Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Subject: IMO Administration	
Title: Eliminate Payment of Intertie Offer Guarantee for Wheeling Transactions	
Nature of proposal (please indicate with X on the right): Alteration - X Deletion Addition	
Chapter: 9	**Appendix**:
Sections: 3.8A	
Sub-sections proposed for amending: 3.8A.1, 3.8A.3 (new), 3.8A.4 (new), 3.8A.5 (new) and 3.8A.6 (new)	

PART 2 – PROPOSAL HISTORY

Issue	Reason for Issue	Issue Date
1.0	Consideration by URAC	July 25, 2002
2.0	URAC Adopted	July 29, 2002
3.0	IMO Board Adopted	August 1, 2002

Approved Amendment Publication Date: July 29, 2002

Approved Amendment Effective Date: July 30, 2002

PART 3 – EXPLANATION FOR PROPOSED AMENDMENT

Provide a brief description of the following:

- The reason for the proposed amendment and the impact the *IMO-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 *IMO-administered markets*.

The current market rules provide that all import transactions to the IMO-administered markets are eligible for the Intertie Offer Guarantee (refer to section 3.8A of Chapter 9 of the market rules). The intent of the Intertie Offer Guarantee (IOG), as stated in the amendment proposal that introduced the IOG (MR-00177) is:

"This proposed rule amendment helps address potential concerns when Ontario requires energy imports to help maintain the reliability of the IMO-controlled grid. By offering these price guarantees, market participants will be encouraged to import into Ontario, knowing they will always be kept financially whole by being settled at their offer price as a minimum."

Since market commencement, IOG payments have been made to market participants for imports where the same market participant also had a scheduled export for the same dispatch interval. Thus far, these transactions have accounted for almost $4 million in additional IOG uplift charges. These transactions, although not identified by the market participant as a "linked wheel" pursuant to section 3.5.8.2 of Chapter 7 of the market rules, result in the same zero net import as a "linked wheel" if both the import and export are scheduled. These transactions could be characterized as "implied wheels" (see section 3.5.8.1 of Chapter 7).

It is proposed that a market participant not be eligible for the IOG payment on their import quantities that are offset by an equal export quantity for the very same dispatch interval. The import and export quantities of an "implied wheel" should both be settled at the real-time energy market price. By doing so, the market participant would be selling into and buying from the IMO-administered markets at the same energy price.

An "implied wheel" does not provide the reliability benefit to the IMO-controlled grid that was the rationale for the introduction of the IOG. A reliability benefit is provided only by the net injection of MWs into the IMO-controlled grid. The MWs injected via the import associated with the implied wheel are offset by the MWs withdrawn via the associated export.

It should be noted that "linked wheel" transactions, by design, do not attract IOG payments. The import associated with a "linked wheel" transaction must be offered at negative MMCP. A negative MMCP offer price will never attract an IOG, as the real-time energy market price cannot be below negative MMCP.

Not permitting IOG payments for imports associated with an "implied wheel" transaction will also mitigate the gaming opportunities inherent in the current rules. Specifically, a market participant could offer in an import and bid out an export for the same hour at times when an IOG payment would likely result. These transactions would net each other out, no power would actually flow and the market participant could make a substantial profit arising from the IOG payment. The cost of these IOG payments would be recovered from load market participants as uplift. There has been evidence of such "implied wheel" transactions in the IMO-administered markets. By eliminating the eligibility to receive such IOG payments, the financial incentive for such transactions would be removed.

However, it should be noted that by removing the IOG eligibility for “implied wheel” transactions, participants could be motivated to conspire. In this situation, two or more market participants may agree that one participant will schedule one or more imports, while the other or others will schedule the export or exports and both share the IOG payment. These market participants may also strike bilateral contracts with each other in conjunction with the scheduling of import and export transactions. The market rule amendment includes a provision to eliminate IOG payments in the event that a market participant has a financial interest in such "implied wheel" transactions.

As per the *Electricity Act, 1998*, these rule amendments meet the urgent rule amendment criteria of avoiding, reducing the risk of or mitigating the effects of an adverse effect of a market rule. These urgent rule amendments also satisfy the IMO’s statutory objective to establish and operate the IMO-administered markets so as to promote the purposes of the *Act*, which purposes include protecting the interests of consumers with respect to prices and facilitating the maintenance of a financially viable electricity industry.

Presently, the total IOG charges (all IOG payments resulting from import transactions, including those transactions associated with an “implied wheel” transaction) are calculated, as a portion of uplift, and are shown as a single line item on the applicable settlement statements.

