



**Open Access
Transmission Tariff
Business Practices Manual**

Version 30

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Document Change History

Issue	Reason for Issue	Date
21	Added clarification to the transmission requirements for CRSG	2007 03 20
22	Revised the coordination of long term TSRs with the Midwest ISO. Added Eligible Customer section. Added detail to TSR process. Added Fully Subscribed Interface section. Added clarification to transferred loads sections. Added Network Integrated Transmission Service section.	2007 10 19
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25	Added clarification to the ATC calculation section	2008 03 05
26	Added section for coordinated long term studies	2008 07 30
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28	Revised Coordination of Tariff section, MISO and Midwest ISO Revised Reserving Point to Point Service section Revised Scheduling section, RDD to EAR	2009 06 30
29	Added Separated Load Service Provisions Changed Contact Information Updated tagging examples and removed outdated provisions.	2011 02 28
30	Added USD and CAD currency conversion information for OATT rates. Added business practice for converting NITS to PTP for pre-OATT contracts.	2011 08 15

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1.0 Introduction

This document contains the business practices for the Manitoba Hydro Open Access Transmission Tariff (OATT) and related activity applicable to the Manitoba Hydro interfaces. These practices are intended to supplement the Manitoba Hydro OATT and to the extent that there is a conflict between the Manitoba Hydro OATT and these practices, the OATT will apply.

2.0 General Inquiries

For general inquiries regarding the OATT contact:

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Tariff Administration Officer

Transmission Services Department

Manitoba Hydro

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3.0 Coordination of the Manitoba Hydro OATT

Manitoba Hydro is a coordinating member of the Midwest Independent Transmission System Operator (Midwest ISO or MISO). The Manitoba Hydro OATT (also referenced herein as Manitoba Hydro Tariff or MH OATT) is similar to Module B of the Midwest ISO Open Access Transmission and Energy Markets Tariff (TEMT).

Transmission customers should be aware that Manitoba Hydro has not implemented an energy market within Manitoba and that the Midwest ISO provides tariff coordination services for the Manitoba Hydro OATT for transmission service across Manitoba Hydro facilities.

The coordination agreement between Manitoba Hydro and the Midwest ISO coordinates transmission service rates between Manitoba Hydro and the Midwest ISO. Transmission customers will be charged as per the MH OATT.

4.0 Real Power Loss Factors

Manitoba Hydro calculates the transmission Real Power Loss Factor using the Average System Loss Factor (ASLF) calculation in accordance with the Midwest ISO Loss System User Manual. All point to point transactions and network transactions shall incur real power losses and are charged the same average loss rate in accordance with “Schedule 9 Real Power Loss Factors” of the Manitoba Hydro OATT. The Average System Loss rate is reviewed on November 1st each year and the resulting Average System Loss Factor Study is posted on OASIS.

5.0 Reserving Point to Point Transmission Service

Transmission Customers reserving transmission service across Manitoba Hydro transmission facilities shall make the following transmission reservations:

- a) All parties reserving transmission services must make one reservation under the Manitoba Hydro Tariff made on the Manitoba Hydro OASIS page. The MH OASIS number is used to calculate Available Transmission Capability (ATC) on Manitoba Interfaces.
- b) If other transmission tariffs are being used, then the transmission customer will be required to make additional transmission service reservations under the appropriate tariff.

Manitoba Hydro Electric Board (MHEB) Transmission Service is sold in Eastern Standard Time (EST) year round to correspond with the Midwest ISO.

5.1 Eligible Customer Status and Application

To become an eligible customer under the Manitoba Hydro Open Access Transmission Tariff the applicant shall complete Attachment L of the MHEB OATT. Eligible Customer status will be approved in conjunction with “Attachment L-1 Creditworthiness Procedures” and at the discretion of Manitoba Hydro. Once approved the MHEB eligible transmission customer will be given the ability to enter a Transmission Service Request on MHEB OASIS.

5.1.1 New Customer

- a) To apply to become an eligible customer under the Manitoba Hydro Open Access Transmission Tariff the applicant must comply with “Attachment L-1 Creditworthiness Procedures” and forward the following information to the contact listed:
 - i) “Attachment L-2 Application for Creditworthiness Approval” from the MHEB OATT as posted on OASIS; along with all the documents requested in Attachment L-2, and;

- ii) “Attachment B Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service” from the MHEB OATT posted on OASIS.
 - b) If an eligible customer wishes to transmit power from Canada to the United States, the eligible customer must also provide Manitoba Hydro with applicable copies of the eligible customer’s National Energy Board (NEB) export permit or license (see NEB section 7.1 Canadian (NEB) requirements for export to the United States).
 - c) If the applicant is a Market Participant of the Midwest ISO, Manitoba Hydro will:
 - i) review the submission and contact the customer if the documentation is deficient in any way;
 - ii) have the Midwest ISO confirm that the applicant is a Market Participant under the MISO TEMT ;
 - iii) make a credit worthiness assessment
 - d) If the applicant is not a Market Participant of the Midwest ISO, Manitoba Hydro will:
 - i) Determine if the applicant is making an application or intends to make an application to become a Market Participant under the Midwest ISO TEMT.
 - ii) If the applicant is not planning to make an application to become a Market Participant under the Midwest ISO TEMT, Manitoba Hydro will require the applicant to submit the following documentation:
 - Request for System Access for Non-MP (contact MISO for latest version)
http://www.midwestiso.org/Library/Repository/Meeting%20Material/Stakeholder/NonMP_Request_for_System_Access_v_1_3_.pdf
 - Settlement and Billing Information and if applicable
Please contact register@midwestiso.org to access form.
 - Authorization for Automatic Debits and / or Credits.
Please contact register@midwestiso.org to access form.
- In the case of any changes to information submitted to MISO, also request the “Non Market Participant Change of Information” form.

5.1.2 Existing Customers

Under section 5.0 in Attachment B “Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service” of the Manitoba Hydro transmission tariff, the service agreement expires 3 years after the contract has been executed. It is the customer’s responsibility to keep all documentation current, including renewal of expired umbrella agreements and any documents or reports supplied that may affect the customer’s credit rating. MHEB eligible customer status may be withdrawn at any time at the discretion of Manitoba Hydro.

5.2 Long Term Transmission Requests-Coordinated Studies

The primary purpose of Long Term Firm Transmission studies is for the coordinated planning and cooperation with Neighbouring Transmission Providers for the enhanced reliability, operation and coordination of transmission upgrades on the contract path. Such planning will result in Manitoba Hydro performing a transmission study that will cooperate with the affected Transmission Provider on the contract path to conform to reliability requirements of North American Electric Reliability Corporation (NERC), applicable regional reliability councils and all applicable requirements of Canadian, Provincial, State, Federal laws and regulatory authorities.

It is the responsibility of the Transmission Customer to arrange for Transmission Service Requests with all Transmission Providers along the contract path. Manitoba Hydro will coordinate the System Impact Study and Facility Study for long term firm Transmission Service Requests with the Transmission Customer and adjacent Transmission Providers. Manitoba Hydro also has the right to coordinate the design and construction of any required transmission upgrades and new transmission facilities with adjacent Transmission Providers.

