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Transmission Rights Market Enhancement and Platform Refresh Project

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Agenda

- Purpose of Today's Discussion
- Background
- Project Scope/Purpose
- Overview of Changes
- Expected Impact to Stakeholders
- Upcoming Work and Stakeholder Involvement
- Next steps

Purpose of Today's Discussion

- Inform Transmission Rights (TR) auction participants of upcoming changes to the TR Auction platform, including:
 - Scope of changes
 - Impacts to Market Participants
 - Estimated timing of milestones and implementation

Background – TR Market Auction Design

- Operating largely based on its original design from 2002
- Ontario Energy Board's Market Surveillance Panel (MSP) has provided recommendations and feedback regarding potential inefficiencies of the TR market
- The IESO conducted a [TR Market Review](#) (completed June 2021) in response to MSP recommendations
- One of the outcomes of the TR Market Review was the identification of certain enhancements, or high-value opportunities, that will improve its efficiency, value and function of the TR market today and in the future

Background – The TR Auction Platform

- The Ontario TR market was established at market opening in 2002. TRs were introduced as a risk management tool to enable traders to hedge the financial risks associated with uncertain congestion at the interties
- To facilitate the sale of TRs the IESO and participants utilize the TR auction platform available on the IESO gateway
- The TR auction platform is based on 15+ year old technology that is due for a refresh



Overview of Changes

Project Scope/Purpose

1. Updating TR auction platform to align with current IESO software

- Required change given the aging system/technology it was built upon
- Modern platform will improve functionality for TR auction participants
- Easier for the IESO to maintain

2. Enhance market by introducing multiple bid laminations

- A high-value opportunity that received unanimous stakeholder support from the TR Market Review that will improve flexibility for traders and encourage more active and competitive bidding
- This improvement was able to leverage the TR auction platform refresh without impacting MRP implementation

1. Upgraded Platform – New User Interface

- Users can represent multiple organizations similar to other platforms - Participants will have the opportunity to consolidate accounts
- Eliminates additional costs by leveraging existing investments such as infrastructure, security, databases, etc., this will be consistent with other IESO platforms
- Moving forward - requires further development to finalize product, updating supporting documentation (i.e. participants guide, etc.) and optional participant training to prepare for implementation

Current TR Auction Platform

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TRA Calendar Links

- TRA Schedule for 2010
- TRA Schedule for 2011
- 2010 Physical Market SSPC
- 2011 Physical Market SSPC
- 2010 Financial Market SSPC
- 2011 Financial Market SSPC

TRA Contact Info

If you have questions or feedback please contact IESO Customer Relations:
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Transmission Rights Auction Announcements

The TR Bid Window normally opens at 09:00 EST of the first day and closes at 17:00 EST of the second day.

Long-term Auctions use summer maximum ratings to determine the maximum number of TRs that can be allocated. Short-term auctions for the month maximum TR capability. Depending upon the application of the Confidence Factor, these auctions will only occur if there are unsold quantities from long-term auctions.

Transmission Rights Auction Settlement information can be found in the Financial Market Settlement Schedule and Demand Calendar.

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TRA User Web
Active Rounds

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Active Rounds | Future Rounds | TR Help

Bidding Active Rounds - Portlet

Auction Rounds

Auction Name	Time Structure	Round Number
ST_20110101-test	ST_20110101_TS-test	1

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Bidding Active Rounds - Portlet

Submit Bid

Auction Name ST_20110101-test
Path MICH-ON
Path Description Transmission Path from Michigan to Ontario
Round Quantity

Bid Quantity

Total Auction Cost per MW

Upgraded TR Auction Platform*

The screenshots illustrate the user interface for the Transmission Rights Auction platform. The top-left view shows the home page with a greeting and a list of auctions. The middle view shows the details for 'Test Auction 6', including organization limit information and a table for Round 2 (ACTIVE). The bottom-right view shows the bidding interface for 'TR PARTICIPANT CHARLIE bids for ON-MAN', with a table for adding laminations.

