Failure Charge for Linked Wheel Transactions

Background

A failure charge has been in place since June 1, 2006 aimed at incenting market participants to navigate the neighbouring markets successfully through a settlement charge for failed transactions within their control. The charge varies depending on the market circumstances, for further information, please refer to the following link for information about the application of the charge.
http://www.ieso.ca/imoweb/settlement/se-itf.asp

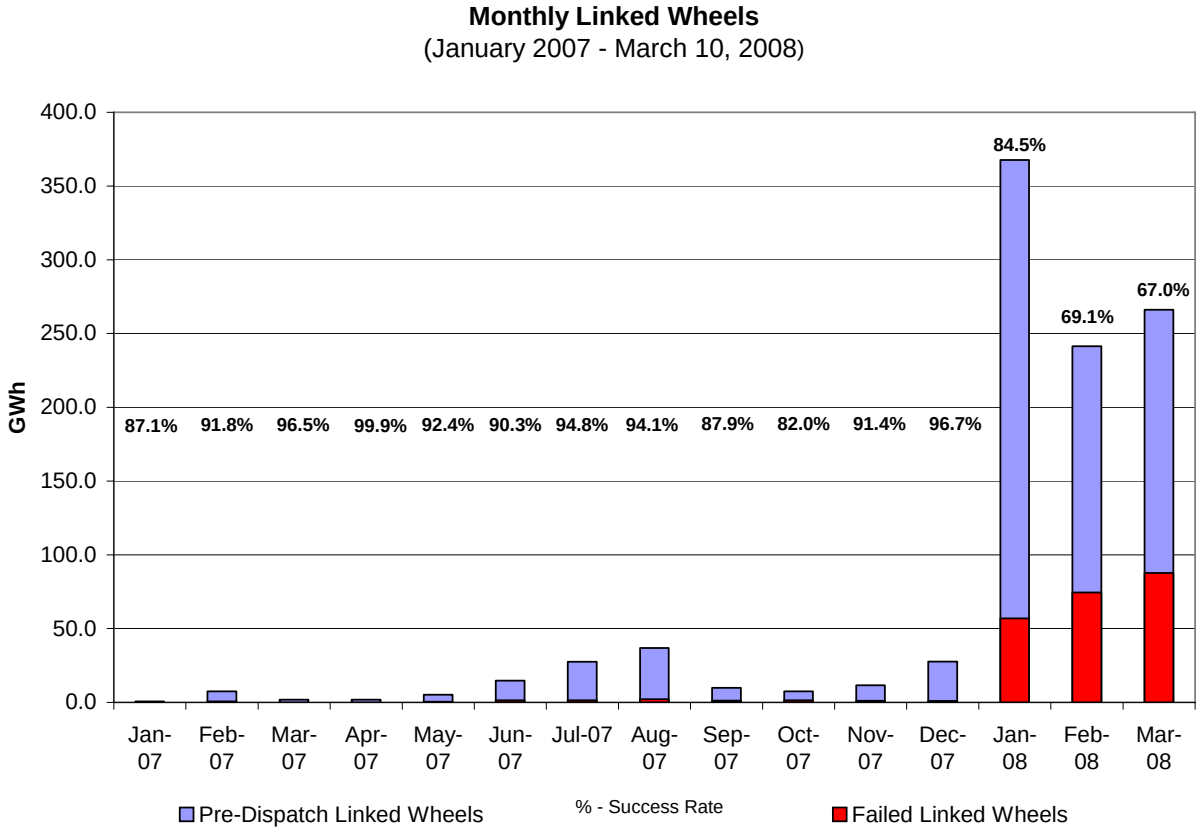
At the February 9, 2006 Interjurisdictional Trading Standing Committee (IJTSC) meeting, the IESO presented that a transaction failure charge would be applied to linked wheel transactions along with the failure for other failed transactions.

On April 7, 2006 a market rule amendment (MR-00315-R00) (http://www.ieso.ca/imoweb/pubs/mr2006/MR_00315-R00-BA.pdf) was passed eliminating CMSC payments to linked wheels, this was put into place by applying the TLRe code to linked wheel curtailments. As a result, the IESO has not applied a failure charge to linked wheel transactions. However, as noted in the minutes from the May 10, 2007 IJTSC meeting (http://www.ieso.ca/imowebpub/200801/intertie-20070510-minutes.pdf), where the IESO reiterated that while failure charges are not applied to failed linked wheels, the IESO would monitor the number of linked wheel through transaction failures in times of congestion and assess the need to apply the failure charge in the future.

Recently, the IESO has observed a dramatic increase in the volume of failed linked wheel transactions which have the potential of affecting both reliability and economic efficiencies including intertie prices. For this reason the IESO raised the issue of applying the failure charge to linked wheels at the March, 2008 IJTSC meeting with the intention to begin applying the failure charges to these transactions. After significant discussion, the IESO committed to providing additional clarification prior to implementation.

Issue

As noted in the May 10, 2007 IJTSC meeting, the IESO continued to monitor the volumes of linked wheel failures, and noticed a significant increase in both linked wheel transactions and failures over the last couple of months. These failures are a result of the participant failing to navigate the neighbouring market. The following graph shows the volume of linked wheel transactions and failures.



In addition to times of potential intertie congestion, other conditions exist where failed linked wheel transactions disrupt the efficient operation of the market. They can be categorized in four sections:

1. Intertie Congestion affecting the Intertie Price and Transmission Rights Market

When an intertie is congested in the pre-dispatch Transmission Rights are paid out to the TR holders. When transaction failures occur (linked wheel or otherwise), the congestion rents collected would be insufficient in relation to the payouts resulting in potential Transmission Rights Market underfunding. As well, since the failure may unload the intertie, there could be an intertie price different from HOEP (an ICP), even though there is no congestion in real-time.

2. Failure Charge Impact on other Participants

When a linked wheel that was scheduled in the IESO pre-dispatch fails due to external economics, the price in the external market (source or sink) could clear at a value that may make another Ontario transaction uneconomic, thus failing in that external market. The failure of the linked wheel transaction would therefore cause other transactions to receive a failure charge.

3. Curtailment of Intertie Transactions and CMSC as a Result of Failed Linked Wheels

The IESO net schedules on the interties, meaning that at times the scheduling of an export transaction may be dependent on the successful scheduling of an import transaction and vise versa. When linked wheels are scheduled in the IESO pre-dispatch and fail due to external reasons, further intertie transactions may be curtailed by the IESO in order to remain within limits. The failure of this linked wheel transaction would therefore cause other transactions to fail and be eligible to receive CMSC payments

4. Inaccurate Market Signals during times of internal congestion

When internal congestion occurs, and the linked wheel is scheduled in the pre-dispatch sequence, internal resources may be constrained in order for the linked wheel to flow. When the linked wheel fails to flow in real time, the internal congestion seen in pre-dispatch is alleviated resulting in the internal resources being dispatched in real time to a value different than what was forecasted in the pre-dispatch. In addition, depending on the volume of the transaction, when the linked wheel is scheduled in the pre-dispatch, preparatory actions such as switching capacitors and/or adjusting reactive loadings on generators may be required to ensure that voltage limits are within acceptable ranges.

Moving Forward

The IESO recommends applying the failure charge to failed linked wheel transactions at all times because of the impact on the IESO Administered Markets raised in this paper.
The Market Manual 4.3 (Real-Time Scheduling of the Physical Markets) requires changing to provide additional clarification with this revised application. The Interim Market Document Change (IMDC) resulting from these changes will be posted for comment.