

PUBLIC



PROCEDURE

Market Manual 4: Market Operations

Part 4.4: Transmission Rights Auction

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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	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 Transition

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

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

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

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

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

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

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

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

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

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

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

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

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commenced, continued or enforced, and any sanction or penalty may be imposed, as if the *legacy market rules* had not been revoked.

Market Manuals

Market manuals set out procedural and administrative details with respect to market rule requirements. Where there is a conflict between the requirements described in a market manual or appended document, and those within the market rules, the market rules shall prevail.

Market Manual Conventions

The standard conventions followed for *market manuals* are as follows:

- The word 'shall' denotes a mandatory requirement;
- References to *market rule* sections and sub-sections may be abbreviated in accordance with the following representative format: '**MR Ch.1 ss.1.1-1.2**' (i.e. *market rules*, Chapter 1, sections 1.1 to 1.2);
- References to *market manual* sections and sub-sections may be abbreviated in accordance with the following representative format: '**MM 1.5 ss.1.1-1.2**' (i.e. *market manual* 1.5, sections 1.1 to 1.2);
- Internal references to sections and sub-sections within this manual take the representative format: 'sections 1.1 – 1.2';
- Terms and acronyms used in this *market manual* and its appended documents that are italicized have the meanings ascribed thereto in **MR Ch.11**;
- All user interface labels and options that appear on the IESO gateway and tools are formatted with the bold font style;
- Data fields are identified in all capitals;
- ~~Double quotation marks are used to indicate titles of legislation, publications, forms and other documents; and~~
- ~~Any procedure specific convention(s) shall be identified within the relevant appended procedure document.~~

– End of Section –

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 **MM 5.8: Settlement Invoicing**.

The *settlement* of payments due to *TR holders* is addressed in **MM 5.5: IESO Administered Markets Settlement Amounts**.

~~1.3. Roles and Responsibilities~~

~~Responsibility for submitting *TR bids* for *transmission rights* and operating the *TR market* is shared among registered *TR participants* and the *IESO*.~~

~~1.3.1. Registered TR Participants~~

~~Registered *TR participants* 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;~~
- ~~• viewing the *TR auction* results; and~~
- ~~• following *IESO* published notifications and contingency procedures for *TR auctions*.~~

~~1.3.2. IESO~~

The ~~IESO~~ is responsible for:

- ~~determining the number of TRs available for each TR auction;~~
- ~~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.~~

This *market manual* supplements the following *market rules*:

- MR Ch.8, s.3: The Transmission Rights Market
- MR Ch.7 s.4.7.2.8

~~1.4.1.3.~~ Contact Information

Changes to this *market manual* are managed via the [IESO Change Management process](#). Stakeholders are encouraged to participate in the evolution of this *market manual* via this process.

To contact the *IESO*, ~~you~~ *market participants* can email *IESO* Customer Relations at customer.relations@ieso.ca or use telephone or mail. Telephone numbers and the mailing address can be found on the ~~IESO website~~ (<http://www.ieso.ca/corporate-ieso/contact>). ~~IESO website~~. *IESO* 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 ~~Appendix A~~. [Appendix A](#). These forms can be downloaded from [Market Rules and Manuals](#) page of the *IESO* website. These forms, as well as the accompanying

supporting documentation are emailed to *IESO* Operations Integration at market.registration@ieso.ca, with **Transmission Rights Auction** stated in the Subject line.

– End of Section –

2. Transmission Rights Overview

Transmission rights (TRs) are financial instruments that entitle the holder to a *settlement amount* based on the external congestion component of *day-ahead market intertie congestion prices*. *Market participants* that trade *energy* across an *intertie* may only use *TRs* to hedge against *day-ahead market* external congestion costs resulting from binding import and export transmission limits at an *intertie zone*. *TRs* cannot be used to hedge *intertie congestion prices* in the *real-time market*, nor any other component of *intertie congestion prices* in the *day-ahead market*.