Home Page:

Hello, TRA.
Select an Auction to begin.

Auction List:

Auction Name	Validity Period
Test Auction 5	April 1 - 30, 2023
Test Auction 6	June 1 - July 31, 2023
LT ab auction	-
ST_20230701	March 1 - April 30, 2023
Auction_20230327_2	March 1 - 31, 2023
Test Auction 7	March 1 - 31, 2023
Test Auction 10	March 1 - 31, 2023

Test Auction 6 Details:

Organization Limit Information

Organization: TR PARTICIPANT CHARLIE
 Bid Limit: \$300,000
 Total Bids: \$4,130
 Remaining Limit: \$295,870

Round 2 (ACTIVE)

Path	Auction Quantity (MW)	Round Quantity (MW)*	Transmission Type	Bids Submitted?
ON-NY	97	42	EXPORT	●
ON-MAN	97	97	EXPORT	○
ON-MICH	97	75	EXPORT	○
QBEAU-ON	97	97	IMPORT	○
NY-ON	97	97	IMPORT	○

Bidding Interface:

TR PARTICIPANT CHARLIE bids for ON-MAN
Transmission Path from Ontario to Manitoba

Lamination	Price (\$)	Quantity (MW)	Lamination Value	Delete
1				✖

Buttons: CANCEL, SUBMIT BID

*Upgraded TR auction platform is still in development phase, and may look different than presented here when finalized

2. Multiple Bid Laminations for TR Auctions

- Stakeholders have asked for the ability to submit multiple bid laminations (price-quantity pairs) into the TR auction. Multiple price-quantity pairs are enabled for all other IESO markets (energy, OR, capacity) because of its recognized market efficiency benefits, improving competition and liquidity.
- Allows traders to express different price sensitivities when bidding.
- This change is made possible by leveraging the planned platform refresh. As this feature exists in other IESO market tools, it is anticipated to be a relatively straight forward implementation.
- Moving forward - requires Market Rule, Manual and other supporting document changes

Single Bid Lamination vs. Multi Bid Lamination

Bidding Active Rounds - Portlet

Submit Bid

Auction Name ST_20110101-test
Path MICH-ON
Path Description Transmission Path from Michigan to Ontario
Round Quantity

Bid Quantity

Total Auction Cost per MW

Save Cancel/Back

Current platform allows a single P/Q pair/lamination for a bid

Current TR Auction Platform

Single Bid Lamination vs. Multi Bid Lamination (Cont'd)

The screenshot displays the 'Transmission Rights Auction' interface for 'Test Auction 7'. It includes sections for 'Test Auction 7' details, 'Organization Limit Information', and 'Round 2' details. A callout box points to the 'Lamination' table in the bid submission form, highlighting the 'Lamination Value' column.

Test Auction 7
Auction Type: Long Term (LT)
Validity Period: March 1 - 31, 2023

Organization Limit Information
Organization: TR PARTICIPANT CHARLIE
Bid Limit: \$300,000
Total Bids: \$2,000
Remaining Limit: \$298,000

Round 1
Start: 2023-05-02 19:00 EST
End: 2023-05-04 19:00 EST
Round Fraction: 0.25
Status: CLOSED

Round 2
Start: 2023-05-03 19:00 EST
End: 2023-06-29 19:00 EST
Round Fraction: 1
Status: ACTIVE

Round 2 (ACTIVE)

Path	Auction Quantity (MW)	Round Quantity (MW)*	Transmission Type	Bids Submitted?
MICH-ON	200	200	IMPORT	✔
MAN-ON	200	200	IMPORT	○
ON-NY	200	200	EXPORT	○

TR PARTICIPANT CHARLIE bids for MAN-ON
Transmission Path from Manitoba to Ontario.


