

MANITOBA HYDRO

OPEN ACCESS TRANSMISSION TARIFF

Amended June 1, 2007

DOCUMENT HISTORY

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| January 25, 2006 | Added 1.13(a) Generation Resource Definition, 1.15(b) Inoperable Capacity Definition, revised section 28.4 on Secondary Service, added section 31.5 (b) Changes in Service Requests. |
| March 30, 2006 | Added 1.15(b) Inoperable Capacity and 30.2.1 Designation of a Temporary Network Resource. |
| June 1, 2006 | Updated Tariff rates for the 2006 fiscal year – Schedules 1, 2, 3, 5, 6, 7, 8, 10, 14, Attachment O
Deleted Schedule 22 – SECA Charges |
| December 19, 2006 | Updated Attachment J. |
| June 1, 2007 | Updated Tariff rates for the 2007 fiscal year – Schedules 1, 2, 3, 5, 6, 7, 8 and Attachment O.
Revised Section 34.1 to refer to Attachment O. |

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I. COMMON SERVICE PROVISIONS

1. DEFINITIONS

1.1 Ancillary Services: Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

1.2 Annual Transmission Costs: The total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H until amended by the Transmission Provider.

1.3 Application: A request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

1.4 Board: The Manitoba Hydro-Electric Board.

1.4(a) Commission or FERC: The U.S. Federal Energy Regulatory Commission.

1.5 Completed Application: An Application that satisfies all of the information and other requirements of the Tariff, including any required deposit.

1.5(a) Contractor: The Midwest ISO.

1.6 Control Area: An electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to:

- (a) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);

- (b) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;
- (c) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and
- (d) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.6(a) Coordinating Owner(s) : An entity that owns transmission facilities and has entered into an agreement with the Contractor to coordinate transmission operations and transmission pricing.

1.6(b) Coordination Agreement: The Coordination Agreement between Manitoba Hydro and the Midwest ISO dated September 27, 2001 and filed with the U.S. Federal Energy Regulatory Commission on November 14, 2001.

1.7 Curtailment: A reduction in firm or non-firm transmission service in response to a transmission capacity shortage as a result of system reliability conditions.

1.7(a) Day One: The period beginning on the effective date of this Tariff and continuing until a date determined by the Contractor.

1.8 Delivering Party: The entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

1.9 Designated Agent: Any entity that performs actions or functions on behalf of the Transmission Provider, an Eligible Customer, or the Transmission Customer required under the Tariff.

1.10 Direct Assignment Facilities: Facilities or portions of facilities that are constructed by the Transmission Provider for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer and shall be subject to Lieutenant Governor in Council or National Energy Board approval if required.

1.10(a) Drive-In Transmission Service: Point-to-Point Transmission Service from a generating source located outside both the Manitoba Hydro Zone and the MISO Tariff Zone to load located in the Manitoba Hydro Zone or the MISO Tariff Zone.

1.10(b) Drive-Out Transmission Service: Point-to-Point Transmission Service from a generating source located in the Manitoba Hydro Zone or the MISO Tariff Zone to load located outside both the Manitoba Hydro Zone and the MISO Tariff Zone.

1.10(c) Drive-Through Transmission Service: Point-to-Point Transmission Service from a generating source located outside both the Manitoba Hydro Zone and the MISO Tariff Zone to load located outside both the Manitoba Hydro Zone and the MISO Tariff Zone.

1.10(d) Drive-Within Transmission Service: Point-to-Point Transmission Service from a generating source located inside the Manitoba Hydro Zone or the MISO Tariff Zone to load located inside either the Manitoba Hydro Zone or the MISO Tariff Zone.

1.11 Eligible Customer: (i) Any electric utility (including the Transmission Provider and any power marketer or U.S. Federal power marketing agency), or any person generating electric energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in Canada, the United States or Mexico. However, an entity is not eligible for transmission service if such service would be prohibited by Section 212(h)(2) of the U.S. Federal Power Act; and (ii) Any retail customer

taking unbundled transmission service pursuant to a statutory or regulatory requirement that the Transmission Provider offer the transmission service, or pursuant to a voluntary offer of such service by the Transmission Provider, is an Eligible Customer under the Tariff.

1.12 Facilities Study: An engineering study conducted by the Transmission Provider to determine the required modifications to the Transmission Provider's Transmission System, including the cost and scheduled completion date for such modifications, that will be required to provide the requested transmission service.