~~Appendix G~~ [Appendix G](#) 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 Transmission Rights Market

(MR Ch.8 ss.3.2.2, 3.4.1, 3.8.2 and 3.12.1)

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 conducted¹. 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 (**MR Ch.8 s.3.8.2**).

The *IESO* conducts separate auctions for *short-term* and *long-term TRs* (refer to ~~section 3~~-[section 3](#)). *TR bids* submitted to the *TR auction* are subject to the *bidding limits* established as a function of the *TR market deposit* described in ~~section 2.3~~-[section 2.3](#). *TRs* are auctioned and traded in increments of 1 megawatt (MW) (~~as per MR Ch.8 s.3.2.2~~)-[as per MR Ch.8 s.3.2.2](#)). 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 external congestion component of the *intertie congestion price* for a particular *intertie zone* in the *day-ahead market*³ (**MR Ch.8 s.3.4.1**). The total amount of *short-term TRs* 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.

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 *TR* settlement is always positive and *TR participants* must hold the *TRs* in the same direction as the congestion.

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 day-ahead *intertie energy locational marginal price* and the external congestion component for each *TR zone* historical *day-ahead market intertie* schedules, forecast available transfer capability, forecasted total *TRs* available, and other related information that may be used by *TR participants* in determining their appropriate bidding strategy. Refer to [Appendix B](#) for the information that is *published* (as per **MR Ch.8 s.3.12.1**).

2.2. Day-Ahead Market Input

To ensure that the *day-ahead market external congestion rent* collected by the *IESO* is 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 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 *day-ahead market external congestion rent* collected and *TR* payouts on a per-path basis⁴. The financial upper limit is

⁴ From March 2017 until MRP commencement date, the *IESO* has calculated the financial upper limit based on net cumulative balance between the congestion rents collected and *TR* payouts on a per path basis in the *real-time market*. Post MRP, the financial upper limit will be calculated in the same way except in the *day-ahead market*.

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 *day-ahead market external congestion rent* collected 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 [Appendix C](#). 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:

Table 2-1: Financial Upper Limit Adjustment 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**
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%
<p>* The Transmission Rights Clearing Account (TRCA) threshold is currently \$20M</p> <p>** Transmission Rights (TR) offered will not be increased when TRCA balance is below threshold</p>		

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; or
- 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 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:

- 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; or
- 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

(MR Ch.8 ss.3.8.3.1, 3.8.3.2, 3.14.1, 3.14.3, 3.14.4, 3.14.5.1, 3.14.5.2, 3.20.4.1 and 3.20.4.2)

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 ~~Appendix F~~Appendix F) provided by an *IESO*-approved bank (**MR Ch.8 s.3.8.3.1**); or
- Cash deposits made with the *IESO* by the *TR participant*, or on the *TR participant's* behalf (**MR Ch.8 s.3.8.3.2**).

TR market deposits made in cash may be submitted by *electronic funds transfer* to an *IESO* designated account detailed in ~~Appendix F~~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* (**MR Ch.8 s.3.14.1**).

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 (**MR Ch.8 s.3.20.4.2**). 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 (**MR Ch.8 s.3.20.4.1**).

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 *TR Auction* application while the auction is available via Online *IESO* at the end of the *business day* prior to the commencement of an auction Round.

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 (**MR Ch.8 s.3.14.3**). Where the cash element of a *TR market deposit* exceeds the amount owed by the *TR bidder*, the *IESO* (as per **MR Ch.8 s.3.14.4**) 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 (**MR Ch.8 s.3.14.5.1**); or
- Retain the Letter of Credit as part of the *TR bidder's TR market deposit* for subsequent *TR auctions* (**MR Ch.8 s.3.14.5.2**).

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 (**MR Ch.8 s.3.20.1**). *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 auction* and for each *long-term auction*, until such time as the *invoices* are issued and paid in full (**MR Ch.8 s.3.20.1**).

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*.

The *TR auction* application pulls data from a database that will not accept non-whole dollar values, or *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 *TRs* 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 *TR auction* application, if applicable.