In the case where there are time differences for the submission of Long Term Firm Transmission Service Request resulting in a different queue position under the different transmission providers transmission tariffs, the date and time that the last Transmission Service Request is submitted to achieve the full contract path for the long term firm service will determine the queue time for processing of the transmission service.

In the case where the Long Term Firm Transmission Service Request submitted to Manitoba Hydro does not have sufficient information to complete a transmission study by Manitoba Hydro with the cooperation of Transmission Providers on the contract path, the Transmission Service Request shall be denied by the Manitoba Hydro Tariff Administrator. The Manitoba Hydro Tariff Administrator will provide written notice of the denial of the request, and the reason for such denial, to the Transmission Customer and the Transmission Customer will lose its queue position.

5.3 Transmission Service Requests

The MH transmission tariff provides service to or from a border point at the Manitoba-Saskatchewan, Manitoba-Ontario, and/or Manitoba-USA border. The border Point of Receipt (POR)'s and Point of Delivery (POD)'s are as follows:

USA: MHEB-MISO, MHEB-MAPP

Ontario: MH-IMO

Saskatchewan: SPC

The hyphen convention that is currently used to define PORs and PODs (e.g. MHEB-MISO) in transmission service requests is different from the dot convention (e.g. MHEB.MISO) used to define PORs and PODs in NERC electronic tags for physical transaction schedules.

5.4 Processing Transmission Service Requests greater than One Year

Transmission Requests for a term of one year or greater will not be accepted on OASIS until an executed "Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service" in the form of MHEB OATT "Attachment A" is filed with the Manitoba Hydro contact listed on the agreement.

Transmission requests with a contract term of one year or greater will be processed as described below depending upon the contract path.

5.4.1 Source and Sink outside the Midwest ISO region

For MHEB Transmission service requests, where Manitoba is on the contract path and the source/sink is outside the Midwest ISO zone, there is no requirement to reference a MISO Transmission Service Request. The E-tag will specify MISO S/A to denote that the Midwest ISO acts as the Scheduling Agent for Manitoba Hydro.

If a system impact study is required, Manitoba Hydro staff shall process/evaluate and administer the system impact & facilities studies as outlined in section 19 ("Additional Study Procedures for Firm Point-to-Point Transmission Service Requests") of the Manitoba Hydro OATT. Manitoba Hydro shall promptly notify the Midwest ISO of the following;

- e) System Impact Study Process
 - iii) Date the System Impact Study Agreement was tendered to the Eligible Customer;

- iv) Date the Eligible Customer executed the System Impact Study Agreement or the date application deemed withdrawn;
 - v) Date the System Impact Study was completed or the date Eligible Customer was notified that Manitoba Hydro is unable to complete the System Impact Study within 60 days along with an explanation of the reasons why additional time is required and a new estimated completion date; and
 - vi) Date the Eligible Customer executed a Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service or Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service or the date application deemed withdrawn.
- f) Facilities Study Process
- i) Date the Facilities Study Agreement was tendered to the Eligible Customer;
 - ii) Date the Eligible Customer executed the Facilities Study Agreement or the date application deemed withdrawn;
 - iii) Date the Facilities Study was completed or the date Eligible customer was notified that Manitoba Hydro is unable to complete the Facilities Study within 60 days along with an explanation of the reasons why additional time is required and a new estimated completion date; and
 - iv) Date the Eligible Customer executed a Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service or Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service and provided the required letter of credit or other form of security or the date application deemed withdrawn.

MHEB staff shall make the necessary status updates on MHEB OASIS as required.

5.4.2 Source and/or Sink inside the Midwest ISO region

For MHEB transmission service requests, where Manitoba is on the contract path and the source/sink is in the MISO Tariff zone or MISO is on the contract path – i.e. NSP to MHEB, NSP to ONT through MHEB, MHEB to NSP:

- a) Midwest ISO will notify MHEB of the transmission service request within 7 days of submission by the Eligible Customer.
- b) MHEB shall determine the ATC for its portion of the contract path in accordance with MHEB OATT “Attachment J Scheduling / Response Times”, and if the request should be accepted or if a system impact study needs to be performed.

- c) Midwest ISO shall determine the ATC for its portion of the contract path in accordance with the Midwest ISO tariff and if the request should be accepted or if a system impact study needs to be performed.

If a system impact study is required Manitoba Hydro staff shall process/evaluate and administer the system impact & facilities studies for its portion of the contract path in accordance with the Manitoba Hydro OATT. Manitoba Hydro shall promptly notify the Midwest ISO of the following;

- a) System Impact Study Process
 - i) Date the System Impact Study Agreement was tendered to the Eligible Customer;
 - ii) Date the Eligible Customer executed the System Impact Study Agreement or the date application deemed withdrawn;
 - iii) Date the System Impact Study was completed or the date Eligible customer was notified that Manitoba Hydro is unable to complete the System Impact Study within 60 days along with an explanation of the reasons why additional time is required and a new estimated completion date; and
 - iv) Date the Eligible Customer executed Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service or Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service or the date application deemed withdrawn.
- b) Facilities Study Process
 - i) Date the Facilities Study Agreement was tendered to the Eligible Customer;
 - ii) Date the Eligible Customer executed the Facilities Study Agreement or the date application deemed withdrawn;
 - iii) Date the Facilities Study was completed or the date Eligible customer was notified that Manitoba Hydro is unable to complete the Facilities Study within 60 days along with an explanation of the reasons why additional time is required and a new estimated completion date; and
 - iv) Date the Eligible Customer executed Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service or Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service and provided the required letter of credit or other form of security or the date application deemed withdrawn.

The Midwest ISO shall process/evaluate and administer the system impact & facilities study for its portion of the contract path in accordance with the Midwest ISO Tariff.

Prior to forwarding a service agreement to the Eligible Customer, MHEB and the Midwest ISO shall discuss the study results and decide if the requested service can be granted under both tariffs and identify any facilities required to be constructed and associated conditions on the service (ie: re-dispatch).

The Midwest ISO and MHEB shall coordinate the approval of the matching Transmission Service Requests.

5.5 Processing Transmission Service Renewal Requests

A Transmission Customer with a contract term of one year (or more) has the right to continue to take transmission service when the contract expires, rolls over or is renewed. Service across Manitoba Transmission facilities requires both renewal of the MHEB TSR and the Midwest ISO TSR, where applicable, under the respective tariffs. MHEB and the Midwest ISO shall coordinate the processing of renewal requests as follows.

