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## Market Rule Amendment Proposal

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### PART 1 – MARKET RULE INFORMATION

Identification No.:	<b>MR-00313-R00</b>		
Subject:	<b>Day-Ahead Commitment Process</b>		
Title:	<b>Account for CMSC Revenues in Day-Ahead Intertie Offer Guarantee Payments</b>		
Nature of Proposal:	<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Deletion	<input type="checkbox"/> Addition
Chapter:	9	Appendix:	
Sections:	3.8A		
Sub-sections proposed for amending:	3.8A.2A		

### PART 2 – PROPOSAL HISTORY

Version	Reason for Issuing	Version Date
1.0	Draft for Technical Panel Review	February 8, 2006
2.0	Publish for Stakeholder Review and Comment	February 14, 2006
3.0	For Technical Panel Review and Vote to Recommend	March 2, 2006
4.0	Recommended by Technical Panel: Submitted for IESO Board Approval	March 7, 2006
5.0	Approved by IESO Board	April 7, 2006
Approved Amendment Publication Date:	10 Apr 06	
Approved Amendment Effective Date:	31 May 06	

### PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact on the *IESO-administered markets* if the amendment is not made.
- Alternative solutions considered.
- The proposed amendment, how the amendment addresses the above reason and impact of the proposed amendment on the *IESO-administered markets*.

#### Summary

This amendment proposes to revise the calculation of the Day-ahead Intertie Offer Guarantee (“DA\_I $O$ G<sub>k,h</sub>” -originally proposed under MR-00305, Part R01) to account for any real-time Congestion Management Settlement Credit (CMSC) settlement amounts paid by/to the market participant for the same day-ahead import transaction. This revision is necessary in order to ensure that the market participant with an import transaction eligible for the DA\_I $O$ G does not receive an over-payment or an under-payment relative to the guaranteed day-ahead import offer price as a result of a real-time constraint being applied to the import transaction.

The potential for an over-payment or an under-payment situation is NOT applicable to real-time Intertie Offer Guarantee settlement amounts (“RT\_I $O$ G<sub>k,h</sub>”). In the real-time market, RT\_I $O$ G is based upon the unconstrained market schedule and therefore aligns with the type of operating profit correction intended by the real-time CMSC.

#### Background

The objective of the DACP is to provide incentives for imports scheduled in the day-ahead to flow in real time and to ensure sufficient internal generation resources are on-line in real time to satisfy reliability needs.

The objective of the Day-Ahead IOG is to ensure that import transactions arranged in the DACP will effectively receive a stop-loss guarantee for their offer price.

#### Discussion

In order to achieve the objective of this amendment, a change to the formulation of the Day-Ahead IOG is required. Specifically the formulation needs to account for the specific portion of the hourly Congestion Management Settlement Credit, known as, “OPE<sub>k,h</sub><sup>i</sup>” (see also, chapter 9, section 3.5.2 of the IESO Market Rules) that is applicable to a specific import transaction. This requires that the OPE<sub>k,h</sub><sup>i</sup> term be added to the DA\_I $O$ G calculation. By accounting for this component in the formula in this way, it will ensure that:

- the DA\_I $O$ G will become correspondingly lower when the real-time CMSC for the same import transaction is positive; and,
- the DA\_I $O$ G will become correspondingly higher when the real-time CMSC for the same import transaction is negative.

This revision needs to be carried out in section 3.8A.2A of the market rules that were originally drafted as part of MR-00305, Part R01 (“Day-Ahead Reliability Guarantees”)

## PART 4 – PROPOSED AMENDMENT

(Note: the amendments below are shown relative to the DACP market rules MR-00305-R01 as approved by the IESO Board in Feb 2006.)

## Day-Ahead Intertie Offer Guarantee

3.8A.2A The day-ahead *intertie offer* guarantee settlement credit for market participant ‘k’ for settlement hour ‘h’ (“DA\_IOG<sub>k,h</sub>”) shall be determined by the following equation:

$PDR\_BE_{k,h}^{i,t}$  is the *offer* matrix of N *price-quantity pairs* for the eligible import transaction scheduled in the *pre-dispatch of record* for market participant ‘k’ during *metering interval* ‘t’ for settlement hour ‘h’ at *intertie metering point* ‘i’ arranged in ascending order by offered price where offered prices are in column 1 and offered quantities are in column 2.