2.4. TR Bid Data Requirements

(MR Ch.8 ss.3.13.1 and 3.14.2)

TRs bids are submitted during a *TR auction* via the *Transmission Rights Auction* application, which is accessed through Online IESO. A *TR bid* must conform to the requirements set out in MR Ch.8 s.3.13.1. Some of the required information, such as the name of the *TR bidder* will be automatically populated by the *Transmission Rights Auction* application.

To clarify the requirement set out in **MR Ch.8 s.3.13.1.5**, *TR laminations* in monotonically increasing quantities with decreasing prices means that the first *TR lamination* of a *TR bid* must be the *TR lamination* with the lowest total quantity and the highest price with each subsequent *TR lamination* having a higher total quantity and lower price relative to the immediately prior *TR lamination*.

Further information on the *IESO Transmission Rights Auction* system is available in the [Transmission Rights Auction System - A Participant's Guide](#)⁵.

2.5. Procedural Steps for TR Market Deposits

Table 2-2: Procedural Steps for TR Market Deposits

Step	Completed by	Action
1	Market Participant	<p>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.</p> <p>Complete and submit IMO FORM 1361: TR Auction Information indicating the submission of, or update to, the <i>TR market deposit</i> 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.</p> <p>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.</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>
2	IESO	<p>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> (refer to section 2.1).</p>

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

Step	Completed by	Action
3A	<i>IESO</i>	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.
3B	<i>IESO</i>	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's bidding limit</i> to zero so that the <i>TR participant</i> is not authorized to participate in the auction as requested.
4	<i>IESO</i>	<p>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 its databases that will be reflected in the <i>TR auction</i> application.</p> <p>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>.</p> <p>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.</p>
5	<i>IESO</i>	<p>After the <i>TR auction</i>, the <i>IESO</i> determines the amount of excess <i>TR market deposit</i>, if any.</p> <p>Once amounts owed by the <i>TR participant</i> for <i>TRs</i> are accounted for, in the case of cash <i>TR market deposits</i>; or</p> <p>Once invoices 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>.</p> <p>If the <i>TR participant</i> did NOT request a credit, the <i>IESO</i> will include the excess in its assessment of the participant's <i>TR market deposit</i> for future <i>TR auctions</i>.</p>

– End of Section –

3. Auctions of Short-Term and Long-Term TRs

(MR Ch.8 ss.3.10.1, 3.10.2, 3.11.1, 3.11.2, 3.11.5 and 3.11.9)

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

A *short-term TR auction* is held between the 1st and 15th day of each month to sell *TRs* valid for the immediately following one-month period (**MR Ch.8 s.3.10.1**). Each of these *short-term TR auctions* consists of a single round (**MR Ch.8 s.3.10.2**).

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 (**MR Ch.8 s.3.11.1**). 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 (**MR Ch.8 s.3.11.2**).

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 (**MR Ch.8 s.3.11.5**). 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 (**MR Ch.8 s.3.11.7**). 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.

Each *TR auction* has a unique name that reflects the time associated with the *TRs* being auctioned (**MR Ch.8 s.3.11.2**). The naming convention is 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_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

(MR Ch.8 ss.3.1.6, 3.1.6.1 – 3.1.6.3, 3.1.7, 3.1.8, 3.13.1.5, 3.13.4, 3.13.8 and 3.14.2)

TR bidders may submit *TR bids* through the *TR auction* application 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* (**MR Ch.8 s.3.13.4**).

The *TR auction* application validates all *TR bids* and *TR laminations* that are submitted and will not allow a *TR bid* to be submitted where the *TR bid* or its associated *TR laminations* do not conform with the requirements of **MR Ch.8 ss.3.13.1** and **3.13.5** or where such *TR bid* causes the *TR bidder* to exceed its *bidding limit* as determined in accordance with **MR Ch.8 s.3.14.2**.

