

Transmission Rights Market Review (SE-110)

Phase 1 Implementation Recommendations
May 6, 2014



- TR Review background
- Recommended procedure for implementation and maintenance of revised confidence level
 - Implementation timeframe
 - Maintenance timeframe
- Next steps

- TR Review initiated in April 2013 through stakeholder engagement initiative SE-110
- Two-phase review:
 - Phase 1
 - Near term review of the confidence level and associated stabilization algorithm introduced in 2004
 - Phase 2
 - Longer term review of the TR market design fundamentals to address known concerns, Market Surveillance Panel (MSP) recommendations and look for overall improvement
 - IESO is planning to prequalify a consultant to provide research on TR markets later in 2014

- Effective March 2004, the Board set a confidence level intended to balance the TRCA at a specified threshold while increasing TR quantities via a stabilization algorithm
- Rationale was that an increase in the number of TRs sold was intended to lead to:
 - increased hedged trades, which in turn would lead to more competition and more imports
 - increased reliability as a result of more imports
 - increased participation and competition in the TR market
- Analysis demonstrated that none of the intended benefits were materially achieved
- In September 2013 the Board revised the confidence level such that the congestion rents collected on each path should be approximately sufficient to cover the IESO's TR payment obligations on that same path

Recommended Procedure: Implementation and Maintenance of Revised Confidence Level



- Implementation Timeframe
 - Gradually adjust TR quantities to reach an ideal TR quantity which historically would have achieved financial balance between collected congestion rents and TR payment obligations
 - Achieved through expiry of existing long-term TRs and offering revised quantities of long-term and short-term TRs
 - Impact on most paths is a reduction in long-term TR quantities and flexibility/volatility in short-term TR offerings
- Maintenance Timeframe
 - Activate an algorithm to maintain the financial balance between congestion rents and TR payments on each path by increasing and decreasing offered TR quantities

- Changes Required:
 - Establish base quantity for each path based on historical schedules
 - Set the initial ideal quantity of TRs which historically would have approached financial balance
 - Revise internal process for consideration of outages and constraints which impact the expected flow on a path
 - Discontinue existing stabilization algorithm
- Market Manual changes will be stakeholdered through the IESO's interim market document change (IMDC) process
- Target Date: September 2014 for short term (ST) and October 2014 for long term (LT) auctions

- Base Quantity – represents long-term TR quantities and is based on historical non-zero schedules on each path
- Initial Ideal Quantity – represents the target “ideal” quantity of combined long-term and short-term TRs and is based on historical congestion rents and intertie congestion price on each path

- Represents the number of long-term TRs available
- Conservative value at which TR payments are not expected to exceed congestion rents collected
- Based on a review of historical scheduled flows over a 24 month period (Apr 2012 – Mar 2014)
- Set as the value at which historical flows equalled or exceeded 70% of the time
- Fixed year-round value
- Re-evaluated at two year intervals or as needed

- Represents the target upper limit of combined long-term and short-term TRs on a path
- Based on a review of historical congestion rents and intertie congestion price (ICP) on each path from April 2012 to March 2014
- Set at the quantity of TRs which historically would have approached financial balance (sum of congestion rents/sum of ICPs)
- Revised if required

Implementation Timeframe Outage Limitations on TR Quantities

- Congestion rents are directly impacted by the actual flow on an intertie
- Change internal process to limit TR offerings by expanding outage and constraint criteria used to determine TR availability:
 - consider internal/external outages which could impact the flow on interties
 - consider foreseeable outages, including internal/external outages, which could impact the flow on a path
 - consider foreseeable constraints on an internal/external interface which could impact the flow on a path

- TR quantities will gradually reach initial ideal quantity through expiry of existing long-term TRs and/or sale of short-term TRs
- Continue to offer long-term TRs at approximately 25% of the new base quantity
- Short-term TRs available only if total sold long-term TRs is less than initial ideal quantity
- Once ideal quantity is achieved, the combination of long and short-term TRs will be capped on the high side by the ideal quantity until the maintenance timeframe is initiated

Implementation Timeframe TR Quantities (continued)

TR Path	Initial Ideal Quantity (MW)	Base Quantity (MW)
MAN-ON	40	40
MICH-ON	625	115
MIN-ON	16	16
NY-ON	1125	150
QOUTA-ON	805	280
QBEAU-ON	385	200
QD5A-ON	110	60
QD4Z-ON	60	50
QP33C-ON	100	80
QX2Y-ON	16	16
ON-MAN	45	24
ON-MICH	1075	630
ON-MIN	16	16
ON-NY	940	600
ON-QOUTA	1055	150
ON-QD5A	115	0
ON-QH4Z	85	50

Implementation Timeframe

Example #1: Based on NY-ON Path

- Current Base Quantity < Initial Ideal Quantity
- Current Base Q = 900MW (225MW at each quarterly LT auction)
- New Base Q = 152 MW (38 MW at each quarterly LT auction)
- Initial Ideal Q = 1125 MW
- Implement maintenance algorithm or revise ideal quantity (as needed) after Jan 2015