Let  $OP(P,Q,B)$  be a profit function of Price (P), Quantity (Q) and an N by 2 matrix (B) of *price-quantity pairs*:

$$OP(P,Q,B) = P \cdot Q - \sum_{n=1}^{s^*} P_n \cdot (Q_n - Q_{n-1}) - (Q - Q_{s^*}) \cdot P_{s^*+1}$$

Using matrix notation for parameter 'B' this may be expressed as follows :

$$OP(P,Q,B) = P \cdot Q - \sum_{n=1}^{s^*} [B[n,1] \cdot (B[n,2] - B[n-1,2])] - [(Q - B[s^*,2]) \cdot B[s^*+1,1]]$$

Where:

$s^*$  is the highest indexed row of B such that  $Q_{s^*} \leq Q \leq Q_n$  and where,  $Q_0=0$

‘P’ is  $EMP_h^{i,t}$ : the real-time 5-minute *energy market price* at the applicable *intertie metering point* ‘i’ during *metering interval* ‘t’ of settlement hour ‘h’

‘Q’ is the minimum of:

- $PDR\_DQSI_{k,h}^{i,t}$ : the *pre-dispatch of record* constrained quantity scheduled for injection by market participant ‘k’ for an import transaction at *intertie metering point* ‘i’ during *metering interval* ‘t’ of settlement hour ‘h’; or
- $DQSI_{k,h}^{i,t}$ : the real-time constrained quantity scheduled for injection by market participant ‘k’ at *intertie metering point* ‘i’ during *metering interval* ‘t’ of settlement hour ‘h’

‘B’ is matrix  $PDR\_BE_{k,h}^{i,t}$ : *energy offers* submitted into the *pre-dispatch of record*, represented as an N by 2 matrix of *price-quantity pairs* for each market participant ‘k’ at *intertie metering point* ‘i’ during *metering interval* ‘t’ of settlement hour ‘h’ arranged in ascending order by the offered price in each *price-*

*quantity pair* where offered prices are in column 1 and offered quantities are in column 2.

such that the day-ahead *intertie offer* guarantee is formulated as follows:

DA\_IOG<sub>k,h</sub> (for all *intertie metering points*) =

-1 x MINIMUM of:

[Zero or

[The sum of all revenues implied by each import transaction valued at the real-time *energy market price* in the applicable *intertie zone* times the minimum of the quantity scheduled for injection in the *pre-dispatch of record* or the *real-time schedule*

minus

Those costs represented through the *offers* submitted by the *market participant* for the import transaction scheduled in the *pre-dispatch of record*]

plus

That component of the real-time congestion management *settlement credit* *settlement amount* applicable to the same import transaction.]

$$DA\_IOG_{k,h} = \sum_i (-1) \cdot \text{MIN} \left[ 0, \sum_t \left[ \text{OP}(\text{EMP}_h^{i,t}, \text{MIN}(\text{PDR\_DQSI}_{k,h}^{i,t}, \text{DQSI}_{k,h}^{i,t}), \text{PDR\_BE}_{k,h}^{i,t}) \right] + \text{OPE}_{k,h}^i \right]$$

where:

‘I’ is the set of all *intertie metering points* ‘i’.

‘T’ is the set of all *metering intervals* ‘t’ in *settlement hour* ‘h’

OPE<sub>k,h</sub><sup>i</sup> is that component of the congestion management *settlement credit* *settlement amount* (CMSC) for *market participant* ‘k’ at *intertie metering point* ‘i’ for *settlement hour* ‘h’ as defined in section 3.5.2.

## PART 5 – IESO BOARD DECISION RATIONALE

This revision will ensure that the market participant with an import transaction eligible for the DA\_IOG does not receive an over-payment or an under-payment relative to the guaranteed day-ahead import offer as a result of a real-time constraint being applied to the import transaction.