The *TR auction* application notifies the *TR bidder* whether their *TR bid* has been accepted or why the *TR bidder* was unable to submit the *TR bid* (**MR Ch.8 s.3.13.8**). *TR bidders* can also review their accepted *TR bids* during the *TR auction* via the *TR auction* application. Refer to [Transmission Rights Auction System - A Participant's Guide](#) for more information on the *TR auction* application.

Changes can be made to both the quantity and the price of a *TR lamination* at any time before the *TR bid* submission window has closed by submitting the required changes through the *TR auction* application, which overwrites previous submissions. In addition, *TR bidders* can delete a *TR bid* or any associated *TR lamination* at any time before the *TR bid* submission window has closed through the *TR auction* application. If a *TR bidder* changes or deletes a *TR lamination* the *TR bidder's* previous *TR bid* submission will be overwritten and a new time stamp will be generated as of the time of the edit or deletion.

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

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 [section 1.4](#).

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 **MR Ch.8 s.3.1.6**):

- Conduct a *TR auction* using contingency procedures, including but not limited to those detailed in [Appendix H](#) (**MR Ch.8 s.3.1.6.1**),
- Conduct a *TR auction* and related activities along timelines other than those specified in the *market rules* (**MR Ch.8 s.3.1.6.2**), 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* (**MR Ch.8 s.3.1.6.3**).

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) (**MR Ch.8 s.3.1.7**). *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* (**MR Ch.8 s.3.1.8**).

3.2. Determination and Publication of TR Auction Results

(MR Ch.8 ss.3.15.1, 3.16.1 and ~~3-168.1~~)

Following the period for accepting *TR bids* during the *TR bid* submission window of a given round of a *TR auction*, the *IESO* determines, in accordance with **MR Ch.8 App.8.1**, the *TR* quantities to be awarded and *TR market clearing price* for each transmission path for that round⁷ (**MR Ch.8 s.3.5.1 and s.3.15.1**).

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 (**MR Ch.8 s.3.16.1**). This report is available through the participants reports page via the [IESO reports site](#). The *IESO* also *publishes* a summary of the *TR auction* results. (Refer to [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

Table 3-1: Procedural Steps for the TR Auction

Step	Completed by	Action
1	<i>IESO</i>	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 (refer to Appendix B) to provide information on the upcoming <i>TR auction</i> .
2	<i>IESO</i>	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>TR auction</i> application. Refer to Transmission Rights Auction System - A Participant's Guide for an overview of the <i>TR auction</i> system.
3	<i>TR Participant</i>	Access and view pre-auction publication data and <i>TR auction</i> information available on the <i>IESO</i> website and <i>TR auction</i> application.
4	<i>TR Participant</i>	Submit <i>TR bids</i> for the <i>TR auction</i> via Online <i>IESO</i> . 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> .

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

Step	Completed by	Action
5A	<i>IESO</i>	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 applicable, in accordance with section 3.1 .
5B	<i>IESO</i>	For any <i>TR bids</i> or <i>TR laminations</i> that the <i>TR bidder</i> was unable to submit, notify the <i>TR participant</i> that their submission was invalid and include the reason(s).
5C	<i>TR Participant</i>	Correct and resubmit <i>TR bid</i> , if desired (within the <i>TR bid</i> submission window).
5D	<i>IESO</i>	Repeat step 5A.
6	<i>IESO</i>	On the specified <i>TR auction day</i> , run the TR auction and determine <i>TR market clearing prices</i> and winning <i>TR bids</i> .
7	<i>IESO</i>	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 Notification Report</i> for each <i>TR participant</i> who was awarded <i>TRs</i> in the <i>TR auction</i> . This report details each purchase and is available at <i>IESO Reports</i> . Refer to the Transmission Rights Auction System – A Participant's Guide for further information. <i>Publish</i> the overall results of the auction round through the Post Auction TR Market Clearing Price Report on the <i>IESO</i> website. Refer to 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*. Refer to **MM 5.8: ~~Settlement Invoicing~~** 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 **MM 5.9: ~~Settlement Payment Methods and Schedule~~** Refer to **MM 5.9** for more information on the process of paying *invoices*.