- a) The Midwest ISO shall notify MHEB of the transmission service renewal request within three (3) business days of submission by the Transmission Customer.
- b) If there is a competition queue established for the contract path, the Midwest ISO shall notify MHEB on the same business day the competition queue is established. If a competition queue is established the Midwest ISO shall administer the competition queue once the available ATC on MHEB facilities has been determined by MHEB. MHEB shall notify the Midwest ISO of the available ATC in accordance with “Attachment J Scheduling / Response Times” of the MHEB OATT (within 30 days) or provide an explanation of the reasons why additional time is required to calculate the ATC and a new estimated date.
- c) The Midwest ISO shall review the renewal request under the terms of the MISO tariff and conditionally approve the renewal request under the terms of the MISO tariff.
- d) MHEB shall review the renewal request and process the renewal request in accordance with Section 2, “Initial Allocation and Renewal Procedures”, of the MH OATT. MHEB shall notify MISO of the available ATC in accordance with “Attachment J Scheduling / Response Times” of the MHEB OATT (within 30 days) or provide an explanation of the reasons why additional time is required to calculate the ATC and a new estimated date.
- e) If there is sufficient ATC to approve the renewal request MHEB shall prepare a Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service for the renewal service and forward to the Transmission Customer for execution. Once the Transmission Customer has executed the Form of Service Agreement for Long-

Term Firm Point-to-Point Transmission Service, MHEB shall notify MISO that the renewal request has been approved by MHEB.

- f) If MHEB determines that a system impact study is required to determine the available ATC for the duration of the renewal request MHEB shall offer partial interim service to the Transmission Customer for the portion of the requested Firm Point-to-Point Transmission Service that can be accommodated without the addition of any facilities and through generation re-dispatch in response to the renewal request. Manitoba Hydro staff shall process/evaluate and administer the system impact & facilities studies as outlined in section 19 (“Additional Study Procedures for Firm Point-to-Point Transmission Service Requests”) of the Manitoba Hydro OATT tariff.
- g) If the Transmission Customer accepts the offer of partial interim service for the renewal request, MHEB shall prepare a Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service for the renewal service and forward to the Transmission Customer for execution. Once the Transmission Customer has executed the Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service, MHEB shall notify MISO that partial interim service for the renewal request has been approved by MHEB.

If a system impact study is required Manitoba Hydro shall promptly notify Midwest ISO of the following:

5.5.1 System Impact Study Process

- a) Date the System Impact Study Agreement was tendered to the Eligible Customer;
- b) Date the Eligible Customer executed the System Impact Study Agreement or the date application deemed withdrawn;
- c) Date the System Impact Study was completed or the date Eligible customer was notified that Manitoba Hydro is unable to complete the System Impact Study within 60 days along with an explanation of the reasons why additional time is required and a new estimated completion date; and
- d) Date the Eligible Customer executed a Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service or Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service or the date application deemed withdrawn.

5.5.2 Facilities Study Process

- a) Date the Facilities Study Agreement was tendered to the Eligible Customer;
- b) Date the Eligible Customer executed the Facilities Study Agreement or the date application deemed withdrawn;

- c) Date the Facilities Study was completed or the date Eligible customer was notified that Manitoba Hydro is unable to complete the Facilities Study within 60 days along with an explanation of the reasons why additional time is required and a new estimated completion date;
- d) Date the Eligible Customer executed a Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service or Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service and provided the required letter of credit or other form of security or the date application deemed withdrawn.

Where the source/sink is in Manitoba or Manitoba is on the contract path to a source/sink outside the Midwest ISO zone (i.e. ONT or SPC) and the source/sink is in the Midwest ISO Tariff zone or MISO is on the contract path – i.e. NSP to MHEB, NSP to ONT through MHEB, MHEB to NSP, the renewal request or partial interim service shall be granted only if both MISO and MHEB approve the renewal request or the partial interim service.

Where the source/sink is in Manitoba or if service is through Manitoba/outside the Midwest ISO zone and the source/sink is outside the MISO zone – i.e. MHEB to ONT, SPC to MHEB, or SPC to ONT through MHEB On the MH_ONT_East, MH_ONT_West, MH_SPC_East, MH_SPC_West interfaces, there is no MISO transmission service reservation required. Renewal of Transmission Service or partial interim service only requires approval by MHEB.

5.6 Processing Transmission Service Requests less than One Year

Manitoba Hydro has contracted out the administration of transmission reservations of less than one year to the Midwest ISO. Manitoba Hydro Transmission Service Requests for a term of less than one year will be processed by the Midwest ISO for both sides of the contract path utilizing AFC values in the scheduling horizon. The Midwest ISO calculates the ATC on each for each of the Manitoba Hydro interfaces and posts the available short term ATC for the each of the Manitoba Hydro interfaces on the Manitoba Hydro OASIS site called the “Manitoba Hydro Interface ATC Tool”.

5.7 Transmission Service Reservation ATC Evaluation

The Midwest ISO has developed an automated process to calculate the ATC on the Manitoba Hydro interfaces (MHEX, ONT, and SPC) called the “Manitoba Hydro Interface ATC Tool”. The link to the Manitoba Hydro Interface ATC Tool is posted on the Midwest ISO OASIS home page under System Information & Studies and is entitled Manitoba Hydro Interface ATC Tool.

The Queries begin at 15 minutes past the hour and are posted on OASIS at 23 minutes past the hour. It is the responsibility of the tariff administrator on shift to manually track the sale of transmission service between hourly queries to ensure that transmission is not over sold. The tool is not a dynamic tool and the ATC posted on OASIS may contain information that is up to one hour old. The Midwest ISO Tariff Administration staff use the ATCs calculated by most recent update to sell transmission service. Transmission Service sold during the interval between updates is not reflected on OASIS.

5.7.1 Firm ATC

For all time points in the Midwest ISO time horizon:

Firm ATC = TTC – Firm TRM – summation of firm reservation capacity

5.7.2 Non-Firm ATC in Operating Horizon:

The Operating Horizon is the remainder of the day (day 1). If the time of day is later than 15:00, the operating horizon is extended to include tomorrow (day 2). During the operating horizon, the ATC calculation will release capacity from transmission reservations where schedules do not exist, as hourly non-firm ATC, with the exception being capacity from hourly non-firm reservations. Similar to the following formula;

Non Firm ATC = TTC – (Non Firm TRM * COEF) – sum of firm schedules - sum of monthly and daily non-firm schedules - sum of hourly non-firm scheduled MW if available (if not scheduled upon, non-firm reservation MW are used).

5.7.3 Non-Firm ATC in the Planning Horizon:

The planning horizon is the period after the operating horizon, being:

- If the hour of the day is before 15:00, the planning horizon is tomorrow and beyond. or
- If the hour of the day is after 15:00, the planning horizon is day 3 and beyond.

During the planning horizon, the ATC calculation will only use transmission reservations MW values to calculate available non-firm ATC.

Non-Firm ATC = TTC – (TRM*COEF) – sum of firm reservations – sum of non-firm reservations

Example 1: Interface Firm/Non-Firm Reservations and Schedules remain constant to illustrate available ATC with time.

TTC	Firm TRM	NF TRM	COEF
1000	100	50	0.7

Day	Time Point	Reservation	Schedule	Reservation	Schedule	Schedule	Time of day < 15:00		Time of day > 15:00	
							Firm ATC	Non-Firm ATC	Firm ATC	Non-Firm ATC
		Firm	Firm	dly non-firm	dly non-firm	hrly non-firm				
1	00:00-24:00	800	500	100	0	50	100	415		
1	-24:00-00:00	800	500	100	0	50	100	415	100	415
2	-24:00-00:00	800	500	100	0	50	100	315	100	415
3	-24:00	800	500	100	0	50	100	65	100	65

Example 2: The same interface with variable Firm/Non-Firm Reservations and Schedules to illustrate available ATC with time.