The proposed new sections, under section 3.8A of Chapter 9, describe how the IMO will calculate offsetting charges to the present IOG calculation, which results in a monthly credit (an additional line item) on the preliminary settlement statements for those market participants who are charged uplift costs. That is, the IMO will calculate the proportion of the IOG payment that resulted from “implied wheel” transactions where the export and import quantities for the same hour were equal. The result of this calculation would be rebated to the applicable market participants.

These proposed changes do not impact the IOG payments to market participants on the net quantity of energy they imported into Ontario. Thus, market participants who have created an “implied wheel”, will be paid IOG on the import quantities over and above any export quantities they have successfully scheduled for the very same transaction hour.

Successful ratification of these urgent rule amendments will permit the IMO to implement a process to eliminate IOG payments for “implied wheel” transactions.

PART 4 – PROPOSED AMENDMENT

3.8A Hourly Settlement Amounts for Intertie Offer Guarantees

3.8A.1 The *provisional market prices* determined by the *real-time market schedule* provided by the *IMO* used for the *settlement* of a *boundary entity* associated with an *intertie metering point* will sometimes deviate from its accepted *offer* prices in the *pre-dispatch market schedule* (the “*projected market schedule*”) in ways that, based on the *real-time dispatch process,* imply a change to *market participant* k’s net operating profits relative to the operating profits implied by *the pre-dispatch* *market schedule* for that *boundary entity*. When this occurs but subject to section 3.8A.3, *market participant* k associated with that *boundary enity* for *settlement hour* h shall receive as compensation, an *intertie offer* guarantee *settlement* credit for his import of *energy* into the *IMO-administered markets* equal to the cumulative losses resulting from a negative change in implied operating profits over the course of each *settlement hour*, resulting from such *settlement*, calculated in accordance with section 3.8A.2.

3.8A.2 The hourly *intertie offer* guarantee *settlement* credit for *market participant* k for *settlement hour* h (“$IOG_{k,h}$”) shall be determined by the following equation:

Let ‘BE’ be a matrix of n *price-quantity pairs* offered by *market participant* k to supply *energy* from a particular *boundary entity* associated with an *intertie metering point* in the *IMO-administered markets*, during *settlement hour* h

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

$$OP(P,Q,B) = P \cdot Q - \sum_{i=1}^{s^*} P_i \cdot (Q_i - Q_{i-1}) - (Q - Q_{s^*}) \cdot P_{s^*+1}$$

Where:

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

B is matrix BE (see above)

Using the terms below, let IOG be expressed as follows:

$$IOG_{k,h} = EIM_{k,h}$$

Where:

$EIM_{k,h}$ represents that component of the *intertie offer* guarantee *settlement* credit for *market participant* k during *settlement hour* h attributable to import of *energy* into the *IMO-administered markets* at all relevant *intertie metering points* i in accordance with the rationale referred to in section 3.8A.1 and is calculated as follows:

$$EIM_{k,h} = \sum_I (-1) \bullet MIN\left[0, \sum_T OP(EMP_h^{i,t}, MQSI_{k,h}^{i,t}, BE)\right]$$

Such that:

I is the set of all relevant intertie metering points i

T is the set of all metering intervals t in settlement hour h

3.8A.3 The cumulative hourly *intertie offer* guarantee *settlement* credit payable to a *market participant* for any and all applicable *settlement hours* in the *real-time energy market billing period* shall be adjusted by the *IMO* in accordance with section 3.8A.4 to nullify such credits where the *market assessment unit* has determined that:

3.8A.3.1 that *market participant* has submitted one or more *energy offers* and one or more *energy bids* as contemplated by section 3.5.8.1 of Chapter 7 for the same *dispatch interval*; or

3.8A.3.2 that *market participant* has an agreement or arrangement to share the *intertie offer* guarantee *settlement* credit with one or more other *market participants* and they have submitted one or more *energy offers* and one or more *energy bids* as contemplated by section 3.5.8.1 of Chapter 7 for the same *dispatch interval*;

and, in either case, at least one of such *energy offers* and one of such *energy bids* is scheduled. For certainty, any *market participant* shall have recourse to the dispute resolution provisions of section 2 of Chapter 3 if it believes that the *market assessment unit* did not have reasonable grounds for making the determination that the *market particpant* had any such agreement or arrangement with another *market participant*.