4.1. Default in Payment

(MR Ch.8 ss.3.20.1 and 3.20.1.2)

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 (**MR Ch.8 s.3.20.1**). In addition, the *TR bidder* will forfeit the lesser of the:

- *TR market deposit* (**MR Ch.8 s.3.20.1.2**), 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* (**MR Ch.8 s.3.20.1.2**).

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

(MR Ch.8 s.3.4.2)

Payments to *TR holders* will occur through the *physical markets settlement statement* process detailed in **MM 5.5: ~~IESO Administered Markets Settlement Amounts~~** **MM 5.5**. A planned or *forced outage* to an *interconnection* may reduce

the *transmission transfer capability* between a withdrawal *TR zone* and an injection *TR zone*, determined for the *day-ahead market*, to zero (**MR Ch.8 s.3.4.2**). In such circumstances, the amount payable to the *TR holder* of a *TR* associated with such *TR zones* will be zero.

TR holders do not receive a credit relating to the purchase cost of a *TR* for the period during which the *outage* has occurred (**MR Ch.8 s.3.4.2**).

4.2.1. Day-Ahead Market Failure

(MR Ch.8 s.3.4.3)

Following the determination of a *day-ahead market* failure or if the *day-ahead market* is suspended, the amount owing by the *IESO* in respect of a *transmission right* that is valid for a *settlement hour* during the time when the *day-ahead market* has failed or suspended will be zero (**MR Ch.8 s.3.4.3**).

– End of Section –

Appendix A: Forms

This appendix contains a list of forms associated with the procedure for *transmission rights auctions*, which are available on the [IESO website](#). The forms included are as follows:

Table A-1: Forms Associated with Transmission Rights Auctions

Form Number	Form Name
IMO FORM 1361	TR Auction Information
IMO FORM 1374	Notice of Revocation of Transmission Rights
FORM-84	Application for Recognition of the Assignment of Transmission Rights
FORM-85	Agreement to Recognize the Assignment of Settlement Amounts Under a Transmission Right

– End of Appendix –

Appendix B: Pre-auction Publication

(MR Ch.7 ~~sss~~.4.B.1, MR Ch.8 ss.3.7.2 and 3.12.1.1 – 3.12.1.5)

The *IESO publishes* the following reports at least 30 days prior to each *TR auction* on the *IESO* website (**MR Ch.8 s.3.12.1**):

- DAM Hourly Intertie Energy Price Report (**MR Ch.7 s.4.B.17.2.8**, **MR Ch.8 s.3.12.1.1**);
- TR Hourly Zonal Price Report (**MR Ch.8 s.3.12.1.1**);
- TRA Pre-Auction MCP Report (**MR Ch.8 s.3.12.1.2**);
- ~~DAM~~ Monthly Day-Ahead Historical Interface ~~Flows, Schedules~~ FSchedules, Transmission Transfer Capability (**MR Ch.8 s.3.12.1.3** and **3.12.1.4**);
- Pre-Auction Report for Long Term Transmission Rights (**MR Ch.8 s.3.7.2** and **3.12.1.5**);
- Pre-Auction Report for Short Term Transmission Rights (**MR Ch.8 s.3.7.2** and **3.12.1.5**);

– End of Appendix –

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 <i>interties</i> due to a price difference resulting from external congestion between the <i>locational marginal price</i> and the <i>intertie border price</i> at a particular <i>intertie zone</i> in the <i>day-ahead market</i> .
Monthly TR Payouts	The payments made to <i>TR holders</i> .
Manual Adjustment	The adjustments made manually to external congestion rents or <i>TR</i> payouts amounts.
Cumulative Congestion Rents	Sum of <i>day-ahead market external congestion rent</i> collected starting from MM YYYY.
Cumulative TR Payouts	Sum of <i>TR</i> payouts starting from MM YYYY.
Cumulative Manual Adjustment	Sum of manual adjustments starting from MM YYYY.
Cumulative Net Balance	Sum of cumulative <i>day-ahead market external congestion rent</i> collected and cumulative manual adjustment minus cumulative <i>TR</i> payouts.
Dead-band	A range for the cumulative difference between <i>day-ahead market external congestion rent</i> and <i>TR</i> payments per path for which no adjustments to the financial upper limit will be necessary.