Day	Time Point	Reservation	Schedule	Reservation	Schedule	Schedule	Time of day < 15:00		Time of day > 15:00	
							Firm ATC	Non-Firm ATC	Firm ATC	Non-Firm ATC
		Firm	Firm	dly non-firm	dly non-firm	hrly non-firm				
1	00:00-24:00	800	500	100	50	50	100	365		
1	-24:00-00:00	800	0	100	0	50	100	915	100	915
2	-24:00-00:00	800	500	100	50	0	100	415	100	415
3	-24:00	800	0	100	0	0	100	65	100	65

5.8 Separated Load Service

Separated Load Service is a type of Long-Term Firm Point-to-Point Transmission Service provided solely for the purpose of serving the Transmission Customer's load during planned or unplanned separation of the load from the Transmission Customer's transmission system.

Manitoba Hydro will provide Separated Load Service to an adjacent transmission provider or their designated marketing agent, subject to the adjacent transmission provider offering comparable, non-discriminatory Separated Load Service to Manitoba Hydro.

For Separated Load Service to an adjacent transmission provider, the adjacent transmission provider or their marketing agent must be a Transmission Customer under Manitoba Hydro's OATT.

The adjacent transmission provider's Separated Load may be served by:

- a) Manitoba Hydro generating resources with a power purchase agreement (PPA),
- b) the adjacent transmission provider's generation wheeling through the Manitoba Hydro Transmission System to feed its own load (subject to the transmission capacity being available), or,
- c) a third party's generation source wheeling through the Manitoba Hydro Transmission System (subject to the transmission capacity being available.)

Manitoba Hydro will offer a type of Long-Term Firm Point-to-Point Transmission Service solely for the purpose of serving the adjacent transmission provider's Separated Load during planned or unplanned separation of the load from the adjacent transmission provider's transmission system. The following shall apply:

- a) There will only be one LTF TSR reserved from an internal generator POR (generator resource PPA) to the specified Separated Load POD.
- b) The ATC on the interface will not be impacted by the TSR and/or schedules from the internal generator POR to the specified POD for Separated Load. When the supply is accomplished by wheeling through the Manitoba Hydro system to feed the Separated Load the ATC will be decremented on the POR segment.
- c) Redirects of the POR only will be approved on a firm basis if there is available firm transmission capacity, and can only be redirected for the period of the current outage.

- d) The TSR as well as any redirects of the TSR can only be used to serve the Separated Load.
- e) After a redirect has been approved, a constraint from a subsequent contingency or other system event that requires reduction of firm service on that interface will require the redirect TSR annulled and/or schedule curtailment prior to other firm service on that interface. In this case the Separated Load supply with the original LTF TSR from the PPA will be reinstated.
- f) The TSR cannot be re-assigned to a third party without the written consent of Manitoba Hydro.
- g) Although Long Term Firm Transmission Service is utilized to serve the Separated Load, this service will not require Manitoba Hydro to build or upgrade the network and/or direct assignment facilities in order to accommodate this service or to continue providing this service.
- h) Rollover of the Separated Load Service will be provided under the same conditions until such time as the parties mutually agree to terminate the Separated Load Service. Rollover may include an increase in capacity, only if the increase is required because of load growth in the Separated Load area, and subject to transmission capacity being available.

5.8.1 Serving Separated Load During a Forced Outage

When a forced outage occurs on either system causing a Separated Load event, the Control Area who is responsible for the Separated Load will immediately contact Manitoba Hydro's control room. Determination can be confirmed if the generation/transmission is available. The following shall apply:

- a) The transmission provider with the outage that caused the Separated Load will ensure that it is posted on their OASIS site to meet the requirements of the Standards of Conduct.
- b) Both control rooms will contact their respective marketing agents to notify them, after the outage has been posted on the OASIS site(s). A dynamic E-Tag for the flow will be submitted according to the procedures that have been specified for that interface.
- c) The Separated Load will be supplied for up to 30-minutes without need for an E-Tag. This initial unplanned service can be accounted for by submitting an E-Tag after-the-fact (ATF.)
- d) The marketers will have 60 minutes to provide a source for the generation. This source may have to be changed by redirecting the TSR (if capacity is available and depending on supply availability).
- e) After the 60 minutes, the procedures for planned outages shall be followed.

5.8.2 Serving Separated Load During a Planned Outage

Planned outages that will cause Separated Loads are generally known and posted on OASIS at least 3 days prior to the event. The following shall apply:

- a) The adjacent transmission provider and/or their marketing agent will have the option of supplying the Separated Load either by:
 1. Invoking the provisions of the PPA and using the prearranged LTF TSR to serve the Separated Load,
 2. Providing the generation from their own source, and redirecting the LTF TSR to wheeling through the Manitoba Hydro system (if the transmission capacity is available), or,
 3. Purchasing power from a third party to serve the separated load, and redirecting the LTF TSR to wheeling through the Manitoba Hydro system (if the transmission capacity is available.)
- b) A dynamic E-Tag must be submitted to schedule the flow according to the procedures that have been specified for that interface.

Customers who take separated load service under Schedule 7-A will pay Schedule 7-A instead of Schedules 7 or 8. Schedule 7-A is an energy based rate in the Manitoba Hydro transmission tariff. Other schedule charges under the MH OATT will be applied as applicable. Note that ancillary services will be charged to the separated load transmission service reservation based on usage and calculated using the hourly rates for Schedule 1 and 2.

5.8.3 Separated Load Point(s) of Receipt and Delivery (POR & POD)

The following separated load Point(s) of Receipt and Delivery are currently available:

- SPC_SEP_LOAD

6.0 Network Integration Transmission Service

Manitoba Hydro provides Network Integration Transmission Service subject to the applicable terms and conditions contained in the MHEB Open Access Transmission Tariff and the Network Integration Transmission Service Agreement. Only a Network Customer with the confirmed network service for the load can designate a network resource for that load or request a new Network Resource. To request an increase or modification of service, the Network Customer shall submit an application to Manitoba Hydro. Network Resource applications are available under the “Application Forms” section or on the [MHEB OASIS](#) site.

Attachment H “Application to Designate Additional Network Resource” is found in the MH OATT.

Pursuant to Section 2.4 of the MH OATT, customers with pre-OATT contracts may convert its Network Integration Transmission Service to Firm Point-to-Point Transmission Service at any time. The customer shall provide written notice to the Tariff Administrator of its intention for service type conversion prior to expiration or renewal of the existing pre-OATT transmission service reservation. The customer shall be allowed one opportunity to convert its transmission service reservation to Firm Point-to-Point Transmission Service and shall not be allowed to revert back to Network Integration Transmission Service type.

7.0 Manitoba – USA Interface

7.1 Canadian (NEB) Requirements for Exports to the United States

Effective November 01, 2002, Manitoba Hydro’s transmission customers that use Manitoba Hydro’s facilities to export electricity that sources in Canada to the United States are required to obtain an export permit/license from the Canadian National Energy Board (NEB).