Lamination	Price (\$)	Quantity (MW)	Lamination Value	Delete
1				✘
2				✘
3				✘
4				✘
5				✘
6				✘

Buttons: CANCEL, SUBMIT BID

Updated platform will allow for up to 20 P/Q pairs/laminations for a bid

Updated TR Auction Platform*

*Upgraded TR auction platform is still in development phase, and may look different than presented here when finalized



Expected Impact, Upcoming Work and Stakeholder Involvement

Expected Impact to Stakeholders

1. New TRA User Interface

- No software/hardware changes for participants
- Testing/learning by TR auction participants
- Easier/more efficient to navigate and use
- **Minor** Impact - change to the look and feel of the platform is similar to other tools the IESO uses (i.e., capacity auction)

2. Enhancement to allow TR auction participants to submit multiple bid laminations

- **Minor/Medium** Impact - users will have the choice to continue to bid with same strategy or expand their bidding strategies to display different price sensitivities

Improved platform with additional choice and added value for participants

Upcoming Work and Stakeholder Involvement

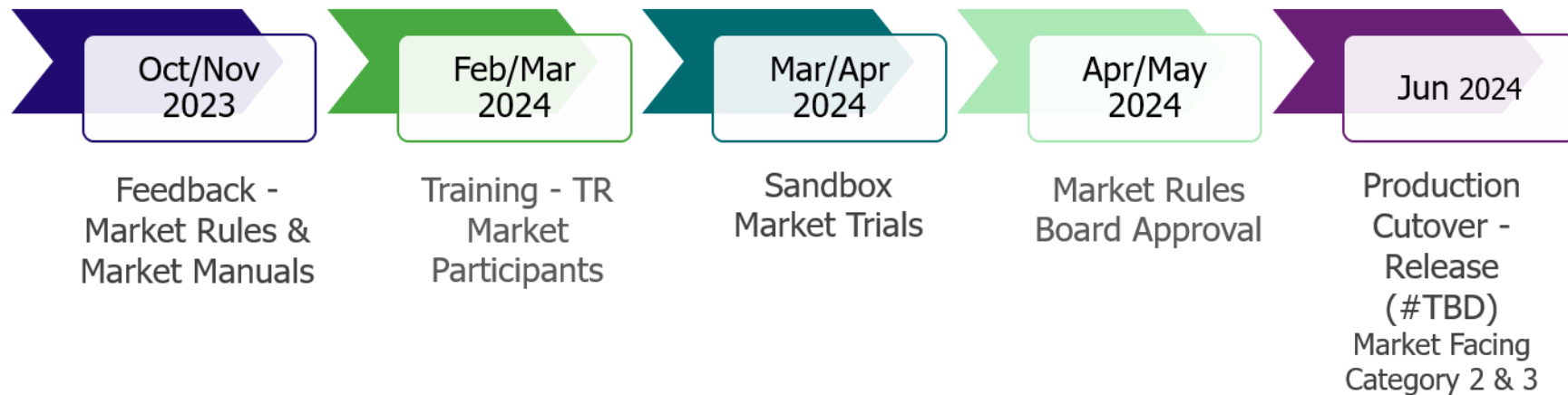
The IESO is continuing development work to implement the upgraded platform, and welcome stakeholder involvement throughout the process:

- 1. Market Rule (MR), Market Manual (MM), and other document amendments** - to facilitate multiple bid laminations and transition to the new platform the IESO will need to amend documentation
 - MR and MM changes are expected to primarily involve clarifying auction design, updates to bidding and lamination requirements, and adjustment of the objective function to award TRs considering multiple laminations
 - *Market Participants will be able to review and comment on draft MR and MM changes.*

Upcoming Work and Stakeholder Involvement cont.

2. **Market Trials** – training and testing of the application before implementation
 - *TR auction participants are encouraged to have resources available to participate in the new platform training and testing, so they can participate in the auction without issue when implementation occurs*

Project Components and Timeline



Engagement Next Steps

Timing	Engagement Activity
Oct-Nov	<ul style="list-style-type: none">• Feedback on Market Rules & Market Manuals
Nov-Dec (if required)	<ul style="list-style-type: none">• Follow-up engagement, pending feedback
TBC	<ul style="list-style-type: none">• Communicate training and seek input through Market Trials

Thank You

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