



Market Surveillance Panel

Report on an Investigation into Possible Gaming Behaviour Related to Infeasible Import Transactions Offered by TransAlta Energy Marketing Corp. on the Manitoba-Ontario Intertie

Investigation No. 2011-02
October 22, 2012

Page Left Blank Intentionally

Ontario Energy Board
P.O. Box 2319
2300 Yonge Street
27th Floor
Toronto ON M4P 1E4
Telephone: (416) 481-1967
Facsimile: (416) 440-7656
Toll Free : 1-888-632-6273

Commission de l'énergie de l'Ontario
C.P. 2319
2300, rue Yonge
27e étage
Toronto ON M4P 1E4
Téléphone: (416) 481-1967
Télécopieur: (416) 440-7656
Numéro sans frais : 1-888-632-6273



Market Surveillance Panel Comité de surveillance du marché

BY EMAIL AND BY COURIER

October 22, 2012

Ms. Rosemarie T. Leclair
Chair
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto ON M4P 1E4

Dear Ms. Leclair,

RE: Report on an Investigation into Possible Gaming Behaviour Related to Infeasible Import Transactions Offered by TransAlta Energy Marketing Corp. on the Manitoba-Ontario Intertie

As you know, on March 21, 2011 the then Chair of the Ontario Energy Board requested that the Market Surveillance Panel (MSP, or the Panel) undertake an investigation into the circumstances that lead to payments being made to two market participants for constrained-off imports at the Manitoba interface despite the fact that the imports could not have flowed at the relevant time, as described in section 3.1 of Chapter 3 of the Panel's Monitoring Report on the IESO-Administered Electricity Markets for the period from May 2010 to October 2010.

The investigation in respect of one of the market participants – TransAlta Energy Marketing Corp. (TransAlta) – has now been completed, and I enclose the Report that sets out the Panel's findings. Prior to finalization of the Report, a draft was provided to TransAlta for review and comment on matters of factual accuracy and confidentiality.

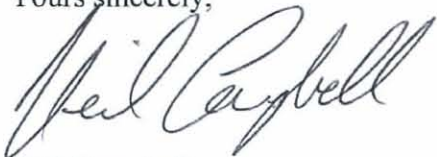
For the reasons set out in the Report, the Panel has concluded that TransAlta did not exploit the Manitoba transmission de-rating for the purpose of receiving Congestion Management Settlement Credit (CMSC) payments during the relevant time period, and hence the Panel finds that TransAlta did not engage in gaming in respect of the transactions at issue.

While the Panel concluded that gaming did not occur, it has identified enhancements that could be made to procedures of the Independent Electricity System Operator (IESO) that would prevent CMSC payments from being made when they are not warranted, and that would inform market participants about the impact of external developments on the feasibility of Ontario intertie flows. The Panel therefore makes two recommendations to address these issues: removal of infeasible intertie transactions from the unconstrained schedule and the establishment of a procedure to communicate available information to Ontario market participants in situations such as the one at issue in this Report.

I understand that, in accordance with the Board's By-law #3, you will transmit the Report to West Oaks. As required by the Board's By-law #3, I will be providing the Report to the CEO of the IESO.

Please do not hesitate to contact me should you have any questions or wish to discuss the Panel's Report.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Neil Campbell". The signature is fluid and cursive, with the first name "Neil" and last name "Campbell" clearly distinguishable.

Neil Campbell
Chair, Market Surveillance Panel

Table of Contents

1.	Introduction	1
2.	Summary of Findings and Recommendations	2
2.1	Findings	2
2.2	Recommendations	2
3.	Investigation Process and Framework	3
3.1	Market Surveillance Panel Mandate	3
3.2	Background to Investigation	4
3.3	Request for an Investigation	5
3.4	The Market Participant Subject to Investigation	5
3.5	Information Obtained by the Panel	5
3.6	Framework for Gaming Investigations	7
4.	Relevant Aspects of Market Design	7
4.1	Market Schedules and Constrained Schedules	8
4.2	Congestion Management Settlement Credits	8
4.3	Scheduling of Transactions Between Ontario and MISO	9
4.3.1	Scheduling Process and Timeline for Imports and Exports	9
4.3.2	Transmission Service	11
4.3.2.1	Ontario	11
4.3.2.2	MISO	11
4.3.3	External Transmission Limitations	12
4.3.4	Transmission Information Available to Traders	12
4.3.4.1	OASIS	13
4.3.4.2	IESO System Status Reports	14
4.3.4.3	Third Party Data Providers	15
5.	Analysis	15
5.1	The Outage	15
5.2	CMSC Payments	16
5.3	Gaming	19
5.3.1	Exploitation	19
5.3.2	TransAlta's Information About the Manitoba De-rating	19
5.3.2.1	Communications Between TransAlta Traders and Supervisors	20
5.3.2.2	Information Reviewed by or Available to TransAlta Traders	20
5.3.2.3	Other Information	22
5.3.3	Offer Strategy	23
5.3.4	Attempting to Obtain Transmission	23
5.3.5	Information from Traders	24
5.4	The Panel's Findings	25
6.	IESO Procedures	26
6.1	2003 Market Rule Change	27
6.2	Recommendations	29
6.2.1	Manual Curtailment Procedure	29
6.2.2	Communications to Market Participants	30

List of Tables

Table 1: Scheduling Timelines for Imports (or Exports) from MISO into Ontario	10
Table 2: Import Offer Prices and Quantities and CMSC Payments to TransAlta July 14-15, 2010.....	17

**REPORT ON AN INVESTIGATION INTO POSSIBLE GAMING BEHAVIOUR
RELATED TO INFEASIBLE IMPORT TRANSACTIONS OFFERED BY
TRANSALTA ENERGY MARKETING CORP. ON
THE MANITOBA-ONTARIO INTERTIE**

1. Introduction

In March 2011, the Market Surveillance Panel (MSP, or the Panel) was requested by the then Chair of the Ontario Energy Board (OEB) to conduct an investigation into circumstances pertaining to Congestion Management Settlement Credit (CMSC) payments received by two market participants (traders) at the Manitoba-Ontario intertie. Those traders repeatedly offered imports from Manitoba, which is part of the Midwest Independent Transmission System Operator (MISO) control area, into Ontario over the period July 14, 2010 to July 15, 2010 (the Relevant Period). From hour ending (HE) 10 of July 13, 2010 until HE 18 of July 15, 2010, a transmission de-rating in Manitoba precluded such transactions from flowing.

This Report describes the investigation in respect of one of the two traders, TransAlta Energy Marketing Corp. (TransAlta).¹ The CMSC paid to TransAlta in respect of transactions during the Relevant Period amounted to \$120,939.²

This Report summarizes the Panel's investigation framework and process, the applicable Independent Electricity System Operator (IESO) Market Rules and processes, and the Panel's analysis and findings in respect of TransAlta's activities. The Report also identifies specific enhancements that could be made to IESO procedures and makes two recommendations in that regard.

¹ The Panel has issued a separate report in respect of the other trader (the Other Trader) which may be found on the Panel's portion of the Ontario Energy Board website:
<http://www.ontarioenergyboard.ca/OEB/Industry/About%20the%20OEB/Electricity%20Market%20Surveillance/Market%20Surveillance%20Panel%20Reports> (the Report Relating to the Other Trader).

² An hourly breakdown of the amounts paid in respect of transactions during the Relevant Period is shown in Table 2 below.

2. Summary of Findings and Recommendations

2.1 Findings

Based on the evidence that was obtained in this investigation, the Panel has concluded that TransAlta did not exploit the Manitoba de-rating for the purpose of receiving CMSC payments and therefore did not engage in gaming in respect of the transactions at issue.

2.2 Recommendations

The IESO has the authority under Sections 5.2 and 5.4 of Chapter 7 of the Market Rules to update intertie schedules (constrained and unconstrained) based on available information (including information regarding transmission conditions outside the Ontario market).³ The IESO has manually altered or curtailed intertie transactions for infeasible transactions from time to time in the past. Such action can eliminate unwarranted⁴ CMSC payments. The Panel therefore recommends as follows:

Where the IESO is aware that an external constraint would prevent a transaction from flowing over an intertie at a given time, the IESO should remove that transaction from the unconstrained schedule. By removing the transaction from the unconstrained schedule, unwarranted CMSC payments will be avoided.