	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
LT Auction (Oct)	225	38	38	38	38	38	38	38	38	38	38	38	38	38
LT Auction (Jan)	225	225	225	225	38	38	38	38	38	38	38	38	38	38
LT Auction (Apr)	225	225	225	225	225	225	225	38	38	38	38	38	38	38
LT Auction (Jul)	225	225	225	225	225	225	225	225	225	225	38	38	38	38
Monthly ST Auction	225	412	412	412	599	599	599	786	786	786	973	973	973	973
Total LT + ST TRs	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125	1125

Implementation Timeframe

Example #2: Based on ON-MAN Path

- Current Base Quantity > Initial Ideal Quantity
- Current Base Q = 150MW (38 MW at each quarterly LT auction)
- New Base Q = 24 MW (6 MW at each quarterly LT auction)
- Initial Ideal Q = 45 MW
- Implement maintenance algorithm or revise ideal quantity (as needed) after Jan 2015

	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT
LT Auction (Oct)	38	6	6	6	6	6	6	6	6	6	6	6	6	6
LT Auction (Jan)	38	38	38	38	6	6	6	6	6	6	6	6	6	6
LT Auction (Apr)	38	38	38	38	38	38	38	6	6	6	6	6	6	6
LT Auction (Jul)	38	38	38	38	38	38	38	38	38	38	6	6	6	6
Monthly ST Auction	0	0	0	0	0	0	0	0	0	0	21	21	21	21
Total LT + ST TRs	152	120	120	120	88	88	88	56	56	56	45	45	45	45

- Changes required in addition to implementation timeframe:
 - activate a maintenance algorithm to increase and decrease offered TR quantities by path based on TR payments and collected congestion rents:
 - Establish dead-band
 - Establish increment quantity
 - Create new public report for tracking congestion rents and TR payments by path
 - Revise pre-auction report template
- Market Manual and report changes are expected to be stakeholdered through standard baseline process

- Activated once public reports are available (approximately one-year after implementation)
 - A revised ideal quantity may be set if the activation of the maintenance algorithm is delayed or if needed during the implementation timeframe
- Increase TR quantities when collected congestion rents exceed TR payments by more than upper limit of dead-band
- Decrease TR quantities when TR payments exceed collected congestion rents by more than lower limit of dead-band
- Generally applies to short-term TRs but can impact long-term TRs if maintenance algorithm reduces TR quantity below base quantity

- Establish dead-band and increment no later than 1-month prior to activation with stakeholder involvement
- Increment options being considered:
 - 4% (or other %) of the total TRs valid in the month evaluated. This method makes adjustments based on the quantity of TRs that actually contributed to TR payments
 - 4% (or other %) of the difference between summer ATC and the new base quantity
 - 10% of the new base quantity, to a max increment of 25 MW

Maintenance Timeframe Algorithm (continued)

TRCA Balance	Cumulative Difference Between Rents and TR Payments (by TR path)	Impact on Monthly TRs (by TR path)
N/A	Between the upper and lower limits of the dead-band	No change
> TRCA threshold*	Exceeds upper limit of dead-band	+(increment value)
< TRCA threshold*	Exceeds upper limit of dead-band	No change*
N/A	Less than lower limit of dead-band	-(increment value)

*TRCA threshold is currently \$20M

**TRs offered will not be increased if TRCA balance < threshold

Maintenance Timeframe Algorithm: Months Considered

Month of TR Pre-Auction Report Publication	Months Considered in Rents – Rights Balance	Month Where Changes Apply to TR Quantity
January	Cumulative Value plus December (plus January if updated before bid window)	March
February	Cumulative Value plus January (plus February if updated before bid window)	April
⋮	⋮	⋮
December	Cumulative Value plus November (plus December if updated before bid window)	February

- Existing Pre-Auction reports can be used during implementation timeframe
- Stakeholder feedback requested on pre-auction report revisions for maintenance timeframe:
 - A revised table on a path basis with the following headings:

Path Name	Maximum Transmission Rights Offered (MW)	Increment Level (%)	Monthly Congestion Rent (\$)	Monthly TR payout (\$)	Cumulative Congestion Rent (\$)	Cumulative TR payout (\$)	Notes
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- “Forecast Total Transfer Capability” will not be provided because the new maintenance process is derived via financial balance and not operational requirements
- Static information such as path descriptions and injection/withdrawal zones will be provided in market manual 4.4

- **May 16th** – Deadline for Stakeholder comments on IESO implementation recommendations
- **May 30th** – Target date for IESO response to Stakeholder comments
- **May/June** – IMDC published for Stakeholder comment
- **July 7th** – publication date of pre-auction report for September short-term auction
- **July 17th** – publication date of pre-auction report for October long-term auction
- A communication will be sent to participating stakeholders informing them of target implementation and a notice will be placed in the IESO bulletin