3.8A.4 Any adjustment made by the *IMO* under section 3.8A.3 shall be applied to any export transaction in the *market schedule* for *market participant* k in each *settlement hour* for which *market participant* k is entitled to receive an *intertie offer* guarantee *settlement* credit. The total amount offset shall be limited by the cumulative quantity of the export transactions expressed in the *market schedule* for that *settlement hour* and shall not exceed the total *intertie offer* guarantee *settlement* credits received for the *settlement hour*. Where the cumulative quantity of the export transactions expressed in the *market schedule* for the *settlement hour* is less than the cumulative quantity of imports triggering *intertie offer* guarantee *settlement* credits for that same *settlment hour*, the *intertie offer* guarantee *settlement* credits will be offset in ascending order from the import transaction attracting the smallest *intertie offer* guarantee *settlement* credit to the import transaction attracting the largest and only up until the point at which the total quantity of import transactions equals the total quantity of export transactions, and may be expressed as follows:

Let MI be a matrix of X pairs of *market schedule* quantities scheduled for injection by *market participant* k at all *intertie metering points* i in *metering interval* t of *settlement hour* h ($MQSI_{k,h}^{i,t}$) paired with the corresponding component of the *intertie offer* guarantee *settlement* credit for each *intertie metering point* i as given by the equation

(-1)MIN[0,? $_T$OP($EMP_h^{i,t}$,$MQSI_{x*,k,h}^{i,t}$,BE)], in ascending order of such calculations.

Where:

x*∈ X, such that ,$MQSI_{x*,k,h}^{i,t}$ denotes the value of ,$MQSI_{k,h}^{i,t}$ in row x* of matrix MI

For each unique row x* in matrix MI, the adjusted *market schedule* quantities scheduled for injection by *market participant* k at an *intertie metering point* i in *metering interval* t of *settlement hour* h ($MQSI\{adj\}_{k,h}^{i,t}$) shall be calculated as follows:

$$MQSI\{adj\}_{k,h}^{\ i,t} = MIN\left[MQSI_{x^*,k,h}^{\ i,t}, MAX\left[0, \left(\sum_{x=1}^{x=x^*} MQSI_{x^*,k,h}^{\ i,t} - \sum^{I} MQSW_{k,h}^{\ i,t}\right)\right]\right]$$

$MQSI\{adj\}_{k,h}^{i,t}$ is each, and where applicable, adjusted quantity scheduled for injection in the *market schedule* by *market participant* k at an *intertie metering point* i in *metering interval* t of *settlement hour* h corresponding with each quantity, $MQSI_{x*,k,h}^{i,t}$ in matrix MI, row x*.;

I is the set of all relevant *intertie metering points* i; and,

all other variables are as defined in section 3.8A.2 such that:

$$IOG_{k,h}OFFSET = EIM_{k,h} - \sum_{I} (-1) \bullet MIN\left[0, \sum_{T} OP(EMP_h^{\ i,t}, MQSI\{adj\}_{k,h}^{\ i,t}, BE)\right]$$

where function OP and variable $EIM_{k,h}$ are as defined in section 3.8A.2

3.8A.5 The cumulative $IOG_{k,h}$OFFSET *settlement amounts* received from *market participants* for each *real-time energy market billing period* shall be distributed to *market participants* in accordance with section 4.8.2.3.

3.8A.6 $IOG_{k,h}$OFFSET *settlement amounts* shall be aggregated or disaggregated on *settlement statements* in such manner as shall be determined by the *IMO*.

PART 5 – IMO BOARD COMMENTS

Market Rule Amendment Proposal

PART 1 – MARKET RULE INFORMATION

Subject: IMO Administration	
Title: Eliminate Payment of Intertie Offer Guarantee for Wheeling Transactions – Additional Non-Hourly Settlement Amounts	
Nature of proposal (please indicate with X on the right): Alteration – X Deletion Addition	
Chapter: 9 **Sections**: 4.8	**Appendix**:
Sub-sections proposed for amending: 4.8.2.3 (new)	

PART 2 – PROPOSAL HISTORY

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1.0	Consideration by URAC	July 25, 2002
2.0	URAC Adopted	July 29, 2002
3.0	IMO Board Adopted	August 2, 2002

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These proposed urgent rule amendments are consequential to those discussed in MR-00204-R00.

PART 4 – PROPOSED AMENDMENT

4.8 Additional Non-Hourly Settlement Amounts

4.8.2 The *IMO* shall, at the end of each *energy market billing period*, distribute to *market participants*, on a pro-rata basis across all allocated quantities of *energy* withdrawn at all *RWMs* and *intertie metering points* during all *metering intervals* and *settlement hours* within that *energy market billing period*, the following amounts:

4.8.2.1 any compensation received by the *IMO* for the provision of *emergency energy* pursuant to section 4.4A.1 of Chapter 5; ~~and~~

4.8.2.2 any compensation received by the *IMO* as a result of a local market power investigation as set out in sections 1.7.1 and 1.7.2 of Appendix 7.6; and~~.~~

4.8.2.3 any adjustments to *intertie offer* guarantee *settlement* credits for wheeling through transactions, in accordance with section 3.5.8.1 of Chapter 7, calculated pursuant to section 3.8A.3.

PART 5 – IMO BOARD COMMENTS