All Manitoba Hydro eligible transmission customers shall provide Manitoba Hydro Transmission Services Department with a copy of their export permit or license. These copies are required to be submitted to Manitoba Hydro prior to scheduling the transmission service. No export permits or licenses are required to transmit electricity between Canadian provinces or for imports from the United States.

Transmission customers will be required to enter the export permit or license number on the transaction tag to verify possession of the required permit or license. The export license/permit number must be entered in the GCA “Contract “field” on the Physical path section of the tag. The export license/permit number must contain 6 digits and is part of the Midwest ISO tag validation process. Export license/permit numbers that do not have 6 digits should be prefaced by a 0 to make up the sixth digit. Example: license EPE-45 should be entered as EPE-045.

The Manitoba Hydro Balance Authority Operator or the Midwest ISO Scheduler will deny a transaction tag that does not have the license or permit number entered if the energy source is in Canada and the transaction is scheduled to flow into the United States.

Transmission customers may contact the National Energy Board at 1-800-899-1265 for further information:

- See Part VI – Exports and Imports, Division II Electricity at the National Energy Board website <http://www.neb.gc.ca/clf-nsi/rpblctn/ctsndrgltn/ct/ntnlngybrdctprt6-eng.html>

8.0 Manitoba – Saskatchewan Interface

8.1 Release of Unscheduled Transmission on the MHEB_SPC_E Interface

There is no automated process in place to release unscheduled transmission service on the MHEB_SPC_E Interface on an hourly basis. To facilitate additional transactions across this interface, hourly requests for transmission service up to three hours out will be examined and approved if unscheduled transmission capacity exists. For example if the current time is 1500 hours, hourly requests for the hour 1800 and less will be examined. The Transmission customer applies for hourly transmission service for the hour three hours out. If there is Hourly Non-Firm Transmission Service available the request will be processed automatically utilizing standard procedures. If there is no Hourly Non-Firm Transmission Service available, the amount of unscheduled transmission service for the requested hour will be manually calculated by Tariff Administration using the formula:

$$\text{Unscheduled Transmission Service} = \text{TTC} - (\text{TRM} * \text{COEF}) - \text{Sum of Monthly Non-Firm Schedules} - \text{Sum Daily Non-Firm Schedules} - \text{Sum Hourly Non-Firm Schedules}$$

Midwest ISO Tariff Administration will then evaluate and determine if the hourly request will be denied, partially approved or approved in full.

8.2 Curtailment Criteria of the Manitoba – Saskatchewan Interface

The purpose of this business practice is to establish the criteria for the coordination of curtailment orders on the SaskPower/Manitoba Hydro interface that would be applied for curtailments in the event of a contingency and for reallocation to allow higher priority transmission service to start.

This criterion reflects the position that the transfer capability into or through a Balance Authority is based on conditions internal to the associated Balance Authority. Conditions in Manitoba impact the ATC posting on the Midwest ISO OASIS site and conditions in Saskatchewan impact the ATC posting on the SaskPower OASIS site.

8.2.1 Curtailment Criteria:

- a) Initialization of Curtailment
 - i) Contingencies that occur within Saskatchewan will cause the curtailment to be initiated by SaskPower.
 - ii) Contingencies that occur within Manitoba will cause the curtailment to be initiated by Manitoba Hydro.
- b) Reallocation

- i) If a tag is received that exceeds the Manitoba Hydro posted ATC for the SP/MH interface, the Midwest ISO will issue the Transmission Loading Relieve (TLR) to process the Reallocation.
- ii) If a tag is received that exceeds the SaskPower posted ATC for the SP/MH interface, the SaskPower Schedule Interruption Practices will be followed to process the Reallocation.
- iii) If a tag is received that exceeds the ATC posted by both SaskPower and Manitoba Hydro for the SP/MH interface and the lower of the posted ATC limits is in Manitoba, the Midwest ISO will issue the TLR to process the Reallocation.
- iv) If a tag is received that exceeds the ATC posted by both SaskPower and Manitoba Hydro for the SP/MH interface and the lower of the posted ATC limits is in Saskatchewan, the SaskPower Schedule Interruption Practices will be followed to process the Reallocation.
- v) If a tag is received that exceeds the ATC posted by both SaskPower and Manitoba Hydro for the SP/MH interface, and the postings are equal, the Midwest ISO will determine the order and initiate the TLR process if the SINK is East of the SP/MH interface.
- vi) If a tag is received that exceeds the ATC posted by both SaskPower and Manitoba Hydro for the SP/MH interface, and the postings are equal, the SaskPower Schedule Interruption Practices will determine the curtailment order if the SINK is West of the SP/MH interface

8.3 Firm Transmission Capacity on the Manitoba Saskatchewan Interface

Manitoba Hydro firm transmission capacity that is posted for the Manitoba – SPC interface reflects the transfer capability attainable without requiring generation re-dispatch within the Manitoba Hydro system. Additional firm transfer capability may be possible by re-dispatching generation at Grand Rapids generating station either higher or lower generation depending on the direction of power transfers. This procedure allows a transmission customer to apply for additional firm transmission capacity resulting from generation re-dispatch.

- a) Procedure to Increase Transfer Capability:
 - i) A transmission customer applying for firm transmission service on the MH-SPC interface and is refused service because the request failed due to inadequate transfer capability, may request MHEB Tariff Administration staff to amend the posted transfer capability after obtaining a generation re-dispatch agreement from Manitoba Hydro Transmission Services Department.
 - ii) Grand Rapids generation must be “constrained on” to increase the firm transfer capability for transfers from MHEB to SPC.

- iii) Grand Rapids generation must be “constrained off” to increase the firm transfer capability for transfers from SPC to MHEB.
- b) Procedure To Negotiate And Administer A Re-dispatch Agreement:
- i) A Transmission Customer requesting MHEB Tariff Administration staff to release additional firm transfer capability must contact MHEB Tariff Administration staff in writing identifying the amount of additional transfer capability required, the duration of the increased transfer capability, start date, and end date.
 - ii) MHEB Tariff Administration in conjunction with Power Sales and Operations Division Hydraulic Operations Department staff will determine if adequate hydraulic resources are available to meet the re-dispatch obligations and the associated energy costs and notify the transmission customer.
 - iii) The transmission customer must complete the re-dispatch agreement form and provide MHEB Tariff Administration with a signed copy of the agreement.
 - iv) MHEB Tariff Administration will submit a copy of the signed agreement to the Midwest ISO tariff administration staff and identify to MISO the additional transfer capability as a result of the re-dispatch agreement.
 - v) The transmission customer must submit a new transmission service request and identify in the “Comments Section” of the transmission service request template that the reservation is subject to re-dispatch agreement.
 - vi) Midwest ISO tariff administration will evaluate the new request including the impact of the re-dispatch agreement. The Midwest ISO will notify the transmission customer and MHEB tariff administration staff of the evaluation results.
 - vii) Once a transmission customer “Confirms” the approved transmission service request the request and the signed re-dispatch agreement become effective the start date of the transmission service request and remain in effect until the end date of the transmission service request.
 - viii) Midwest ISO tariff administration staff will revise the posting components to reflect the additional transfer capability and forward to MISO for posting.
 - ix) The Manitoba Hydro Balance Authority Operator (BAO) will dispatch the designated generation as required to prevent an overload security violation.
- c) Limitations:
- i) Transmission service approved contingent on a re-dispatch agreement is available for monthly firm service only and limited to consecutive 6 months duration.
 - ii) Re-dispatch agreements will be considered only when adequate hydraulic resources on the Manitoba Hydro system are available.