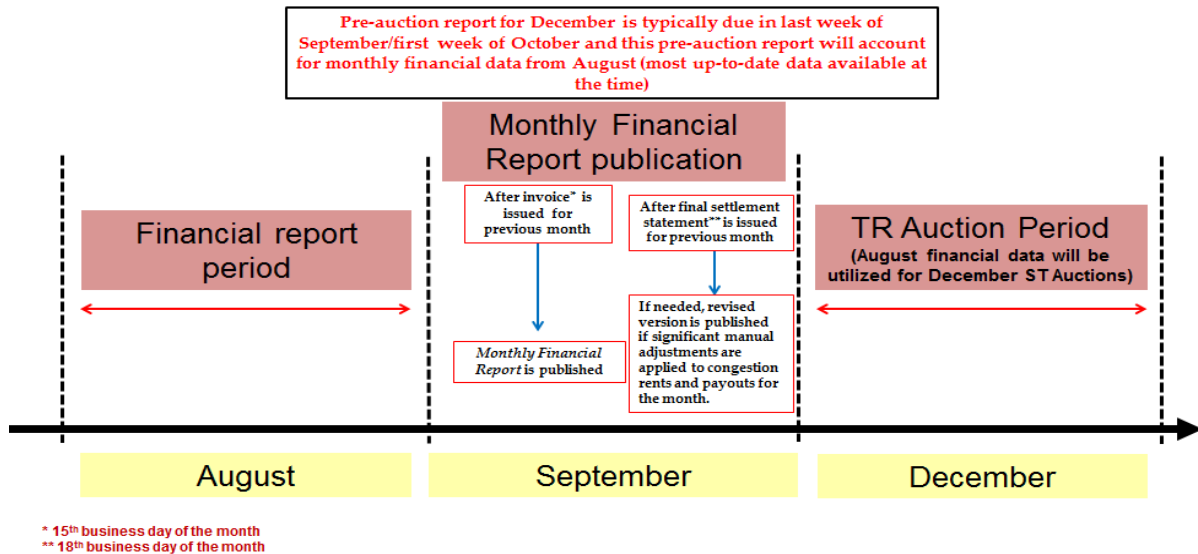


Figure C-1: Timeline – Monthly Financial Report

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 [Market Calendars page](#) of the *IESO* website. A revised version of the monthly financial report will be released only when the significant manual adjustments are applied to the *day-ahead market external congestion rent* collected or payouts for the applicable period in the financial *settlement statement* (released as per the *SSPC*).

– End of Appendix –

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 day-ahead 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 ATCs at any time.

– End of Appendix –

Appendix E: TR Auction Results

(MR Ch.8 ss.3.16.1 and 3.16.3)

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:

- Participant Notification Report (via Participant Reporting) for each *TR participant* (**MR Ch.8 s.3.16.1**).
- A Post-Auction Sales and Price Report is available to the public (**MR Ch.8 s.3.16.3**).

Refer to [Transmission Rights Auction System - A Participant's Guide](#) for more information on these reports.

– End of Appendix –

Appendix F: TR Market Deposits

(MR Ch.8 ~~sss~~.3.8.4)

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 **MR Ch.8 s.3.8.4**).

