



**Market Rule Amendment Submission**

This form is used to request an amendment to, or clarification of, the *Market Rules*. Please complete the first four parts of this form and submit the completed form by email or fax to the following:

Email Address: [Rule.Amendments@ieso.ca](mailto:Rule.Amendments@ieso.ca)  
 Fax No.: (416) 506-2847 Attention: Market Rules Group  
**Subject: Market Rule Amendment Submission**

All information submitted in this process will be used by the *IESO* solely in support of its obligations under the *Electricity Act, 1998*, the *Ontario Energy Board Act, 1998*, the *Market Rules* and associated policies, standards and procedures and its licence. All submitted information will be assigned the *confidentiality classification* of “Public” upon receipt. You should be aware that the *IESO* will *publish* this *amendment submission* if the *Technical Panel* determines it warrants consideration and may invite public comment.

Terms and acronyms used in this Form that are italicized have the meanings ascribed thereto in Chapter 11 of the *Market Rules*.

**PART 1 – SUBMITTER’S INFORMATION**

Please enter contact information in full.	
Name: <u>Silverhill Ltd.</u>	
(if applicable) <i>Market Participant / Metering Service Provider</i> No. <sup>1</sup> : _____	<i>Market Participant Class:</i> <u>Wholesaler</u>
Telephone: <u>(416) 363-3339</u>	Fax: <u>(416) 368-4330</u>
E-mail Address: <u>gradan@aquilon.ca</u>	

**PART 2 – MARKET RULE AMENDMENT SUBMISSION INFORMATION**

Subject: Request for the Implementation of Economic Dispatch of Linked Wheels _____	
Title: <u>Economic Dispatch of Linked Wheels</u>	
Nature of Request (please indicate with x)	
<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Deletion
<input type="checkbox"/> Addition	<input type="checkbox"/> Clarification
Chapter: <u>7</u> Appendix: _____ Sections: <u>3.5.8</u>	

<sup>1</sup> This number is a maximum of 12 characters and does not include any spaces or underscore.

**PART 1 – SUBMITTER’S INFORMATION**

Sub-sections proposed for amending/clarifying: 3.5.8.1 and 3.5.8.2

Market Manual 4: Market Operations Part 4.2: Submission of Dispatch Data in the Real-Time Energy and Operating Reserve Markets (Wheeling Through Interchange Schedules)

**PART 3 – DESCRIPTION OF THE ISSUE**

Provide a brief description of the issue and reason for the proposed amendment. If possible, provide a qualitative and quantitative assessment of the impacts of the issue on you and the *IESO-administered markets*. Include the Chapter and Section number of the relevant *market rules*.

Currently, the IESO administered markets do not allow for the economic dispatch of linked wheels. Market Participants are forced to bid the export portion of a linked wheel at +MMCP and offer the import portion of a linked wheel at –MMCP exposing the market participant to \$4000/MWh of financial risk. Some wheel through transactions must be submitted with a single NERC etag number thus eliminating the option of submitting the transaction as an implied wheel.

The current IESO software algorithm evaluates the export bid and import offer of a linked wheel independently.

There are several significant and detrimental issues with this current Market Rule/Market Manual instruction:

1. The current requirement to submit MMCP bids and offers for linked wheels, places linked wheel throughs at a higher priority to the imports and offers of other Market Participants that are not required to submit MMCP bids and offers. Linked Wheels, which have a net zero energy balance in the IESO, should not take priority over other imports and exports, especially in the case of emergency shortages when a linked wheel through is forced to take priority over required imports resulting in particularly adverse reliability implications. Therefore, we deem such inequity a market rule flaw that also compromises reliability.
2. Linked Wheel transactions are forced to flow in the direction of potential significant transmission congestion further contributing to congestion needlessly. The proposed economic dispatch of linked wheels in this submission will reduce congestion and thus improve market efficiency and reliability
3. The financial risk to Market Participants as a result of submitting MMCP bids and offers for linked wheels is unreasonable and unfair. For example, a 100MW wheel through that is subjected to \$4000/MW of congestion through Ontario equates to \$400,000 of congestion payments per hour.

