for a subsequent round), the IESO makes TR participant-specific reports available to each TR participant who has purchased TRs in the auction round, which details their purchases (Ch.8, S.4.16.1 of the market rules). This report is available through the IESO Gateway. The IESO also publishes a summary of the TR auction results on the IESO website. (See Appendix E for the information to be provided in the TR participant-specific report and public report.)

3.3 Procedural Steps for the TR Auction

Step	Completed by	Action
1	IESO	At least 30 days prior to each <i>TR auction</i> , the <i>IESO</i> determines and <i>publishes</i> the pre-auction publication data (see <u>Appendix B</u>) on the <i>IESO</i> website to provide information on the upcoming <i>TR auction</i> .
2	IESO	Prior to each <i>TR auction</i> , the <i>IESO</i> makes information on the upcoming <i>TR auction</i> available that <i>TR participants</i> can access through the <i>IESO</i> Gateway. Refer to <u>Transmission Rights Auction System - A Participant's Guide</u> for an overview of the <i>TR auction</i> system.
3	TR Participant	Access and view pre-auction publication data and <i>TR auction</i> information available on the <i>IESO</i> website and <i>IESO</i> Gateway.
4	TR Participant	Submit <i>TR bids</i> for the <i>TR auction</i> via the <i>IESO</i> Gateway. The <i>TR bid</i> submission window opens at 09:00 EST, two (2) <i>business days</i> before the <i>TR auction</i> , and closes no later than 17:00 EST, one business day before the <i>TR auction</i> .
5A	IESO	Receive, time stamp, and validate <i>TR bids</i> . Issue acceptance confirmation for <i>TR bids</i> that are accepted. <i>TR bids</i> are rejected if the: • Date/time of the <i>TR bid</i> submission is outside the <i>TR bid</i> submission window,

Table 3-1: Procedural Steps for the TR Auction

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⁷ It should be noted that under certain tie breaking conditions not all *TR*s available can be allocated without violating the feasibility requirement due to rounding of results. These unallocated *TR*s may be available for future auctions.

Step	Completed by	Action
		• TR bid would increase the aggregate of all TR bids the TR participant has submitted for that auction to a value that exceeds their bidding limit,
		Price submitted is zero or a negative, or
		• TR bid's MW quantity exceeds the total amount of TRs available in that round of the auction.
5B	IESO	For any rejected <i>TR bids</i> , notify the <i>TR participant</i> that their submission was invalid and include the reason(s) for rejecting.
5C	TR Participant	Correct and resubmit TR bid, if desired (within the TR bid submission window).
5D	IESO	Repeat step 5A.
6	IESO	On the specified <i>TR auction</i> day, run the <i>TR auction</i> and determine <i>TR market clearing prices</i> and winning <i>TR bids</i> .
7	IESO	By the end of the next <i>business day</i> , and prior to the opening of the <i>TR bid</i> submission window for submitting <i>TR bids</i> in any subsequent <i>TR auction</i> round.
		• Issue a <i>TR Participant Bid</i> Notification Report for each <i>TR participant</i> who was awarded <i>TR</i> s in the <i>TR auction</i> . This report details each purchase and is available at <i>IESO</i> Reports. Refer to the Transmission Rights Auction System – A Participant's Guide for further information.
		• Publish the overall results of the auction round through the Post Auction TR Market Clearing Price Report on the IESO website. See Appendix E for the information contained in the reports.

– End of Section –

4. 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 the *IESO*, or the full amount owing 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 5.7: Financial Markets Settlement Statements and Market Manual 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 5.9: Settlement Payment Methods and Schedule for more information on the process of paying *invoices*.

4.1 Default in Payment

When a successful *TR bidder* fails to remit to the IESO 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.4.20.1 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 *TR*s awarded to the *TR bidder* during the applicable *TR auction* (Ch.8, S.4.20.2.2 of the *market rules*).

If a TR bidder defaults on a payment, the IESO may impose reductions of the TR market deposit multiplier for the setting of TR bid limits for the TR bidder's future TR auctions as follows:

1st default – TR bid limit multiplier lowered from 10 to 8 times

2nd default – TR bid limit multiplier lowered from 8 to 5 times

3rd 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.