– End of Appendix –

Appendix G: Summary of Transmission Rights

Table G-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 external congestion component of the <i>intertie congestion price</i> at different withdrawal and injection locations from and into the Ontario market and the adjacent <i>control area</i> in the <i>day-ahead market</i> .
Issuer	<i>Independent Electricity System Operator (IESO)</i>
Notional amount	1 MW per hour
Withdrawal and injection zones	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: New York Michigan Minnesota Manitoba Quebec
TR Payout Process	The payout for any <i>settlement hour</i> will be as outlined in MR Ch.8. s3.4 . For all amounts payable with respect to <i>TRs</i> in any calendar month, <i>TR holders</i> will receive <i>TR</i> payments through the physical <i>settlement</i> invoicing and payment process.
Determination of P_w and P_i	The <i>TR settlement price</i> for each <i>intertie zone</i> will be the external congestion price in the <i>day-ahead market</i> . In the event of a <i>day-ahead market</i> suspension, the <i>TR settlement</i> for each <i>intertie zone</i> will be zero (as set out in MR Ch.8 s.3.4.3). For information about <i>administrative pricing</i> in the <i>day-ahead market</i> , refer to MM 4.2: Operation of the Day-Ahead Market.
Term	<i>TRs</i> will be available for one-calendar-month and one-calendar-year period. Each <i>TR</i> will cover all hours in the periods. The <i>IESO</i> will not make <i>TRs</i> available for specific hours within a period (such as peak or off-peak hours).

Item	Description
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>TRs</i> 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 (refer to section 2.1 section 2.1). <i>Bidding limits</i> for each auction must be established five (5) <i>business days</i> before the <i>TR bid</i> submission window opens. <i>Bidding limits</i> are set at 10 times each <i>TR participant's TR market deposits</i> posted for that round of the <i>TR auction</i> , unless the <i>IESO</i> determines otherwise. The <i>TR participant</i> chooses the <i>TR market deposit</i> amount.
Assignment	<i>TR holders</i> may assign their <i>TR</i> to another registered <i>TR participant</i> subject to <i>IESO</i> 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 MR Ch.8 s.3.9 .

– End of Appendix –

Appendix H: TRA Contingency Procedures

H.1. Triggering Events

(MR Ch.8 ss.3.1.6.1 – 3.1.6.3)

This Appendix contains information on the *IESO* contingency procedures for operating the *transmission rights* market in the event that the *Transmission Rights* Auction application, accessed through Online IESO, 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 (**MR Ch.8 s.3.1.6.1**);
- conduct a *TR auction* and related activities along timelines other than those specified in the *market rules* (**MR Ch.8 s.3.1.6.2**); 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* (**MR Ch.8 s.3.1.6.3**).

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

- Failure in any of the components of the participant network or participant workstation including:
 - hardware;
 - software; or
 - communications components.
- Failure in any of the *IESO's TR* and associated systems including:
 - hardware;
 - software; or
 - communications.

H.2. TRA Process for Contingency Operation

(MR Ch.8 ss.3.1.7 and 3.1.8)

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 (**MR Ch.8 s.3.1.7**). *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 (**MR Ch.8 s.3.1.8**). 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 *TR bids*;
- submit *TR bids* through an alternative method; or
- review and resubmit *TR bids*.

The *market rules* state that the *IESO* shall not accept *TR bids* outside a specified timeframe. There is no specific duration within the specified timeframe for which the *TR bid* submission window must be open. While the *IESO* intends to accept *TR bids* 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 *IESO* confirms the results of the *TR auction* are valid; and
- the *TR* application must be capable of accepting *TR bids* 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.

– End of Appendix –

List of Acronyms

Acronym	Term
ATC	<i>available transfer capability</i>
CDMS	Customer Data Management System
<i>DAM</i>	<i>day-ahead market</i>
MW	megawatt
<i>TR</i>	<i>transmission right</i>
TRCA	transmission rights clearing account

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References

Document ID & Link	Document Title
MDP RUL 0002 08	Market Rules Chapter 8: Physical Bilateral Contracts and Financial Markets
MDP PRO 0030 MDP PRO 0030	Market Manual 4.5: Market Suspension and Resumption
MDP PRO 0033	Market Manual 5.5: Physical Markets Settlement Statement
MDP PRO 0047	Market Manual 5.8: 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 <u>Bank Act</u> , S.C. 1991, C.46
IMO GDE 0004	Transmission Rights Auction System Participant's Guide

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