**PART 4 – PROPOSAL (BY SUBMITTER)**

Provide your proposed amendment. If possible, provide suggested wording of proposed amendment.

It is proposed that there be an economic dispatch of linked wheels. This can be accomplished by one of many ways by changing the current software algorithm implemented by the IESO. One suggestion would be to replace the following current formatting convention:

- For import: WI\_SourceCA....SinkCA
- For export: WX\_SourceCA...SinkCA

and requirement to submit a –MMCP offer for imports and +MMCP bid for exports with a single “congestion” bid for a linked wheel. The NYISO has implemented such a bidding mechanism for “linked” wheel through transactions. For example, the market participant would submit a congestion bid curve that would represent the amounts in \$/MW that the market participant would be willing to pay for congestion, with corresponding volumes, to wheel through Ontario. Such a process would simultaneously remove both the import and export portions of the linked wheel through transaction when the congestion bid was not economic.

The current formatting convention could be replaced with:

LW\_SourceCA...SinkCA where the acronym “LW” represents “Linked Wheel”.

The following represents the proposed wording for “Wheeling Through Interchange Schedules” in Market Manual 4: Market Operations Part 4.2: Submission of Dispatch Data in the Real-Time Energy and Operating Reserve Markets:

### **Wheeling Through Interchange Schedules**

In case of **implied** wheeling through *interchange schedules*, market participants having *boundary entities* must submit:

- an interchange *offer* (for the import into the Ontario market); and
- an interchange *bid* (for the export out of the Ontario market).

Normally, **implied** wheeling *interchange schedules* will be handled as two separate *interchange schedules*, the same as any import and export. In this case, the *dispatch data* for the interchange *offer* must be accompanied by the unique *NERC* e-Tag ID for the import, where Ontario would be designated in the *NERC* e-Tag as the *sink control area*. The *dispatch data* for the interchange *bid* must be accompanied by a separate *NERC* e-Tag ID for the export, where Ontario would be designated in the *NERC* e-Tag as the *source control area*. This implies that, when the *IESO-controlled grid* is generation deficient, the export may not be scheduled or may be manually curtailed as a means to balance the load and generation within Ontario. *Market participants* may consider that scheduling of the import portion of the wheeling through *interchange schedule* while curtailing the export portion as an inappropriate redirection of *energy* from its intended customer, but still an acceptable risk for the potential savings/profits offered by the spot market.

Risk-adverse *market participants* however, have the option to protect their wheeling through *interchange schedule* by:

*bidding* the export portion at +MMCP;

## PART 4 – PROPOSAL (BY SUBMITTER)

~~offering the import portion at –MMCP; and~~

~~as an additional protective measure, they can also submit the same NERC e-Tag ID with the dispatch data for both the import offer and the export bid to indicate that the two interchange schedules are linked and part of the same wheeling through interchange schedule.~~

The IESO will consider that an import and an export are linked *interchange schedules* of the same wheeling through *interchange schedule* if ~~the export is bid at +MMCP, the import is offered at –MMCP~~ and the associated NERC e-Tag IDs submitted by market participants along with their dispatch data have been edited to follow this formatting convention:

~~For import: WI\_SourceCA...SinkCA~~

~~For export: WX\_SourceCA...SinkCA~~

LW\_SourceCA...SinkCA

where:

"SourceCA...SinkCA" is the unique NERC e-Tag ID obtained from the NERC Tagging system for the wheeling *interchange schedule*. For wheeling through *interchange schedules* treated in this manner, Ontario would not be listed as a source CA or as the sink CA in the NERC e-Tag ID, but would be included in the NERC e-Tag as part of the transmission path;

~~WI is a delimiter indicating that the interchange schedule is the import leg of a wheel. The delimiter is added by the market participant to the NERC e-Tag ID submitted to the IESO as dispatch data for the import; and~~

~~WX is a delimiter indicating that the interchange schedule is the export leg of a wheel. The delimiter is added by the market participant to the NERC e-Tag ID submitted to the IESO as dispatch data for the export.~~

LW is a delimiter indicating that the interchange schedule is a “linked wheel”. The delimiter is added by the market participant to the NERC e-Tag ID submitted to the IESO as dispatch data for the linked wheel.