- iii) Re-dispatch agreements are only available for the Manitoba – SPC interface.
- iv) Only re-dispatch agreements in the same power transfer direction can be in effect simultaneously.

8.3.1 Re-dispatch Agreement Form:

MHEB – SPC INTERFACE GENERATION RE-DISPATCH REQUEST FOR INCREASING FIRM TRANSFER CAPABILITY	
TO: Manitoba Hydro Transmission Services Department Attention: Manager Fax: (204) 487-5368	
FROM: (Transmission Customer) Contact: Address: Phone: Fax:	Alternate Transmission Customer Contact: Contact: Phone: Fax:
Section 1: Increased Transfer Capability Requested in MW.	
Section 2: Power transfer direction MHEB to SPC ڦ SPC to MHEB ڦ	
Section 3: Start Date	
Section 4: Stop Date	

8.4 Transfers of Island Falls Generation to the Manitoba Hydro System

Under the terms of the Island Falls Power and Energy Transfer Agreement, which is a pre-OATT agreement (sometimes referred to as a grandfathered agreement), there is a provision that will allow for the transfer of power to the Manitoba Hydro system, as opposed to wheeling this power through the Manitoba Hydro system to SaskPower load.

As this is a grandfathered agreement, transmission service is carved out of the MH OATT and a set-aside transmission service reservation will be created. The POR for this set-aside will be MH-SPC and the POD will be MHEB. For tagging purposes, the POR will be MHEB.SPC and the POD will be MHEB. This transmission service reservation is not included in ATC calculations.

9.0 Manitoba - Ontario Interface

9.1 General - MH_ONT_E Interface (formerly MH_IMO_E)

The IESO (formerly IMO) has an hourly based market which does not require transmission service to schedule energy. The Manitoba Hydro OATT requires a transmission reservation in order to schedule energy.

Transmission customers who have firm Manitoba Transmission service are permitted to redirect transmission service (changing the source / sink) using the same reservation. Transmission customers must apply via OASIS for redirected Transmission Service, requests will be approved subject to available ATC.

9.1.1 IESO Accepts Schedules Greater Than Interface Capacity

Manitoba Hydro does not coordinate transfer capability limits with the IESO market limits. The IESO may accept offers of energy greater than the interface capacity. If the resulting schedules exceed the capacity of the MH_ONT_E interface, curtailment of schedules may be required. Curtailment of schedules will be made based on the criteria in the corresponding sink Balance Authority. The sink Balance Authority will be responsible for adjusting the appropriate tag(s) to adjust the Schedule. When Manitoba Hydro is the sink, curtailment of schedules will be made based upon transmission reservation priority. If ONT is the sink, IESO will decide which schedules to curtail.

9.1.2 Off-Load Phase Shifter

The MH_ONT interface includes two phase-shifting transformers; the transformers have both on-load and off-load tap changers. The on-load phase-shifter has a limited range, when the on-load phase-shifter runs near the end of its window of operation to maintain the existing schedules, it may be necessary to perform an off-load tap change. Once agreement has been reached to proceed

with an off-load tap change, curtailment of schedules will be made based on the criteria in the corresponding sink Balance Authority.

10.0 Scheduling

The Manitoba Hydro Scheduling and interchange is controlled by the MHEB System Operator. The Operator uses an electronic scheduler that is driven by the interchange transaction system (E-Tag) specified by NERC. The electronic scheduler screens the tags and creates schedules for the three MHEB interfaces. It has several validations that it uses to ensure each tag follows the various rules for interchange specified by the Canadian Energy board and NERC. Each tag must contain the MW value, a valid MHEB Transmission Service Request, etc. Transmission Service Requests on the MH tariff are entered as to or from BORDER POINTS. For example – MHEB to MHEB-MISO (MHEB-MISO is a valid POD).

10.1 Transmission Service Needed for Dynamic Schedules

Transmission Customers are required to have arranged transmission service for the use of the system for dynamic schedules. This service used for dynamic schedules can be purchased utilizing the OASIS in the same manner as for transmission service, which will be used via static schedules. Transmission service is needed for the maximum amount of the dynamic schedule that will be used in any hour. Bi-directional services (such as regulation which is expected to flow in both directions) require two reservations (one for the expected utilization amount in each direction). Non-firm transmission service may be used if the dynamic scheduling service is interruptible.

10.2 Scheduling Rules

- a) All MHEB transmission service is sold in Eastern Standard Time (EST).
- b) When a transaction leaves Canada and enters the United States, an NEB permit number is required in the Contract field on the GCA (Generator Balance Authority) line on the physical path table of the tag. The license number shall be identical as shown on the permit examples are EPE-XXX (there could be 2 to 4 numbers following EPE), EL-XXX or ELO-XXX. The permit is required on all transactions from Canada and wheeling through MHEB into the states.
- c) MHEB has a physical path to a limited number of MAPP members, such as MPC via OTP.MPC POR/POD. Transactions to directly connected MAPP members will not settle in the Midwest ISO market provided MHEB.MAPP POR/POD is used for MHEB transmission and the source/sink is not a MISO member.
- d) MPC uses OTP as its balancing authority to schedule hourly transactions and is inaccessible from the MHEB.MAPP interface without going through the Midwest ISO market settlement system.

- e) Wheels through Manitoba - All transactions which source and sink external to MHEB shall have MISO listed as a Transmission Provider before and after MHEB in the physical path table of the tag.
- f) A loss calculator is posted on the MHEB OASIS page. Transmission Customers scheduling transmission service through MHEB shall use the loss calculator to determine the loss repayment required. Losses shall appear on the MHEB column of the Energy and Transmission profile table for each hour of the tag.

10.3 Scheduling Validation

The list below describes the automatic validations performed MHEB electronic Scheduler.