1.13 Firm Point-to-Point Transmission Service: Transmission Service under this Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff.

1.14 Good Utility Practice: Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

1.15 Interruption: A reduction in non-firm transmission service due to economic reasons pursuant to Section 14.7.

1.15(a) ISO Agreement: The Agreement of Transmission Facilities Owners to organize The Midwest Independent Transmission System Operator Inc., a Delaware Non-Stock

Corporation, as amended from time to time.

(b) Inoperable Capacity: The amount of the output of a Generation Resource which is not available due to: (i) a scheduled outage approved by the Transmission Provider; (ii) legal or regulatory restrictions, including, without limitation, environmental restrictions; (iii) modifications or repairs to Generation Resource; (iv) reduction in output due to hydro conditions; or (v) Generation Resource is in a mothballed state.

1.16 Load Ratio Share: Ratio of a Transmission Customer's Network Load to the Transmission Provider's total load computed in accordance with Sections 34.2 and 34.3 of the Network Integration Transmission Service under Part III of the Tariff and calculated on a rolling twelve month basis.

1.17 Load Shedding: The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations under Part III of the Tariff.

1.18 Long-Term Firm Point-to-Point Transmission Service: Firm Point-to-Point Transmission Service under Part II of the Tariff with a term of one (1) year or more.

1.18(a) Manitoba Hydro Zone: The area encompassing the Transmission Provider's transmission facilities over which Transmission Service is provided and any generation or load connected directly thereto.

1.19 Midwest ISO or MISO: Midwest Independent Transmission System Operator, Inc.

1.19(a) MISO Tariff: The Open Access Transmission Tariff of the Midwest ISO.

- 1.19(b) MISO Tariff Zone:** The combination of all rate zones included within the MISO Tariff.
- 1.20 Native Load Customers:** The wholesale and retail power customers of the Transmission Provider on whose behalf the Transmission Provider, by statute, franchise, regulatory requirement, or contract, has undertaken an obligation to construct and operate the Transmission Provider's system to meet the reliable electric needs of such customers.
- 1.21 Network Customer:** An entity receiving transmission service pursuant to the terms of the Transmission Provider's Network Integration Transmission Service under Part III of the Tariff.
- 1.22 Network Integration Transmission Service:** The transmission service provided under Part III of the Tariff.
- 1.23 Network Load:** The load that a Network Customer designates for Network Integration Transmission Service under Part III of the Tariff. The Network Customer's Network Load shall include all load served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network Load but may not designate only part of the load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Part II of the Tariff for any Point-to-Point Transmission Service that may be necessary for such non-designated load.
- 1.24 Network Operating Agreement:** An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Part III of the Tariff.

1.25 Network Operating Committee: A group made up of representatives from the Network Customer(s) and the Transmission Provider established to coordinate operating criteria and other technical considerations required for implementation of Network Integration Transmission Service under Part III of this Tariff.

- 1.26 Network Resource:** Any designated generating resource or dedicated transmission equipment owned, purchased or leased by a Network Customer, or by the load-serving entity where the Network Customer is acting as an intermediary for the load-serving entity, and used to serve the load-serving entity's load on a firm basis, under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties (other than the load-serving entity on whose behalf the Network Customer is acting) or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis.
- 1.27 Network Upgrades:** Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such Transmission System.
- 1.28 Non-Firm Point-to-Point Transmission Service:** Point-to-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 14.7 under Part II of this Tariff. Non-Firm Point-to-Point Transmission Service is available on a stand-alone basis for periods ranging from one (1) hour to one month.
- 1.29 Open Access Same-Time Information System (OASIS):** The information system and standards of conduct contained in Part 37 of the U.S. Federal Energy Regulatory Commission's regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.
- 1.30 Part I:** Tariff Definitions and Common Service Provisions contained in Sections 2 through 12.

- 1.31 Part II:** Tariff Sections 13 through 27 pertaining to Point-to-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.
- 1.32 Part III:** Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.
- 1.33 Parties:** The Transmission Provider and the Transmission Customer receiving service under the Tariff.
- 1.34 Point(s) of Delivery:** Point(s) on the Transmission Provider's Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-to-Point Transmission Service.
- 1.35 Point(s) of Receipt:** Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-to-Point Transmission Service.
- 1.36 Point-to-Point Transmission Service:** The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Part II of the Tariff.
- 1.37 Power Purchaser:** The entity that is purchasing the capacity and energy to be transmitted under the Tariff.