The Panel also believes that the IESO should modify its procedures such that, where it has information about external conditions that will restrict flows on Ontario's interties, the IESO should reflect the impact of these conditions in its public reports. The Panel therefore recommends that:

Where the IESO is aware of conditions that will prevent or reduce the ability for power to flow at an Ontario intertie, the IESO should reflect this information in its public reports.

³ Market Rules: Chapter 7, available at: http://www.ieso.ca/imoweb/pubs/marketRules/mr_chapter7.pdf, pp. 45-47.

⁴ The unwarranted nature of these CMSC payments is discussed in section 5.2 below.

3. Investigation Process and Framework

3.1 Market Surveillance Panel Mandate

The MSP is empowered under the *Electricity Act, 1998* (the Act) to conduct investigations into any activity related to the IESO-administered markets or the conduct of a market participant.⁵

The MSP, with the support of the IESO's Market Assessment Unit (MAU),⁶ is also required by OEB By-Law #3 (the MSP By-Law) to monitor activities related to the IESO-administered markets and the conduct of market participants with a view to identifying, among others:

- inappropriate or anomalous market conduct, including possible abuses of market power and gaming;
- design flaws and inefficiencies in the Market Rules and other rules and procedures of the IESO; and
- design flaws in the overall structure of the IESO-administered markets.⁷

The general process applicable to MSP investigations is set out in the MSP By-Law which provides, among other things, that:

- the MSP may initiate an investigation on its own, upon receipt of a complaint or at the request of the OEB Chair;⁸
- where the Panel commences an investigation, the Panel shall, upon determining that there is a *prima facie* case in respect of the conduct of a person that is the subject matter of the investigation, notify that person of the commencement of the investigation;⁹
- for the purposes of an investigation, the Panel has the power to examine and compel the production of any documents or other things, to summon and compel testimony, to

⁵ *Electricity Act, 1998* (Ontario), as amended, available online at, http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98e15_e.htm#BK95, s. 37 (1).

⁶ The MAU provides support to the MSP pursuant to the "Protocol Relating to Market Surveillance Panel" between the IESO and the OEB, available online at: http://www.ontarioenergyboard.ca/OEB/_Documents/MSP/msp_protocol.pdf. References herein to investigative steps carried out by the MSP include investigative steps carried out by the MAU on behalf of the MSP.

⁷ MSP By-Law, as amended, available online at: http://www.oeb.gov.on.ca/OEB/_Documents/About%20the%20OEB/OEB_bylaw_3.pdf, s. 4.1.1.

⁸ *Ibid.*, s. 5.1.1.

⁹ *Ibid.*, s. 5.1.9.

conduct inspections, and to obtain warrants for search and seizure as authorized by the Act;¹⁰ and

- upon completion of an investigation, the Panel shall prepare a written report on the matter investigated, including its findings and its recommendations, if any.¹¹

3.2 Background to Investigation

In its Monitoring Report on the IESO-Administered Electricity Markets for the Period from May 2010 – October 2010 (the Summer 2010 Monitoring Report), the Panel described the Manitoba transmission de-rating and the associated CMSC payments paid to two traders for their repeated constrained-off import offers:

A part of the transmission system in Manitoba was [de-rated] to 0 MW of transfer capability, which prevented any power from flowing between Ontario and MISO on the Ontario-Manitoba intertie from July 13 HE 10 to July 15 HE 18. However, two market participants still offered or bid at the Manitoba interface. To accommodate the loss of transfer capability in Manitoba, the IESO can either preemptively curtail transactions (prior to final pre-dispatch) or curtail transactions in real-time (if they were scheduled in the constrained sequence). However, where transactions are scheduled only in the unconstrained sequence but not in the constrained sequence, there is no manual curtailment required and, under the circumstances, this would automatically lead to constrained-off CMSC payments. In the two days (July 14 and 15), Ontario load paid \$163,000 in uplift to two traders for constrained-off imports at the Manitoba interface even though the imports could not possibly have flowed.¹²

¹⁰ *Ibid*, s. 5.1.11.

¹¹ *Ibid*, ss. 5.1.13 and 7.2.1.

¹² Summer 2010 Monitoring Report, available online at: http://www.ontarioenergyboard.ca/OEB/_Documents/MSP/MSP_Report_20110310.pdf, pp. 68-69.

The Panel recommended that the IESO change the Market Rules or its procedures to avoid recurrences of this type of situation.¹³

3.3 Request for an Investigation

Following receipt and publication of the Summer 2010 Monitoring Report, the then Chair of the OEB wrote to the Chair of the MSP on March 21, 2011 and requested that the MSP investigate the circumstances that lead to CMSC payments being made to two market participants for constrained-off imports at the Manitoba interface as described in the Summer 2010 Monitoring Report.¹⁴ The Panel commenced this investigation in response to the Chair's request.

The Panel then notified TransAlta of the commencement of the investigation.

3.4 The Market Participant Subject to Investigation

This investigation relates to trades conducted by TransAlta Energy Marketing Corp. TransAlta is incorporated in Canada. TransAlta is a market participant and holds an Electricity Wholesaler Licence issued by the OEB which allows it to purchase and sell electricity in the IESO-administered market.¹⁵

3.5 Information Obtained by the Panel

In carrying out its investigation, the MSP obtained and considered extensive information provided by the IESO. This included statistical information (price, schedule, settlement and other data) and outage and de-rating information that was available before and during the Relevant Period.

Similarly, the Panel obtained and considered information from Manitoba Hydro and MISO relating to outages and de-ratings for the Manitoba and MISO systems generally and during the Relevant Period.

¹³ *Ibid.*, p. 70. See also Section 6 below.

¹⁴ Such requests are specifically contemplated in MSP By-Law, s. 5.1.1(c).

¹⁵ Electricity Wholesaler Licence EW-2011-0136, available online at:

http://www.rds.ontarioenergyboard.ca/webdrawer/webdrawer.dll/webdrawer/rec/287935/view/licence_ew_TransAlta_20110728.PDF.

The MSP also requested information from TransAlta. TransAlta responded to the Panel's requests on a voluntary basis. (The Panel did not employ its statutory inspection or other compulsory powers in this case.) The information provided by TransAlta included:

- Copies of documented communications involving relevant TransAlta traders, supervisors, other personnel and consultants that pertained directly or indirectly to the import transactions at issue in this investigation;
- copies of documents relating to the MISO OASIS system¹⁶ that were reviewed or could have been reviewed by TransAlta personnel with respect to the Manitoba transmission de-rating and consequent reduction in Manitoba-Ontario transfer capability; and
- audio recordings of inquiries made of Manitoba Hydro by TransAlta and of the responses from Manitoba Hydro in April, 2011, relating to the Manitoba transmission de-rating during the Relevant Period.

TransAlta advised that it had carried out a diligent and thorough internal investigation and had provided correct and complete responses to the Panel's information requests.

In addition, the Panel requested information from two other traders (that were not the subject of any investigation contemporaneous to this one) that transact over the Manitoba-Ontario intertie. The Panel was particularly interested in whether such other traders would have been aware of the reduction in effective transfer capability during the Relevant Period.

The MAU also retained a former trader (the Trading Expert) with experience in trading with various jurisdictions, including on the Manitoba-Ontario intertie, and obtained his views regarding TransAlta's trading behaviour during the Relevant Period.

The Panel also considered relevant information gathered in the course of its investigation of the Other Trader. The Panel's investigation of the Other Trader concerned similar trading behaviour over the same period and, therefore, the Panel assessed information that was provided by the

¹⁶ The Open Access Same-Time Information Systems, or OASIS, required to be established by the U.S. Federal Energy Regulatory Commission are described in section 4.3.4.1 below.