- a) Energy Profile – checks that the ‘Trans’ MW is greater than or equal to the ‘Gen’ MW on the tag.
- b) Timing – This checks the Queued Time, Start Time, Stop Time and Pre-confirmed parameters match parameters required.
- c) Ramp – Checks the ramp duration compares with NERC duration of 10 minutes.
- d) Status – Status of the OASIS reservation must be ‘Confirmed’
- e) MW – MW may not exceed OASIS reservation.
- f) Losses –This check ensures that the hourly losses identified on the tag for transactions that DO NOT source or sink within Manitoba are equal to or greater than 2.44% of the greater of the POR or POD. Losses are rounded up to the nearest MW and collected hourly over the duration of the schedule. Any difference in rounding is carried forward and rounded again, for any remaining hours in the day for which the schedule is in effect. If the hourly or total scheduled losses are not sufficient the tag will fail validation. This method is consistent with the Manitoba Hydro loss calculator posted on the MHEB OASIS site.
- g) Customer/TP Owner –The owner on the tag must match the customer on the MHEB TSR.
- h) NERC Priority – NERC Priority on the tag must match the OASIS reservation.
- i) Customer Code/PSE – PSE on same row as TP in the physical path match the customer code on the OASIS reservation.
- j) POR/POD – POR and POD on the tag must match the OASIS reservation.
- k) Recall/Resale – Checks the request type of the OASIS reservation is not a recall or resale reservation.
- l) NEB Permit – Tag must contain a valid NEB Permit Number in the contract field on the physical path portion of the tag. The PSE listed on the tag must be a NERC registered PSE affiliated with the entity holding the permit. Tags containing expired permits will be denied.

10.4 Scheduling Examples

10.4.1 Drive-out from MHEB to MISO

Transmission reservations are required under both the MHEB and MISO Tariffs.

OASIS Requests		
Field	MHEB Tariff	MISO Tariff
TP	MHEB	MISO
POR	MHEB	MHEB-MISO
POD	MHEB-MISO	MISO
Source	*	*
Sink	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

When MHEB is the BA (Balance Authority), MHEB is shown as the first TP (Transmission Provider) and must be shown in the Scheduling Entities column of the MHEB TP line of the physical path table on the tag. MISO is entered as TP and in the Sched Entities column below the MHEB TP line of the physical path table of the tag.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
MHEB		MHEMA1	MHEB				
	MHEB	MHEMA1	MHEB	MHEB.MISO	MHEB		
	MISO	MHEMA1	MHEB	MISO	MISO		
MISO		MISO	MISO				

10.4.2 Drive-In from MISO to MHEB

Transmission reservations are required under both the MHEB and MISO Tariffs.

OASIS Requests		
Field	MHEB Tariff	MISO Tariff
TP	MHEB	MISO
POR	MHEB-MISO	MISO
POD	MHEB	MHEB-MISO
Source	*	*
Sink	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

When MHEB is the LCA, MHEB is shown as the last TP and *must* be shown in the Sched Entities column on the MHEB TP line of the physical path table of the tag. MISO is entered as TP and in the Sched Entities column above the MHEB TP line of the physical path table of the tag

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
MISO		MISO	MISO*				
	MISO	MHEMA1	MISO	MHEB	MISO		
	MHEB	MHEMA1	MHEB.MISO	MHEB	MHEB		
MHEB		MHEMA1	MHEB				

* MISO requires a unit specific source.

10.4.3 Drive-Out from MISO to MHEB

Transmission reservations are required only under the MHEB Tariff.

Field	MHEB Tariff
TP	MHEB
POR	MHEB
POD	MH-IMO
Source	*
Sink	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

MISO is entered as TP and in the Sched Entities column below the MHEB TP line of the physical path table of the tag, with non-TSR reference “MISO S/A” listed for MISO’s Transmission Allocation. The pseudo TSR number “MISO S/A” must be included in the transmission profile.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
MHEB		MHEMA1	MHEB				
	MHEB	MHEMA1	MHEB	MHEB.IMO	MHEB		
	MISO	MHEMA1	MHEB	MH-ONT	MISO		
	ONT	MHEMA1	ONT.IMPORT.WHITESHELL.PS	ONT	ONT		
ONT		MHEMA1	ONT				

10.4.4 Drive-out from MHEB to SPC

Transmission reservations are required under the MHEB Tariff.

Field	MHEB Tariff	SPC Tariff
TP	MHEB	SPC
POR	MHEB	See SPC Tariff
POD	SPC	See SPC Tariff
Source	*	*
Sink	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

MISO is entered as TP and in the Sched Entities column below the MHEB TP line of the physical path table of the tag, with non-TSR reference “MISO S/A” listed for MISO’s Transmission Allocation. The pseudo TSR number “MISO S/A” must be included in the transmission profile.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
MHEB		MHEMA1	MHEB				
	MHEB	MHEMA1	MHEB	SPC	MHEB		
	MISO	MHEMA1	MHEB	SPC	MISO		
	SPC	MHEMA1	MH.230kV	SPC	SPC		
SPC		MHEMA1	SPC				

10.4.5 Drive-In from SPC or MH_IMO to MHEB

Transmission reservations are required under the MHEB Tariff.

OASIS Requests		
Field	MHEB Tariff	SPC Tariff
TP	MHEB	SPC
POR	SPC	SPC Tariff
POD	MHEB	SPC Tariff
Source	*	*
Sink	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

When MHEB is the LCA, MHEB is shown as the last TP and *must* be shown in the Sched Entities column on the MHEB TP line of the physical path table of the tag. MISO is entered as TP and in the Sched Entities column above the MHEB TP line of the physical path table of the tag, with non-TSR reference “MISO S/A” listed for MISO’s Transmission Allocation. The pseudo TSR number “MISO S/A” must be included in the transmission profile.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
SPC		SPC	SPC				
	SPC	NRTPNT	<i>External POR</i> *	MH.230	SPC		
	MISO	MHEMA1	SPC	MHEB	MISO		
	MHEB	MHEMA1	SPC	MHEB	MHEB		
MHEB		MHEMA1	MHEB				

* *External POR* - correct POR from the external system

10.4.6 Drive-In to MHEB from MPC

Please contact Manitoba Hydro Tariff Administration.

10.4.7 Drive-Out from MHEB to MPC

Please contact Manitoba Hydro Tariff Administration.

10.4.8 Drive-through MHEB – Island Falls Agreement

Transmission reservations are required under both the MHEB and MISO Tariffs.

OASIS Requests	
Field	MHEB Tariff
TP	MHEB
POR	SPC
POD	SPC
Source	*
Sink	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

This agreement falls under grandfathered provision thus no MISO transmission or losses are required on the tag. To accommodate this, include the following;

- o MISO must appear as a transmission provider in the transmission path as in the physical path below; and
- o The pseudo TSR number “MISO S/A” must be included in the transmission profile.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
SPC		NRPTRT(1)	Source:	SPC			
	MISO	SPC	SPC	MHEB	MISO		
	MHEB	MHEB	SPC	SPC	MHEB		
	MISO	SPC	MHEB	SPC	MISO		
	SPC	SPC	MH.230	SPC	SPC		
SPC		SPC	Sink:	SPC			

10.4.9 Drive-In MHEB – Island Falls Agreement

Please contact Manitoba Hydro Tariff Administration.

10.4.10 SPC Drive-In MHEB/MISO Footprint - Wheel for MHEB

Transmission reservations are required under both the MHEB and MISO Tariffs.