Appendix G shows a tagging example (Example 1) of a linked wheel through transaction.

Notes regarding linked wheel through *interchange schedules*:

~~To receive this treatment, the market participant must offer the import at –MMCP and bid the export at +MMCP.~~

The IESO’s scheduling algorithm ~~does not consider the separate submissions of dispatch data for the import leg offer and the export leg bid~~ considers the bids of the linked wheel through *interchange schedule* to ~~be linked~~ represent bids that the Market Participant is willing to pay for congestion. Therefore, ~~the scheduling algorithm may prepare schedules for these two interchange schedules with different quantities. It is the market participant’s responsibility to revise the common NERC e-Tag to the lowest quantity of the import/export interchange schedules.~~ when a linked wheel congestion bid is not economic, the entire linked wheel transaction will be curtailed.

~~By doing so, Market participants indicate that they~~ are willing to have a linked wheel transaction ~~both interchange schedules~~ curtailed ~~at the same time~~ when the IESO-controlled grid is generation deficient (Ch.7, S. 3.5.8 of the market rules).

**PART 4 – PROPOSAL (BY SUBMITTER)**

However, for a linked wheel through *interchange schedule* involving the Hydro Quebec Transenergie (HQT) *control area*, the *NERC* e-Tag must identify HQT as being the SOURCE, the SINK or intermediate *control area*; otherwise, the *IESO* will deny the *NERC* e-Tag.

Appendix G has a tagging example (Example 2) of a linked wheel through transaction involving Hydro Quebec Transenergie *control area*.

**Validation**

*Bids* and *offers* to import or export *energy* will be validated by the *IESO* to ensure that:

*bids* and *offers* are submitted in accordance with the intentions declared during the *boundary entity* registration process (or any subsequent updates);

the *market participant* has the necessary licenses and authorizations;

the *NERC* e-Tag source/sink corresponds with the *boundary entity* resource, as set out in Appendix F;

the *NERC* e-Tag is consistent with the tie point identified in the *dispatch data* submission;

the *NERC* e-Tag IDs submitted for linked wheeling through *interchange schedules* are correctly formatted

the *market participant* has navigated intermediary markets successfully as well as the Ontario markets; and

there are no external or internal transmission constraints or other mitigating limitations.

The *IESO* expects to undertake this validation between 1 and 2 hours out prior to the *dispatch hour* but will seek to undertake validation on a best effort basis prior to the start of the two-hour window. This may prevent a *market participant* from resubmitting their *bid* or *offer*, depending on the nature of the change that is required to address the validation failure<sup>19</sup>. The results of all validation will be provided to *market participant* in the form of a revised *pre-dispatch schedule*. However, the *IESO* will also seek to notify *market participants* directly of validation failures on a best effort basis.

The manual nature of much of this validation process means that it is important that all *bids* and *offers* to import or export *energy*, or import *operating reserve*, conform to the relationships set out in Appendix F. In addition, *market participants* should ensure that they have the appropriate *NERC* e-Tags within the required timeframe.

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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 IESO's statutory objective to establish and operate the IESO administered markets so as to promote the purpose of the Act, which purposes include:**

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<sup>19</sup> For instance the, *NERC* reliability standard INT-001 for *interchange schedules* requires that *NERC* e-Tags be submitted at least 20 minutes prior to the start of the *interchange schedule* for *interchange schedules* that are less than or equal to 1 hour in duration. However, to ensure effective *interchange schedule* coordination between *control areas* and minimize the number of failed *interchange schedules*, the *IESO* has adopted a more stringent requirement of 30-minutes.