Other Trader to determine whether it was consistent with the information provided by TransAlta.¹⁷

3.6 Framework for Gaming Investigations

The Panel's mandate includes investigations in relation to conduct that may constitute an abuse of market power or gaming. In the course of providing a framework for analyzing market power issues, the Panel has noted that gaming is a separate concept (which may or may not overlap with market power concerns) that encompasses, among others, market manipulation and conduct that involves the following four elements:

- (i) a defect in the market design, poorly specified rules or procedures or a gap in the Market Rules or procedures (collectively referred to as a Market Defect);
- (ii) exploitation of the Market Defect by the market participant;
- (iii) profit or other benefit to the market participant; and
- (iv) expense or disadvantage to the market.¹⁸

4. Relevant Aspects of Market Design

The IESO operates the wholesale electricity markets in Ontario, including a real-time energy market in which electricity demand and supply are balanced and instructions are issued to dispatchable generators, loads, importers and exporters (the market includes transactions scheduled on the interfaces with neighbouring jurisdictions). For each five-minute interval, the IESO matches offers from generators/importers and bids from dispatchable loads/exporters to provide the required amount of electricity and establish the market clearing price (MCP). The simple average of the 12 interval MCPs in an hour is the Hourly Ontario Energy Price (HOEP).

The aspects of market design that are particularly relevant to this investigation are the “two-schedule” system which is employed in Ontario, the related CMSC payments, and the scheduling of transactions between the Ontario and MISO markets.

¹⁷ See Section 5.3.2 of the Report Relating to the Other Trader.

¹⁸ Market Surveillance Panel, *Monitoring Document: Monitoring of Offers and Bids in the IESO-administered Markets*, available online at: http://www.ontarioenergyboard.ca/OEB/_Documents/MSP/MSP_Monitoring_Offers_Bids_Document_20100310.pdf, p. 44.

4.1 *Market Schedules and Constrained Schedules*

Ontario has adopted a “two-schedule” market design whereby generators and dispatchable loads are settled at the uniform (*i.e.*, province-wide) MCP (other loads pay the HOEP) for electricity irrespective of their location in the province and of any associated physical limitations of the transmission system in their particular location. Importers (or exporters) receive (or pay) the HOEP unless there is congestion at the applicable interface, in which case they may receive a lower (or pay a higher) price (*i.e.*, the MCP +/- the intertie congestion price (ICP), referred to in this Report as the “Zonal MCP”).

After market participants submit their bids and offers, the IESO runs the information through the “dispatch algorithm” to determine schedules, prices and quantities. The dispatch algorithm is run in two modes (for both the various hourly pre-dispatch (PD) runs as well as the real-time (RT) run): the unconstrained mode and the constrained mode. The unconstrained mode ignores most physical limitations of the transmission system inside Ontario and produces the MCP as well as “market schedules”. The constrained mode considers all physical limitations of the transmission system inside Ontario and produces dispatch instructions and nodal (sometimes referred to as “shadow”) prices.¹⁹

4.2 *Congestion Management Settlement Credits*

When the constrained schedule produces a different dispatch than the market schedule, the affected market participant receives a CMSC payment to compensate it for being constrained on or constrained off. For example, if an import is scheduled to flow in a situation where it is uneconomic in the Ontario market schedule, it will be constrained on. Conversely, an import is constrained off if it is economic in the Ontario market schedule but is not scheduled to flow. In either circumstance, the importer is paid CMSC.

¹⁹ Nodal prices represent the cost of energy at each injection or withdrawal point on the grid based on the offers and bids of dispatchable participants (and the aggregate demand of non-dispatchable loads) at or accessible to/from that location. See IESO, *Introduction to Ontario's Physical Markets*, October 2011, available online at: <http://www.ieso.ca/imoweb/pubs/training/IntroOntarioPhysicalMarkets.pdf>, p. 36.

The purpose of CMSC payments is to compensate dispatchable market participants for responding to a physical dispatch instruction where transmission or other local conditions within Ontario result in a different flow of power than would be implied by the economically-based scheduling on a province-wide basis.²⁰ More specifically, CMSC payments are designed to pay constrained resources the amount they would have earned had they been dispatched in economic merit order in accordance with the market schedule. CMSC amounts are calculated using a formula which is intended to represent the difference between the operating profit that would have resulted from the market schedule and the operating profit resulting from the constrained schedule. The formula considers the difference between the participant's offer (or bid) price and the MCP, as well as the quantity differences between the schedules.²¹

4.3 Scheduling of Transactions Between Ontario and MISO

4.3.1 Scheduling Process and Timeline for Imports and Exports

Market participants with dispatchable generation or dispatchable load facilities in Ontario receive dispatch instructions every five minutes regarding the quantity of energy they should be injecting or withdrawing by the end of the five-minute interval. The IESO cannot issue dispatch instructions every five minutes in real-time to facilities located outside of Ontario. Instead, interjurisdictional trades are coordinated between the IESO and other system operators (such as MISO) using hourly interchange schedules.

Which imports or exports will flow for a particular dispatch hour (T) is determined by the final pre-dispatch run of the dispatch algorithm during the preceding hour (for example, the final import or export schedules for hour T are determined during hour T-1). These flows are then confirmed with neighbouring jurisdictions to determine if matching transactions will flow. Once this is confirmed, transactions become fixed for the dispatch hour. This means that they do not change during hour T (unless a change is required for reliability reasons). Thus, intertie transactions compete economically in the final Ontario pre-dispatch run, but are then fixed for

²⁰ For a general overview, see IESO, *Introduction to Ontario's Physical Markets*, *ibid.*

²¹ The unconstrained schedule for an import is called Market Quantities Scheduled for Injections (MQSI). The constrained schedule for an import is called Dispatch Quantities Scheduled for Injections (DQSI).

For imports, $CMSC = \text{Operating Profit Unconstrained} - \text{Operating Profit Constrained}$
 $= [(MCP - \text{Offer Price}) \times MQSI] - [(MCP - \text{Offer Price}) \times DQSI]$

the hour in real-time. In other words, they are treated like a dispatchable resource in pre-dispatch, but like a non-dispatchable resource in real-time.²²

The scheduling of imports/exports one hour ahead has implications for how traders procure transmission service. As indicated below in Table 1, traders see their final unconstrained and constrained schedules for imports (or exports) at approximately 40 minutes prior to the start of hour T (although the IESO may take manual actions within minutes of these final schedules being posted). In order to follow their constrained schedule, traders with import (or export) transactions must then procure (or sell) the requisite energy and obtain transmission service in the neighbouring jurisdiction from which they are exporting (or importing) (*e.g.*, MISO). This can be done up to 30 minutes before the real-time hour.

Table 1: Scheduling Timelines for Imports (or Exports) between MISO and Ontario

Time	Event
T - 2:00	Ontario deadline for submitting offers/bids for trades that would flow in real-time if scheduled.
T - 1:40	Traders see their <i>preliminary</i> Ontario pre-dispatch unconstrained and constrained schedules. ²³
T - 0:40	Traders see their <i>final</i> Ontario pre-dispatch unconstrained and constrained schedules.
T - 0:30	For imports into Ontario, deadline for obtaining energy and/or transmission in MISO. ²⁴
Hour T	Transaction flows in real-time (unless the transaction fails or is curtailed by the system operator in either jurisdiction). ²⁵

Because the final schedules in Ontario are determined before an importer must obtain the energy and transmission service in MISO, importers may and often do wait to procure power and transmission service in MISO until after the final schedules for Ontario have been posted. If the offered import does not appear in the Ontario constrained schedule, the transaction will not flow

²² See IESO, *Interjurisdictional Energy Trading Workbook*, October 2011, available online at: http://www.ieso.ca/imoweb/pubs/training/Workbook_IJT.pdf, p. 7.

²³ These preliminary schedules are non-binding estimates of what market participants' respective schedules are expected to be. There is no guarantee that these estimates will reflect the final schedules generated in the hour prior to real-time.

²⁴ See Section 4.3.2.2 for a description of MISO processes/procedures regarding transmission.

²⁵ IESO, *Interjurisdictional Energy Trading Workbook*, October 2011, available online at: http://www.ieso.ca/imoweb/pubs/training/Workbook_IJT.pdf, p. 61.

and the trader has no obligations.²⁶ If, on the other hand, the import appears in the constrained schedule, the trader still has time to take steps to procure the scheduled quantity of energy and any necessary transmission capacity in MISO.

4.3.2 Transmission Service

4.3.2.1 Ontario

Market participants are not required to purchase transmission service in order to flow energy transactions within, into or out of the Ontario wholesale energy market. The cost of transmission in Ontario is paid, in part, by exporters through an export transmission service tariff (currently \$2/MWh).²⁷ There is no transmission tariff charged in respect of import transactions. (Market participants in Ontario may purchase “transmission rights” (TRs); however, these are financial instruments and are not akin to the purchase of physical transmission capacity or service in other markets.²⁸)

4.3.2.2 MISO

In order to flow energy transactions within, into or out of MISO’s wholesale energy market, a market participant must purchase transmission capacity corresponding to the transaction quantity (e.g., in order to flow 10 MW out of MISO a trader must purchase (at least) 10 MW of transmission capacity for each hour during which the transaction will flow).