OSAIS Requests			
Field	SPC Tariff	MHEB Tariff	MISO Tariff
TP	SPC	MHEB	MISO
POR	SPC Tariff	SPC	SPC
POD	SPC Tariff	MHEB-MISO	MISO
Source	*	*	*
Sink	*	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

When the transaction is a wheel for MHEB – MISO must be listed as a TP before and after MHEB in the physical path table of the tag.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
SPC		NRPTRT	SPC			EPE-XX	
	SPC	NRPTRT	QEPS	MH.230	SPC		
	MHEB	NRPTRT	SPC	MHEB.MISO	MHEB		
	MISO	NRPTRT	MHEB.MISO	MISO	MISO		
MISO		MISO	MISO				

10.4.11 SPC Drive-Out MHEB/MISO Footprint - Wheel for MHEB

Transmission reservations are required under both the MHEB and MISO Tariffs.

OASIS Requests			
Field	SPC Tariff	MHEB Tariff	MISO Tariff
TP	SPC	MHEB	MISO
POR	SPC Tariff	MHEB-MISO	MISO
POD	SPC Tariff	SPC	SPC
Source	*	*	*
Sink	*	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

When the transaction is a wheel for MHEB – MISO must be listed as a TP before and after MHEB in the physical path table of the tag.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
MISO		MISO	MISO*				
	MISO	NRPTRT	MISO	MHEB.MISO	MISO		
	MHEB	NRPTRT	MHEB.MISO	SPC	MHEB		
	SPC	NRPTRT	MH.230	SPC	SPC		
SPC		NRPTRT	SPC				

10.4.12 Drive-Through - Wheel for MHEB

Transmission reservations are required under both the MHEB and MISO Tariffs, with non-TSR reference “MISO S/A” listed for MISO’s transmission allocation. The pseudo TSR number “MISO S/A” must be included in the transmission profile.

OASIS Requests			
Field	SPC Tariff	MHEB Tariff	MISO Tariff
TP	SPC	MHEB	MISO
POR	SPC Tariff	SPC	SPC
POD	SPC Tariff	MHEB.IMO	MHEB.ONT
Source	*	*	*
Sink	*	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

When the transaction is a wheel for MHEB and MISO transmission is used, MISO must come before and after MHEB transmission.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
SPC		NRPTRT	SPC				
	SPC	NRPTRT	QEPS	MH.230	SPC		
	MHEB	NRPTRT	SPC	MHEB-IMO	MHEB		
	MISO	NRPTRT	SPC	MHEB.ONT	MISO		
	ONT	NRPTRT	ONT.IMPORT.WHITESHELL.PS	ONT	ONT		
ONT		NRPTRT	ONT				

10.4.13 ONT Drive-In MHEB/MISO Footprint - Wheel for MHEB

Transmission reservations are required under both the MHEB and MISO Tariffs.

OASIS requests		
Field	MHEB Tariff	MISO Tariff
TP	MHEB	MISO
POR	IMO	MH-IMO
POD	MHEB-MISO	MISO
Source	*	*
Sink	*	*

* POR/POD as well as Source & Sink on the MHEB Transmission Reservation shall match the source and sink on the MHEB TP row of the physical path portion of the tag.

When the transaction is a wheel for MHEB – MISO must be listed as a TP & SE before and after MHEB in the physical path table of the tag.

The MISO POR MH-ONT can be on the tag only once. MHEB.IMO indicates the phase shifter on the ONT (IMO) interface. If it were on the tag more than once it would double the energy MW value of the tag from MISO’s perspective.

Losses must be entered on the MHEB line only.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
ONT			ONT			EPE-XX	
	ONT		ONT	ONT.EXPORT.WHITESHELL.PS	ONT		
	MISO		MH-ONT	MHEB	MISO		
	MHEB		MHEB.IMO	MHEB.MISO	MHEB		
	MISO		MHEB	MISO	MISO		
MISO		MISO	MISO				

10.4.14 Serving MHEB or SPC Separated Load

Please contact Manitoba Hydro Tariff Administration.

10.4.15 MISO Spot Market – Source in MHEB

A Transmission reservation is required under the MHEB Tariff, and a spot market reservation is required from MISO.

OASIS Requests		
Field	MHEB Tariff	MISO Tariff
TP	MHEB	MISO
POR	MHEB	MISO
POD	MHEB-MISO	MISO
Source	*	*
Sink	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
MHEB		MHEMA1	MHEB				
	MHEB	MHEMA1	MHEB	MHEB.MISO	MHEB	EPE-XX	
	MISO	MHEMA1	MHEB	MISO	MISO		
MISO		MISO	MISO				

10.4.16 MISO External Asynchronous Resource

Please contact Manitoba Hydro Tariff Administration.

10.4.17 MISO Spot Market – Source External to MHEB

Three Transmission reservations are required under the MHEB Tariff, the MISO tariff and a spot market reservation is required from MISO.

The MISO TSR will be the first MISO transmission listed on the tag, followed by the MHEB TSR, followed by the 2nd MISO Spot TSR.

OASIS Requests		
Field	MHEB Tariff	MISO Tariff
TP	MHEB	MISO
POR	MHEB	MHEB-MISO
POD	MHEB-MISO	MHEB-MISO
Source	*	*
Sink	*	*

* Source & Sink on Transmission Reservation shall match the source and sink on the tag.

When the transaction is a wheel for MHEB – MISO must be listed as a TP before and after MHEB in the physical path table of the tag.

Physical Path							
CA	TP	PSE	POR	POD	Sched Entities	Contract	Misc (Token/Value)
SPC							
	SPC		SPC	MHEB	SPC		
	MHEB		SPC	MHEB.MISO	MHEB		
	MISO		SPC	MISO	MISO		
MISO			MISO				

11.0 Converting CAD tariff rates

Transmission service settlements are administered by the Midwest ISO on behalf of Manitoba Hydro. The Midwest ISO settlements system invoices MH OATT customers in U.S. dollars. This requires that MH OATT rates, which are in Canadian dollars, are converted into U.S. dollars for use in the Midwest ISO settlements system for MH OATT transmission service invoicing.

Manitoba Hydro's forecasted CAD/USD (inverse of USD/CAD) foreign exchange (FX) rate for the current fiscal year will be used for all transmission tariff rates. The current year FX rate is a forecasted rate that is based on a consensus of several sources including financial institutions and independent forecasters. The forecasted FX rate for each fiscal year will be based on the corporate approved rate and updated from time to time.

An annual foreign exchange rate expressed on a fiscal year basis will be used to convert all transmission tariff rates that apply for that fiscal year from CAD/MW to US/MW.

As of May 24, 2011, the approved corporate forecasted Canadian foreign exchange rate for the fiscal year 2011/12 is 0.98 CAD/USD.

CAD/MW to USD/MW conversion is as follows:

$$\frac{USD}{MW} = \frac{1}{CAD/USD} \times \frac{CAD}{MW}$$

$$\frac{USD}{MW} = \frac{USD}{CAD} \times \frac{CAD}{MW}$$

For example, if the transmission tariff rate is CAD \$10,000/MW and the Canadian foreign exchange rate for the year 2011/12 is 0.98 CAD/USD, the USD conversion is as follows:

$$\frac{USD}{MW} = \frac{1}{0.98} \times \frac{10,000}{MW}$$

$$\frac{USD}{MW} = 1.02 \times \frac{10,000}{MW}$$

$$\frac{USD}{MW} = \frac{\$10,200}{MW}$$