4.2 Payments to TR Holders

Payments to *TR holders* will occur through the *physical markets settlement statement* process detailed in <u>Market Manual 5.5: Physical Markets Settlement Statements</u>. 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 *transmission 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).

Appendix A: Forms

This appendix contains a list of forms associated with the procedure for *transmission rights auctions*, which are available on the <u>IESO's website</u>. The forms included are as follows:

Table A-1: Forms Associated with Transmission Rights Auctions

Form Number	Form Name
<u>IMO_FORM_1361</u>	TR Auction Information
IMO FORM 1374	Notice of Revocation of Transmission Rights
FORM-84	Application for Recognition of the Assignment of Transmission Rights
<u>FORM-85</u>	Agreement to Recognize the Assignment of Settlement Amounts Under a Transmission Right

Appendix B: Pre-auction Publication

The *IESO publishes* the following information at least 30 days prior to each *TR auction* as part of the *TR* Pre-Auction Report published on the *IESO* website (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 zone¹ 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 flows² 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 interconnection³ 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*, 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*) and forecasted amount of *TR*s available.

¹ Zonal Prices determined by the last run of the pre-dispatch unconstrained schedule.

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

³ 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 the *IESO publishes* the financial report, which summarizes the following quantities for the previous month:

Table C-1: TR Monthly Financial Report Quantities

Quantity	Definition
Monthly Congestion Rents	The amount collected by the <i>IESO</i> 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 TR holders.
Manual Adjustment	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 <i>TR</i> payouts
Dead-band	A range for the cumulative difference between congestion rents and <i>TR</i> payments per path for which no adjustments to the financial upper limit will be necessary.

Timeline Monthly Financial Report

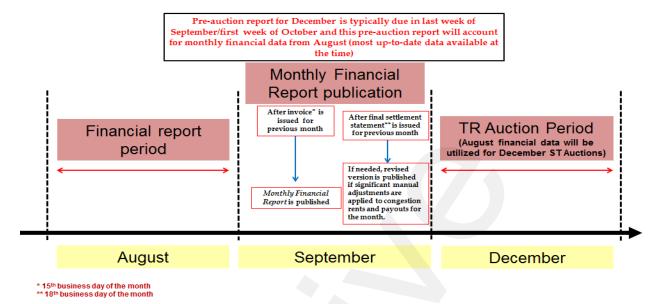


Figure C-1: Timeline - Monthly Financial Report

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* submission window).

The monthly financial report will be published after release of the financial *invoice*, as per the *Physical Market Settlement Schedule and Payments Calendar (SSPC)* for the current year, which can be found on the <u>Market Calendars page</u> of the *IESO* website. A revised version of the monthly financial report 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 the *SSPC*).

Appendix D: TR Path Information

The following section explains how the forecast *transmission transfer capabilities* presented in pre-auction reports are obtained.

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.

Appendix E: TR Auction Results

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 <u>Transmission Rights Auction System - A Participant's Guide</u> for more information on these reports.

Appendix F: TR Market Deposit

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 the *IESO* (as set out in Ch.8, S.4.8.2B of the *market rules*).

Appendix G: Summary of Transmission Rights

Table F-1: Summary of Transmission Rights

Item	Description
Nature of <i>TR</i>	A contractual right to receive a <i>settlement amount</i> based on the difference between <i>energy</i> prices at different withdrawal and injection locations from and into the Ontario market and the adjacent <i>control area</i> .
Issuer	Independent Electricity System Operator (IESO)
Notional amount	1 MW per hour
Withdrawal and injection zones	Each Transmission Right (TR) will specify a withdrawal and injection zone, one of which will be the Ontario zone. The other zone will be one of: New York Michigan Minnesota Quebec ()
TR Payout Process	 The payout for any hour will be Max [0, Q_{TR} x (P_w less P_i)]. Q_{TR} is the number of TRs owned by a TR participant on a specific path P_w is the IESO-determined TR settlement price (in Cdn \$/MWh) for the withdrawal zone P_i is the IESO-determined TR settlement price (in Cdn \$/MWh) for the injection zone. For all amounts payable with respect to TRs in any calendar month, TR holders will receive TR payments through the physical settlement invoicing and payment process.
Determination of P _w and P _i	The TR settlement price for each price zone will be the final prices used in the settlement process. In Ontario, the TR settlement price will be the Ontario energy market price, or EMP (uniform prices inside Ontario). For each external price zone, the TR settlement price will be the Ontario EMP plus the intertie congestion price. [This is the Ontario EMP minus the EMP at the relevant metering point, and the EMP at the relevant metering point is ICP plus Ontario EMP.] The intertie congestion price is the price difference between the Ontario EMP and the external zone price as determined in the projected hourly market schedule. In the event of a market suspension, administrative pricing details are found in Market Manual 4.5: Market Suspension and Resumption.