Market participants can buy hourly, daily, weekly, monthly or yearly transmission capacity from MISO. Additionally, market participants can purchase capacity on a “firm”²⁹ or “non-firm”³⁰

²⁶ For example, if a transaction appears only in the unconstrained schedule the trader does not need to take steps to obtain transmission in the neighbouring jurisdiction from which they are importing and unless subsequent control actions are taken by the IESO this trader will receive a CMSC payment.

²⁷ Export transactions are subject to a number of other charges (including uplift and non-uplift charge types). Because these charges are not relevant to the analysis in this Report, they are not discussed further.

²⁸ See IESO, *Transmission Rights: Marketplace Training*, 2009, available online at: <http://www.ieso.ca/imoweb/pubs/training/TRworkbook.pdf>. A detailed explanation of TRs is also set out in the Panel’s “Monitoring Report on the IESO-Administered Electricity Markets for the Period from November 2009 – April 2010”, available online at: http://www.ontarioenergyboard.ca/OEB/_Documents/MSP/MSP_Report_20100830.pdf, pp. 140-167.

²⁹ Defined by the North American Electric Reliability Corporation (NERC) as the “highest quality (priority) service offered to customers under a filed rate schedule that anticipates no planned interruption”: see http://www.nerc.com/files/Glossary_12Feb08.pdf.

³⁰ Defined by NERC as “[T]ransmission service that is reserved on an as-available basis and is subject to curtailment or interruption”: see http://www.nerc.com/files/Glossary_12Feb08.pdf.

basis. The longer the duration of the transmission capacity, the further in advance this capacity is typically purchased. For example, one-year firm transmission capacity may be purchased years in advance. On the other hand, MISO releases available hourly non-firm transmission less than one hour before the beginning of the dispatch hour (in other words, market participants cannot purchase hourly non-firm transmission more than an hour in advance of the initiation of a transaction).

4.3.3 External Transmission Limitations

As noted above, the IESO's unconstrained schedule ignores transfer limitations *within Ontario*. It does, however, consider flow limitations on the interties, as does the constrained schedule. This means that flow limitations or congestion on an intertie are not a basis for a difference between a trader's unconstrained schedule and constrained schedule — and, therefore, not a basis for CMSC payments.

On the other hand, transmission limitations *external to Ontario* which reduce the ability of transactions to flow but do not impact the physical capability of the intertie are not systematically used to adjust unconstrained and constrained pre-dispatch schedules (even if the IESO is aware of the limitation). As a result, import transactions that cannot possibly flow due to external transmission limitations may still be scheduled in pre-dispatch in Ontario's unconstrained schedule. Furthermore, these import transactions will be eligible to receive CMSC payments in the usual manner — *i.e.*, if, in real-time:

- (i) the import offer is economic and, therefore, scheduled in the unconstrained schedule; and
- (ii) the import offer price is above the applicable nodal price and, therefore, the import is not scheduled in the constrained schedule.³¹

4.3.4 Transmission Information Available to Traders

³¹ In the event such an import was offered below the applicable nodal price, it would be manually curtailed by the IESO and coded as resulting from an external transmission loading relief –external (TLRe) action. When transactions are curtailed and coded with the TLRe tag, IESO policy is to remove the transactions from both the unconstrained and the constrained schedules. As a result, there can be no variance between the two schedules and no CMSC payments are generated.

There are various readily available sources from which energy traders can obtain information regarding transmission constraints. This section provides a summary of these sources of information.

4.3.4.1 OASIS

In the United States, the Federal Energy Regulatory Commission (FERC) requires that:

...each public utility (or its agent) that owns, controls, or operates facilities used for the transmission of electric energy in interstate commerce will be required to create or participate in an [Open Access Same-Time Information System or OASIS] that will provide open access transmission customers and potential open access transmission customers with information, provided by electronic means, about available transmission capacity, prices, and other information that will enable them to obtain open access non-discriminatory transmission service.³²

In accordance with the relevant FERC Order, MISO OASIS provides information about transmission capacity and price information for the portion of the electricity grid which is overseen by MISO.³³ MISO OASIS also publishes summary reports which detail outages for equipment within that area (including Manitoba's transmission system).³⁴ It is MISO OASIS, and not the Manitoba OASIS website referred to below, that is the website which traders use to obtain transmission capacity in Manitoba.

³² Federal Energy Regulatory Commission, "Open Access Same-Time Information System (formerly Real-Time Information Networks) and Standards of Conduct", Order No. 889, April 24, 1996, available online at: <http://www.ferc.gov/legal/maj-ord-reg/land-docs/rm95-9-00k.txt>.

³³ MISO OASIS also includes an interface which allows market participants to input requests to purchase transmission capacity: see MISO, "Business Practices Manual for Module B of the Open Access Transmission, Energy and Operating Reserve Markets Tariff", effective August 10, 2009, available online at: <https://www.midwestiso.org/Library/Repository/Meeting%20Material/Stakeholder/SMWG/2011/20111031/20111031%20SMWG%20Item%2010b%20Draft%20Redline%20Change%20Re%20Spot%20In%20BPM-013-r4.pdf>, p. 6-3.

³⁴ Market participants can use the MISO OASIS to access certain reports such as "Outage Summary", "Real-Time Outage Reports" and "MISO AFC (and ATC) Related Postings and Reports". For a sample OASIS report, see <http://oasis.midwestiso.org/OASIS/MISO>.

Manitoba Hydro is a “Coordination Member” of MISO (and the only Canadian member of MISO).³⁵ Manitoba Hydro operates as an external participant in MISO. As such, it controls its own generation while at the same time enjoying reciprocity in the application of transmission tariffs on transactions into and out of MISO.³⁶ Pursuant to a Coordination Agreement³⁷ with MISO, Manitoba Hydro is required to provide MISO with information concerning its system that may impact operation of the combined MISO/Manitoba Hydro systems, including outage information.

MISO OASIS publishes intertie system information in various reports, including one titled “Manitoba Hydro Interface ATC Tool” (the MHIAT).³⁸ The MHIAT provides market participants with projections of what the available transfer capacity (ATC) at the Manitoba-Ontario intertie will be on an hourly basis for the upcoming seven days.

MISO hosts an OASIS on behalf of Manitoba Hydro where information regarding the Manitoba transmission grid is posted.³⁹ This website contains a number of reports which document the status of the Manitoba transmission system, including the transfer capacity of the Manitoba-Ontario interface.⁴⁰

4.3.4.2 IESO System Status Reports

The IESO publishes System Status Reports (SSRs) for each day, which provide forecasts of future system conditions and are updated as new system conditions arise.⁴¹ Among other things, SSRs include information on intertie capabilities⁴² and are a source of publicly available

³⁵ MISO, “Members by Sector”, available online at :

<https://www.midwestiso.org/Library/Repository/Communication%20Material/Corporate/Current%20Members%20by%20Sector.pdf>.

³⁶ Manitoba Hydro, “A History of Electric Power in Manitoba”, available online at:

http://www.hydro.mb.ca/corporate/history/history_of_electric_power_book.pdf, p. 70.

³⁷ MISO, “Coordination Agreement by and between Midwest Independent Transmission System Operator Inc. and Manitoba Hydro”, available online at: <https://www.midwestiso.org/Library/Repository/Tariff/Rate%20Schedules/Rate%20Schedule%2002%20-%20Midwest%20ISO-MH%20Coordination%20Agreement.pdf>.

³⁸ For a sample MHIAT report, see <http://oasis.midwestiso.org/documents/mheb/mheb.asp>.

³⁹ <http://oasis.midwestiso.org/OASIS/MHEB>.

⁴⁰ For a sample of such status reports, see <http://oasis.midwestiso.org/documents/Mheb/MH%20Interface%20SOL%20%20Scheduling%20Limit%20Calculations%20Dec%202011.pdf>.

⁴¹ The SSR requirements are contained in section 12 of Chapter 7 of the Market Rules, available online at:

http://www.ieso.ca/imoweb/pubs/marketRules/mr_chapter7.pdf.

⁴² For a sample of an SSR, see http://reports.ieso.ca/public/SSR/PUB_SSR_20120427_v4.htm.

information from the IESO regarding changes to Ontario's intertie capabilities.⁴³ SSRs provide a forecast of future system conditions, including expected supply and demand conditions, and internal and intertie transmission interface limitations. SSRs and other IESO public reports do not, however, address external system conditions in cases where external transmission constraints have reduced the effective transfer capacity of an intertie without impacting the physical capability of the intertie itself (such as that described in this Report where external system conditions prevented power from flowing across the intertie even though all of the components that make up the intertie were operational and capable of transmitting power between Manitoba and Ontario).

4.3.4.3 Third Party Data Providers

Third party data providers offer traders various services including data aggregation, organization and parsing. These providers typically will offer value-added data products based on publicly available information (*e.g.*, real-time, forecast and historical data regarding energy prices and quantities on one screen or real-time/historical analysis of transmission conditions within control areas and on the interties between Ontario and its neighbours). Such services also gather information about transmission capabilities and outages from disclosures made by system operators.

5. *Analysis*

5.1 *The Outage*

In response to a request from the MAU,⁴⁴ Manitoba Hydro provided documentation describing the outage during the Relevant Period. Manitoba Hydro drafted and approved Temporary Operating Instruction No. 10-104 (the TOI) on July 8, 2010. The TOI was emailed to certain employees of MISO, the IESO, Manitoba Hydro and Hydro One Networks Inc. on July 9, 2010 and was also posted on the Manitoba Hydro OASIS website. The TOI outlined a reduction to 0

⁴³ Information on intertie transmission limitations is also available via IESO Intertie Scheduling Limit Reports, which are published on a day-ahead, pre-dispatch and real-time basis: see <http://reports.ieso.ca/public/>

⁴⁴ Email from MAU to Manitoba Hydro, January 6, 2012.

MW in the east and west transfer limits between Manitoba and Ontario from HE 10 of July 13, 2010 to HE 18 of July 15, 2010 (the TOI Period, which extends over the Relevant Period for this investigation). More specifically, the TOI communicated an upcoming abnormal operating condition on the Manitoba transmission system regarding the Selkirk Generating Station Unit 1.⁴⁵

The IESO was informed by email by Manitoba Hydro on July 9, 2010 that the effective intertie capacity between Manitoba and Ontario would be reduced to 0 MW over the TOI Period. The IESO did not reduce the transfer capacity of the Manitoba-Ontario intertie in its scheduling tools due to the fact that the physical capability of the intertie itself was not affected by this external transmission constraint.

5.2 CMSC Payments

CMSC payments were established to “keep whole” market participants who are required as a result of transmission or other local conditions on the Ontario grid to act in a manner different from their economic position in the province-wide Ontario schedule.⁴⁶ They were not intended to provide compensation for – among others – conditions arising outside of the Ontario market.⁴⁷ Although in many hours during the Relevant Period the transactions were constrained off as a result of internal constraints within Ontario,⁴⁸ at all material times the transmission outage in Manitoba would have made it impossible for any imports to flow into Ontario. While the Panel has concluded that neither TransAlta nor the Other Trader exploited the situation, the Panel considers the CMSC payments made to these two traders during the Relevant Period to

⁴⁵ This unit is one of two natural gas generators located close to the Red River on the east side of the Town of Selkirk, Manitoba. The Selkirk generation units are part of the generation area that affects the Manitoba-Ontario interface transfer limits. The impact of the Selkirk unit(s) on the interface is due to overload on SG12 for contingency loss of SR3/SW3 at high Winnipeg River generation. This is reflected in emails from Manitoba Hydro to MAU, January 29, 2012 and May 1, 2012.

⁴⁶ See the Panel’s 2003 discussion paper: “Congestion Management Settlement Credits (CMSC) In the IMO-Administered Electricity Market”, available online at: http://www.ontarioenergyboard.ca/documents/msp/consultation_discussionpaper_180203.pdf.

⁴⁷ The IESO agreed with the Panel that “CMSC payments for external congestion are inappropriate”: see the IESO’s response to the recommendations in the Summer 2010 Monitoring Report which is reproduced in Section 6 below.

⁴⁸ Transactions that are constrained off because of conditions internal to Ontario will appear in the unconstrained schedule but not in the constrained schedule. For example, in Table 2 any transaction where the offer is economic relative to the PD Zonal MCP but uneconomic relative to the PD Nodal Price would have been constrained off as a result of internal conditions. In several hours TransAlta’s offer prices were lower than the PD Nodal Price yet the transactions did not appear in the PD constrained schedule (i.e. July 14, HE 6, 7, 19, 20 and 22). Similarly, in several hours TransAlta’s offer prices were lower than the PD Zonal MCP and higher than the PD Nodal Price yet the transactions did not appear in the PD unconstrained schedule (i.e. July 14, HE 5, 8, 9, 14, 23 and 24). In these hours the transactions were pre-emptively curtailed by the IESO and did not receive CMSC payments. The basis for pre-emptive curtailment is detailed IESO Market Manual 4: Market Operations - Part 4.3: Real-time Scheduling of the Physical Markets at section 1.7.4: see: http://www.ieso.ca/imoweb/pubs/marketOps/mo_RealTimeScheduling.pdf

nonetheless be unwarranted because at all times factors not related to Ontario transmission grid system conditions would have prevented the imports from flowing.

During the Relevant Period, TransAlta repeatedly offered imports from Manitoba to Ontario when the transmission outage in Manitoba precluded the transactions from flowing. Table 2 below shows the market conditions, TransAlta offers and outcomes (the unconstrained schedule and CMSC payments) over the Relevant Period.⁴⁹ As referred to in Table 2: (i) the PD Zonal MCP is the applicable price that determines whether an import offer is economic in the unconstrained schedule; (ii) the PD Nodal Price is the applicable price at the Manitoba-Ontario intertie which determines whether an import transaction will be dispatched in the constrained schedule; and (iii) the real-time Zonal MCP (RT Zonal MCP) is the applicable price which is used to determine the amount of any CMSC payments.

**Table 2: Import Offer Prices and Quantities and CMSC Payments to TransAlta
July 14-15, 2010
(\$/MWh, MW and \$)**

Date	Hour Ending	PD Zonal MCP (\$/MWh)	PD Nodal Price (\$/MWh)	Offer Price (\$/MWh)	Offer (MW)	Unconstrained Schedule (MQSI) (MW)	RT Zonal MCP ⁵⁰ (\$/MWh)	CMSC (\$)
07/14	1	41.00	27.25	-	-	-	54.02	0
07/14	2	36.34	26.86	-	-	-	35.34	0
07/14	3	35.31	26.86	-	-	-	34.22	0
07/14	4	32.89	26.73	28.25	25	25	32.94	117
07/14	5*	34.77	27.38	28.25	50	0	35.70	0
07/14	6*	36.65	28.97	28.25	75	0	37.51	0
07/14	7*	37.65	30.57	28.25	200	0	40.58	0
07/14	8*	42.18	7.03	28.25	250	0	39.70	0
07/14	9*	45.88	13.26	28.25	250	0	42.28	0
07/14	10	31.99	13.47	28.25	250	250	34.45	1,548
07/14	11	49.20	16.19	22.25	175	175	55.62	5,839
07/14	12	52.64	21.30	22.25	175	175	52.82	5,349
07/14	13	56.39	26.22	26.25	175	175	52.66	4,620
07/14	14	65.00	28.18	30.25	175	175	54.49	4,242
07/14	15	60.00	28.20	30.25	175	175	66.47	6,337

⁴⁹ Note that due to the inability of power to flow over the Manitoba-Ontario intertie during the TOI Period, TransAlta's real-time constrained schedule for all hours during the Relevant Period was 0 MW.

⁵⁰ While the RT Zonal MCP is calculated on a 5 minute (interval) basis, the data presented in this column is an equally-weighted hourly average of the RT Zonal MCP. Due to the fact that import schedules are fixed for the hour (barring reliability issues), calculating the CMSC payments using this equally-weighted hourly average Zonal MCP is generally equivalent to calculating CMSC payments on an interval basis using the interval Zonal MCP.