Item	Description
Term	TRs will be available for one-calendar-month and one-calendar-year period. Each TR will cover all hours in the periods. The IESO will not make TRs available for specific hours within a period (such as peak or off-peak hours).
Position Restrictions	Position restrictions will not be imposed, but the <i>TR participant</i> is subject to market surveillance.
TR Market Clearing Price Per Path	The price as determined by competitive auctions to be held monthly and quarterly. Purchase price for <i>TR</i> s per direction is payable in full after the conclusion of an auction round through the financial <i>settlement</i> invoicing and payment process.
Ownership restrictions	Participation in the <i>TR auctions</i> is restricted to entities authorized as <i>TR participants</i> by having signed a <i>participation agreement</i> with the <i>IESO</i> before the auction (see Section 2.1).
	Bidding limits for each auction must be established five (5) business days before the TR bid submission window opens. Bidding limits are set at 10 times each TR participant's TR market deposits posted for that round of the TR auction, unless the IESO determines otherwise.
	The TR participant chooses the TR market deposit amount.
Re-sale	 The following TR market feature is not currently available: TR holders may offer their TRs for re-sale into subsequent TR auctions.
Assignment	TR holders may assign their TR to another registered TR participant subject to IESO verification. Refer to FORM-84: Application for Recognition of the Assignment of Transmission Rights and FORM-85: Agreement to Recognize the Assignment of Settlement Amounts Under a Transmission Right. This is in line with C.8, S.4.9 of the market rules.

Appendix H: TRA Contingency Procedures

H.1 Triggering Events

This Appendix contains information on the *IESO* contingency procedures for operating the *Transmission Rights* market in the event that the *Transmission Rights* Auction System, accessed through the *IESO* Gateway, is unavailable during an active *TR Auction*. The *IESO* 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 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* (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 *participant workstation* including:
 - o Hardware,
 - Software, or
 - o Communications components.
- Failure in any of the IESO's TR and associated systems including:
 - o 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, the *IESO* will declare that the *TR auction* has experienced a contingency through a public advisory process. Prior to taking any action, the IESO 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*). *TR participants* who wish to participate in a *TR auction* being conducted under contingency procedures and/or revised timelines shall comply with any applicable contingency procedure, revised activity schedules, or revised timelines specified by the IESO (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), a *TR participant* 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 the IESO shall not accept TR bids/offers outside a specified timeframe. There is no specific duration within the specified timeframe for which the TR bid/offer submission window must be open. While the IESO intends to accept TR bids/offers during the entire TR bid submission window, there may be instances where significant tool failure will not allow this.

H.3 Overriding Concerns/Principles for Contingency

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

As a general principle, the *IESO* applies 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 (2) business days prescribed by the market rules (from 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* submission window.

References

Document ID	Document Title
MDP_RUL_0002_08	Market Rules Chapter 8: Physical Bilateral Contracts and Financial Markets
MDP PRO 0030	Market Manual 4.5: Market Suspension and Resumption
MDP PRO 0033	Market Manual 5.5: Physical Markets Settlement Statement
MDP_PRO_0046	Market Manual 5.7: Financial Markets Settlement Statement
MDP PRO 0047	Market Manual 5.8: Financial Market Settlement Invoicing
MDP PRO 0036	Market Manual 5.9: Settlement Payment Methods and Schedule
IMO MAN 0024	Market Manual 6: Participant Technical Reference Manual
N/A	Schedule to the Bank Act, S.C. 1991, C.46
IMO GDE 0004	Transmission Rights Auction System Participant's Guide

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