07/14	16	57.00	28.18	30.25	175	175	58.86	5,006
07/14	17*	68.31	30.25	30.25	175	0	98.44	0
07/14	18	66.74	30.23	30.25	175	175	73.44	7,558
07/14	19*	57.39	48.78	31.25	175	0	63.89	0
07/14	20*	58.00	49.30	31.25	175	0	54.32	0
07/14	21	58.00	30.23	-	-	-	54.60	0
07/14	22*	45.18	37.54	36.25	150	0	48.03	0
07/14	23*	45.49	21.37	31.25	150	0	78.23	0
07/14	24*	39.00	28.09	33.25	150	0	38.15	0
07/15	1*	35.93	27.93	30.88	200	0	37.21	0
07/15	2	34.31	27.80	28.88	200	200	35.11	1,245
07/15	3	33.95	27.67	28.88	100	100	33.15	427
07/15	4*	32.95	27.93	28.88	175	0	32.49	0
07/15	5*	32.84	27.15	28.88	175	0	32.97	0
07/15	6	36.03	26.63	30.08	200	200	35.01	987
07/15	7	36.82	27.41	28.08	200	200	35.99	1,583
07/15	8	38.81	28.24	29.08	200	200	37.10	1,604
07/15	9	39.17	28.26	29.88	200	200	43.91	2,806
07/15	10*	41.88	29.88	29.88	200	0	69.36	0
07/15	11	60.00	28.19	32.88	200	200	63.70	6,165
07/15	12	32.88	29.32	32.88	200	188	56.96	4,526
07/15	13	73.00	28.23	38.88	150	150	83.12	6,636
07/15	14	87.00	28.21	34.88	150	150	69.13	5,138
07/15	15	90.83	32.20	34.88	150	150	161.79	19,037
07/15	16	109.11	32.83	34.88	150	150	137.79	15,436
07/15	17	111.00	1.79	34.88	150	150	70.61	5,359
07/15	18	94.00	28.08	34.88	150	150	97.38	9,374
Total								120,939

Manually Curtailed Hours (defined below) are denoted with asterisks () in the above table.

In many hours, TransAlta's import offers were economic and were scheduled in the market schedule but were also above the applicable nodal price and thus were not dispatched in the constrained schedule (the Constrained Hours). In most of the Constrained Hours, TransAlta was constrained off and received CMSC payments. However, during certain Constrained Hours, TransAlta's offers were manually curtailed (in both schedules) by the IESO control room operators (the Manually Curtailed Hours). As a result of the manual curtailment, these transactions were not eligible for CMSC payments.⁵¹ The Panel estimates that this manual curtailment of TransAlta's import transactions during the Manually Curtailed Hours avoided approximately \$17,588 in unwarranted CMSC payments during the Relevant Period.

⁵¹ For details on the mechanics of curtailment, see footnote 48 above. The specific reasons why certain of TransAlta's offers during the Constrained Hours were manually curtailed and others were not was not recorded by the IESO and it has not been possible to determine after-the-fact the reasons for the differing treatment of transactions in certain hours (*i.e.*, why some of these transactions with final pre-dispatch unconstrained schedules greater than 0 MW were constrained off and received CMSC payments while others were manually curtailed by the IESO control room and did not receive CMSC payments).

5.3 *Gaming*

5.3.1 Exploitation

As noted in Section 3.6 above, an essential element of gaming related to a Market Defect is the exploitation of the opportunity. The Panel considers that exploitation may exist where the market participant had some level of intention to exploit or knowledge of an opportunity to exploit arising from the Market Defect. The Panel has not, to date, had occasion to determine whether exploitation can be said to occur where relevant information can reasonably be expected to be identified/obtained and the market participant failed to do so. It is not necessary for the purposes of this Report for the Panel to determine the precise standard applicable to the exploitation element of gaming as the Panel is satisfied that TransAlta was not gaming regardless of which standard is applied.

The Panel assessed information from TransAlta and other sources in order to determine what information TransAlta had about the Manitoba transmission de-rating, what offer strategy it used and what attempts it made to obtain transmission. The Panel also considered information obtained from other traders regarding transmission availability and the Manitoba de-rating, as well as the views expressed by the Trading Expert.

5.3.2 TransAlta's Information About the Manitoba De-rating

TransAlta stated that its supervisors and traders had no knowledge of the Manitoba transmission de-rating and the resultant lack of transfer capability on the Manitoba-Ontario intertie during the Relevant Period. TransAlta stated that it therefore had no intention to game the market by offering imports that it knew could not flow for the purpose of receiving CMSC payments. TransAlta stated that it first became aware of the Manitoba de-rating and the lack of transfer capability on the Manitoba-Ontario intertie when it received an information request from the MAU in February 2011.⁵²

⁵² Letter from TransAlta to MAU, March 22, 2011, and letter from TransAlta to the Panel, April 29, 2011.

5.3.2.1 Communications Between TransAlta Traders and Supervisors

TransAlta provided the Panel with copies of documented communications among its Relevant Staff regarding the import transactions at issue in this investigation. These communications do not indicate that TransAlta was aware of the Manitoba transmission de-rating or that TransAlta personnel sought to exploit the de-rating to obtain CMSC payments.

5.3.2.2 Information Reviewed by or Available to TransAlta Traders

TransAlta advised the Panel that it assesses the following factors when determining whether to make an import offer:

- (i) the economics of a possible trade taking into account transaction costs as well as its net position in the two markets; and
- (ii) the intertie capability, as set out in SSRs published by the IESO, to determine the likelihood of congestion impacting the trade.⁵³

TransAlta advised the Panel that it does not assess the availability of internal transmission within Manitoba prior to initiating a trade between Manitoba and Ontario. TransAlta indicated that firm transmission is usually unavailable (having been purchased long-term) and therefore TransAlta traders typically only apply for non-firm transmission in Manitoba after they receive a final pre-dispatch schedule from the IESO.

The following summarizes potential sources of information about transmission in Manitoba during the Relevant Period, and notes whether they were used or accessed by TransAlta in respect of the import transactions at issue in this investigation.

System Status Reports

TransAlta advised the Panel that none of the SSRs issued by the IESO indicated limitations in respect of the Manitoba-Ontario intertie either before or during the Relevant Period. TransAlta further advised the Panel of TransAlta's understanding that it was not the practice of the IESO to

⁵³ Letter from TransAlta to MAU, March 22, 2011.

issue SSRs where a condition giving rise to a lack of transmission capability was external to the IESO-administered market.⁵⁴

The Panel confirmed through inquiries of IESO personnel that no SSRs, or similar reports, identifying the Manitoba de-rating or its impact on the Manitoba-Ontario intertie were issued by the IESO prior to or during the Relevant Period. The Panel further confirmed with the IESO that it does not ordinarily issue SSRs or other reports identifying reductions in transmission capacity where the condition does not affect the physical capability of the intertie.⁵⁵

Sygration Market Dashboard

TransAlta advised the Panel that Sygration Market Dashboard was the primary source of information that TransAlta traders relied on at the time of the subject import transactions to assess system conditions. Sygration is a third-party service provider that provides consolidated market information to market participants in real-time.⁵⁶ TransAlta downloaded historical information from Sygration for the TOI Period and provided it to the Panel.

The Sygration Market Dashboard information upon which TransAlta said its traders relied did not show the Manitoba transmission de-rating or its impact on the Manitoba-Ontario intertie. To the contrary, it showed an import limit on the Manitoba-Ontario intertie between 200 MW and 300 MW for all hours during the Relevant Period.⁵⁷

MISO OASIS

TransAlta advised the Panel that its traders did not ordinarily monitor or rely upon MISO OASIS prior to engaging in trades. For the purpose of responding to the Panel's requests for information in the context of this investigation, TransAlta obtained outage information from MISO for the entire month of July 2010. This information (the MISO Outage Information) did not include the Manitoba Hydro TOI. The MHIAT (a report published on MISO OASIS described in Section

⁵⁴ *Ibid.*

⁵⁵ Email from IESO to MAU, April 27, 2012.

⁵⁶ See information about Sygration's "Dashboard Supply Mix" report described at <http://www.sygration.com/supplymixhelp.html>.

⁵⁷ Letter from TransAlta to MAU, April 29, 2011, Tab B.

4.3.4.1 above) did not clearly identify the Manitoba de-rating. That neither the MHIAT nor the MISO Outage Information clearly identified the reduction in the transfer capability over the Manitoba-Ontario intertie resulting from the Manitoba de-rating was corroborated by the Trading Expert.

5.3.2.3 Other Information

TransAlta provided the Panel with a compact disc containing recordings of calls made by TransAlta in April 2011 as part of its own internal investigation. The CD includes a record of calls between TransAlta and each of Manitoba Hydro, MISO and Yes Energy (a third-party information provider) during which TransAlta inquired whether market participants could access information concerning outages or de-ratings that were expected to occur in the 30 days after these calls were made.⁵⁸

In its call with Manitoba Hydro, TransAlta was advised that all transmission information concerning the Manitoba System was posted to MISO OASIS. However, in a later call, MISO personnel advised TransAlta that not all emergency outages were posted on MISO OASIS as Manitoba Hydro may not report all outages to MISO. The MISO representative noted that transmission events that occurred in real-time would not be found in the planned outage report, but that these real-time events would be known by MISO and could perhaps be found in other reports on MISO OASIS.⁵⁹

Manitoba Hydro provided the Panel with a copy of an email notification sent on July 9, 2010 by Manitoba Hydro to a number of recipients, including MISO and the IESO.⁶⁰ This email contained the TOI which, as stated above, outlined a reduction in the east and west transfer limits from Manitoba to Ontario from HE 10 of July 13, 2010 to HE 18 of July 15, 2010 (in other words, during the TOI Period which extends over the Relevant Period for this investigation). The TOI was posted on the Manitoba Hydro OASIS website but the email was not sent to traders such as TransAlta.

⁵⁸ Letter from TransAlta to MAU, April 29, 2011, Tab E.

⁵⁹ *Ibid.*

⁶⁰ Email from Manitoba Hydro to MAU, January 30, 2012.

Based on the above, although information detailing the reduction in intertie capacity was publicly available on the Manitoba Hydro OASIS website during and shortly before the TOI Period, the Panel has concluded that TransAlta was not aware of it and that the TOI Period would not reasonably have been expected to be identified/obtained by traders given its absence in the IESO SSRs and on MISO OASIS which, as noted above, is the website that traders use to obtain transmission capacity in Manitoba.

5.3.3 Offer Strategy

In order to assess the offer behaviour of TransAlta during the Relevant Period, the Panel provided the Trading Expert with TransAlta's offer data on a no-names basis for this period and, for comparative purposes, for the two preceding months (the Offer Behaviour).

According to the Trading Expert, the patterns in the Offer Behaviour were consistent with a lack of knowledge by TransAlta of the Manitoba de-rating prior to or during the Relevant Period.

5.3.4 Attempting to Obtain Transmission

The Trading Expert corroborated the fact that hourly non-firm transmission is not released to the market by MISO until less than an hour prior to the beginning of the applicable period.⁶¹ In his view, it is reasonable for traders to wait until after they have received their final constrained schedule from Ontario before applying for the MISO transmission capacity required to consummate a transaction. The Panel agrees that this is a reasonable approach for traders to follow.⁶²

Had a trader tried to procure non-firm transmission during the Relevant Period to flow an import from Manitoba into Ontario, MISO OASIS would have denied the request. Typically, MISO

⁶¹ See Section 4.3.2.2 above.

⁶² The Panel is aware of the Alberta Utilities Commission Decision 2012-182, Market Surveillance Administrator Application for Approval of a Settlement Agreement between the Market Surveillance Administrator and TransAlta Energy Marketing Corp. (Proceeding ID No. 1553, (the AUC Decision)). TransAlta's conduct that is the subject of this Report does not relate to the 'close-to-the-gate' conduct described in the AUC Decision. Although traders are able to wait until they see their final Ontario pre-dispatch schedule to obtain power and/or transmission service from the intended source or sink market, a deliberate close-to-the-gate strategy could be subject to investigation by the Panel to determine if it constituted an abuse of market power and/or gaming.

OASIS would have advised the trader that non-firm ATC was unavailable, but would not have provided further particulars as to the reason.⁶³ This is consistent with the information provided by TransAlta with regards to one of the hours when TransAlta's import offers were not fully constrained off and it therefore sought to procure transmission service from MISO OASIS to flow its scheduled import.

On July 15 in HE 10 TransAlta's import offers were not fully constrained off and it was scheduled in the final pre-dispatch run of the constrained schedule for 9 MW (and subsequently manually curtailed by the IESO control room).⁶⁴ TransAlta supplied the Panel with a copy of a response to a transmission request for this hour showing that TransAlta sought to obtain transmission capacity to flow the power into Ontario over the Manitoba-Ontario intertie. This response indicates in the section "status comments" that "non-firm ATC is unavailable". However, there is no further information provided as to why ATC was unavailable. TransAlta's position is that this document evidences that TransAlta was not trying to game the situation and, in fact, its intent was to import power into Ontario during those hours when it was not constrained off.⁶⁵ The Panel does not accept that this is, in and of itself, supportive of TransAlta's position since a market participant who had pre-existing knowledge of the reduced transfer capability between Manitoba and Ontario could nonetheless have made, at no cost, a request to MISO for transmission capacity.

5.3.5 Information from Traders

Two market participants who trade on the Manitoba interface on a regular basis were contacted to ascertain their knowledge of the Manitoba de-rating. Neither market participant could recall whether it had knowledge of the Manitoba de-rating prior to or during the Relevant Period.⁶⁶

As noted above, the Panel also considered and assessed information provided by the Other Trader, for the purpose of determining whether it was consistent with information provided by

⁶³ This was confirmed by the Trading Expert.

⁶⁴ The IESO control room cancelled that flow and coded it TLRe. TransAlta was not paid any CMSC for that hour because in real-time both the constrained and unconstrained schedules were set to 0 MW. It was only for the periods where TransAlta's unconstrained and constrained schedules differed (and where TransAlta was fully constrained off) that it received CMSC payments.

⁶⁵ Letter from TransAlta to the Panel, April 29, 2011, Tab D.

⁶⁶ One of the market participants indicated that it was not yet an active participant on the Manitoba-Ontario intertie during the Relevant Period.

TransAlta. The information provided by the Other Trader was largely consistent with the information supplied by TransAlta.⁶⁷

5.4 The Panel's Findings

Based on the evidence that was obtained in this investigation, the Panel is satisfied that TransAlta did not exploit the Manitoba de-rating for the purpose of receiving CMSC payments during the Relevant Period. This is supported by the following:

- TransAlta's trading behaviour; and
- the fact that information from Manitoba Hydro detailing the de-rating was not communicated to traders such as TransAlta and could not reasonably be expected to have been identified/obtained.

None of the information provided by TransAlta in its responses to the Panel's information requests was indicative of exploitation, and the information provided by TransAlta was corroborated where applicable by the Trading Expert and is consistent with information provided to the Panel by the Other Trader.

Given this finding, one of the essential elements comprising gaming in relation to a Market Defect – exploitation by the market participant – is not present. As a result, the Panel need not address the other three elements, and concludes that TransAlta did not engage in gaming in respect of the transactions at issue.

It is the Panel's view that this investigation highlights opportunities to improve IESO procedures regarding the scheduling of intertie transactions and the payment of CMSC (which benefits one market participant and increases uplifts to all customers) in circumstances where external transmission limitations render transactions infeasible. In Section 6 below the Panel provides its recommendations in respect of IESO procedures.

⁶⁷ See Section 5.3.2 of the Report Relating to the Other Trader.

6. IESO Procedures

This investigation (and the Panel's parallel investigation of the Other Trader) identifies two enhancements that could be made to IESO procedures and makes two recommendations in that regard. CMSC was paid in respect of import offers even though at all material times the imports would have been incapable of flowing due to external transmission limitations in Manitoba,⁶⁸ and information available to the IESO about the infeasibility of import transactions was not reflected in IESO public reports. The result was unwarranted CMSC payments for TransAlta (and the Other Trader). These CMSC payments were ultimately recovered from loads as an uplift charge.

Under the IESO's current rules and procedures, the dispatch algorithm's unconstrained schedule takes into account intertie limitations that may make import/export transactions infeasible, but does not take into account external transmission limitations that do not impact the physical capability of the intertie.⁶⁹ As a result, imports which have no possibility of flowing due to external transmission limitations may be included in the unconstrained schedule, but will be constrained-off in the constrained schedule if they are priced higher than the applicable nodal prices. In these circumstances, the transactions attract CMSC payments unless the IESO manually curtails the transactions. There is currently no mechanism under the Market Rules for clawing-back such CMSC payments (absent a finding of local market power).⁷⁰

In its Summer 2010 Monitoring Report, the Panel recommended that the IESO address the issue of CMSC paid in respect of intertie transactions that are incapable of flowing due to external transmission issues, and identified the following options in that regard: removing the related

⁶⁸ As noted in section 5.2 above, many of the transactions were constrained off as a result of internal constraints within Ontario. This does not affect the finding, however, that at all material times any transactions scheduled in the constrained schedule would have subsequently been curtailed by the IESO as a result of the transmission de-rating in Manitoba (i.e. notwithstanding the conditions in Ontario, the transmission de-rating in Manitoba would have made it impossible for any imports to flow).

⁶⁹ Email from IESO to MAU, April 27, 2012.

⁷⁰ While it is possible (as happened during the Relevant Period) that an import transaction which is constrained off under circumstances where it is impossible for that transaction to flow is eligible for CMSC, the same possibility does not exist for constrained-on exports. In the event that any transaction (import or export) was constrained on in circumstances where it could not flow, it would be identified as a reliability issue, be curtailed by the IESO and not be eligible for CMSC.

offers/bids, reducing intertie transfer capability to zero, or establishing a mechanism for clawback of the CMSC payments.⁷¹

In its response to this recommendation, the IESO agreed that CMSC payments for external congestion are inappropriate, and that removing the transactions from the market schedule will result in a more accurate price signal to the market. However, the IESO noted complexities associated with each of the three above options and indicated that, in its view, the preferred approach is for the Market Assessment Unit to continue to monitor participant behaviour and take appropriate action as required to address issues as they occur.⁷²

The Panel notes that information pertaining to the inability of an intertie transaction to flow may be unavailable, or not reasonably expected to be identified/obtained by the market participant, as was the case for TransAlta and the Other Trader. Moreover, there is currently no mechanism which enables avoidance or recovery of these CMSC payments. As such, the Panel does not believe that reliance on monitoring of participant conduct is the preferred approach by which to address the issue of CMSC payments for infeasible intertie transactions. An alternative solution for achieving the desired outcome is discussed further below.

6.1 2003 Market Rule Change

In 2003, the Board of Directors of the IESO (then IMO) approved an omnibus set of changes to the Market Rules which contained (among other items) Market Rule Amendment MR-00195R03 (the 2003 Rule Change), which empowers the IESO to use interchange (amongst other) information for determining and updating the pre-dispatch schedules that are generated.⁷³ The rationale for the 2003 Rule Change, which would “enable the [IESO] to modify interchange schedule data so both the constrained and unconstrained schedules would reflect the transaction’s ability to flow”,⁷⁴ was expressed as follows:

⁷¹ Summer 2010 Monitoring Report, p.70

⁷² The full extent of the IESO’s response is reported in a letter from Paul Murphy, President and Chief Executive Officer, Independent Electricity System Operator, to Cynthia Chaplin, Chair, Ontario Energy Board (December 15, 2011), available online at: http://www.ontarioenergyboard.ca/OEB/_Documents/MSP/Response_to_Chair-OEB_MSP-Monitoring-Report_201112.pdf .

⁷³ MR-00195R03, which documents the proposal to amend Section 5.2.1.6 of Chapter 7 of the Market Rules, was published December 15, 2003 and is available at: http://www.ieso.ca/imoweb/pubs/mr/mr_00195_R00_R06_R06_BA.pdf.

⁷⁴ *Ibid.*

[T]he unconstrained schedule, which sets the market clearing price (MCP), can contain unavailable offers or bids on the incorrect assumption that all transactions could actually flow between markets. A transaction in the unconstrained schedule is not limited by the upper limit of the same transaction in the constrained schedule. The schedules therefore may be widely different leading to congestion management settlement credits based on an energy quantity that has no possibility of being scheduled. This creates an inconsistency with the original intent of the CMSC payment structure in Ontario – a payment is being made for the non-delivery of energy due to actions other than the [IESO] dispatching facilities to lower levels than would be the case if not for congestion or other system restrictions.⁷⁵

The IESO has implemented the 2003 Rule Change in the following manner:

- Transactions which are in the constrained schedule: If a transaction which cannot flow due to external transmission constraints has a final pre-dispatch constrained schedule of greater than 0 MW, then the transaction is manually curtailed by the IESO control room, coded with the external transmission loading relief (TLRe) code and is not eligible to receive CMSC payments.
- Transactions which are not in the constrained schedule: If a transaction has a final pre-dispatch constrained schedule of 0 MW, then the transaction is not guaranteed to be manually curtailed and coded with the TLRe code (as 0 MW are scheduled to flow in real-time in any event). If the final pre-dispatch unconstrained schedule is greater than 0 MW, the transaction will generate a CMSC payment related to the quantity difference between the two schedules (*i.e.*, the IESO does not modify the unconstrained schedule in order to ensure that it reflects the transaction's inability to flow).

⁷⁵*Ibid*, p. 13.

As was demonstrated by the actions of the IESO control room operators in the Manually Curtailed Hours during the Relevant Period,⁷⁶ the IESO may manually curtail transactions that for external reasons cannot flow. Had the IESO manually curtailed all such transactions during the Relevant Period, no CMSC would have been payable to TransAlta (or to the Other Trader). However, as noted above, manual curtailment is not currently required by the IESO's procedures and is not used on all occasions when the transaction receives a 0 MW constrained schedule as a result of the final pre-dispatch run.

6.2 Recommendations

The total CMSC payments made to TransAlta and the Other Trader during the Relevant Period were \$162,563. The Panel does not have comprehensive information on how frequently external situations prevent flows on the Ontario interties (or the related amounts of CMSC payments) because there is no mechanism that systematically identifies such events. The Panel believes that two straightforward procedural changes could ensure that future CMSC payments are avoided under similar circumstances.

6.2.1 Manual Curtailment Procedure

The IESO has the authority under Sections 5.2 and 5.4 of Chapter 7 of the Market Rules to update intertie schedules (constrained and unconstrained) based on available information (including information regarding transmission conditions outside the Ontario market).⁷⁷ The IESO has manually altered or curtailed intertie transactions for infeasible transactions from time to time in the past. Such action can eliminate unwarranted CMSC payments. If applied consistently in all cases where a transaction cannot flow due to external transmission constraints, these transactions would be treated in a manner similar to the treatment of infeasible transactions that have a final pre-dispatch constrained schedule greater than 0 MW. It is the Panel's understanding that this approach could be implemented by the IESO through a change to its

⁷⁶ See Section 5.2 above.

⁷⁷ Market Rules: Chapter 7, available at: http://www.ieso.ca/imoweb/pubs/marketRules/mr_chapter7.pdf, pp. 45-47.

existing procedure, at least in circumstances where the external constraint prevents all transactions from flowing over an intertie at a given time.⁷⁸

The Panel therefore recommends that:

Where the IESO is aware that an external constraint would prevent a transaction from flowing over an intertie at a given time, the IESO should remove that transaction from the unconstrained schedule. By removing the transaction from the unconstrained schedule, unwarranted CMSC payments will be avoided.

6.2.2 Communications to Market Participants

The Panel understands that the IESO normally would be expected to receive from system operators or transmitters in neighbouring jurisdictions advance notification of planned external transmission outages or other events that would affect Ontario intertie flows (as it did from Manitoba Hydro in respect of the July 2010 TOI). Establishing a procedure to make Ontario market participants aware of such relevant information would improve transparency. This should also facilitate more efficient trade transactions (and may also increase the reliability of the Ontario power system).

The Panel believes that, where the IESO has information about external conditions that will restrict flows on Ontario's interties, the IESO should reflect the impact of these conditions in its public reports. The Panel therefore recommends that:

Where the IESO is aware of conditions that will prevent or reduce the ability for power to flow at an Ontario intertie, the IESO should reflect this information in its public reports.

⁷⁸ Where the intertie flow is partially reduced but not entirely eliminated, the Panel understands from the IESO that complexities may arise in terms of ascertaining whether an internal or an external constraint is the one which was binding in regards to a particular transaction and thus was responsible for the divergence of the constrained and unconstrained schedules.