- 1.38 Prime Lending Rate:** The rate of interest per annum, publicly announced from time to time by the Royal Bank of Canada at its main office in the City of Winnipeg, Manitoba, as its preferred lending rate of interest charged to its most creditworthy Canadian customers, whether or not such interest rate per annum is actually charged by said bank to any customer. Notwithstanding the foregoing, in no event shall said rate of interest ever exceed the maximum rate of interest allowed under Canadian law.
- 1.39 Receiving Party:** The entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.
- 1.40 Regional Transmission Group ('RTG'):** A voluntary organization of transmission owners, transmission users and other entities formed to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.
- 1.41 Reserved Capacity:** The maximum amount of capacity and energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part II of the Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.
- 1.42 Service Agreement:** The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.
- 1.43 Service Commencement Date:** The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement.

- 1.44 Short-Term Firm Point-to-Point Transmission Service:** Firm Point-to-Point Transmission Service under Part II of the Tariff with a term of less than one (1) year.
- 1.45 System Impact Study:** An assessment by the Transmission Provider of: (i) the adequacy of the Transmission System to accommodate a request for either Firm Point-to-Point Transmission Service or Network Integration Transmission Service; and (ii) whether any additional costs may be incurred in order to provide transmission service.
- 1.46 Third-Party Sale:** Any sale for resale of generation capacity or energy to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service.
- 1.46(a) Transition Period:** The period from the first day that the Midwest ISO begins providing transmission service pursuant to the MISO Tariff to the last day of the sixth year after the Midwest ISO begins providing said transmission service.
- 1.47 Transmission Customer:** Any Eligible Customer (or its Designated Agent) that: (i) executes a Service Agreement; or (ii) receives service under an Umbrella Agreement. This term is used in the Part I Common Service Provisions to include customers receiving transmission service under Part II and Part III of this Tariff.
- 1.47(a) Transmission Owner(s) :** An “Owner” as defined pursuant to the ISO Agreement.
- 1.48 Transmission Provider:** Manitoba Hydro (or its Designated Agent).
- 1.49 Transmission Provider’s Monthly Transmission System Peak:** The maximum firm usage of the Transmission Provider’s Transmission System in a calendar month.

- 1.50 Transmission Service:** Point-to-Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis.
- 1.51 Transmission System:** The facilities owned, controlled or operated by the Transmission Provider that are used to provide transmission service under Part II and Part III of the Tariff.
- 1.52 Umbrella Agreement:** An agreement between the Transmission Provider and an Eligible Customer which provides all the information necessary to enable such Eligible Customer to receive Short-Term Firm or Non-Firm Point-to-Point Transmission Service under this Tariff for a maximum period of three years without the necessity of executing a Service Agreement for each Completed Application. A form of Umbrella Agreement is attached as Attachment B.

2. INITIAL ALLOCATION AND RENEWAL PROCEDURES

- 2.1 Initial Allocation of Available Transmission Capability:** For purposes of determining whether existing capability on the Transmission Provider's Transmission System is adequate to accommodate a request for firm service under this Tariff, all Completed Applications for new firm transmission service received during the initial sixty (60) day period commencing with the effective date of the Transmission Provider's initial Tariff will be deemed to have been filed simultaneously. A lottery system conducted by an independent party shall be used to assign priorities for Completed Applications filed simultaneously. All Completed Applications for firm transmission service received after the initial sixty (60) day period shall be assigned a priority pursuant to Section 13.2.
- 2.2 Reservation Priority for Existing Firm Service Customers:** Existing firm service customers (wholesale requirements and transmission-only, with a contract term of one-year

or more), have the right to continue to take transmission service from the Transmission Provider when the contract expires, rolls over or is renewed. For purposes of this Section 2.2, a request for transmission service made by an existing firm service customer in the exercise of the above right shall be known as a “Rollover Request”. This transmission reservation priority is independent of whether the existing customer continues to purchase capacity and energy from the Transmission Provider or elects to purchase capacity and energy from another supplier. If a request(s) for transmission service or Rollover Request(s) for the total amount of capacity for a given interface have been submitted on the OASIS (“Competition Queue”) and, the Transmission Provider’s Transmission System cannot accommodate all of the requests for transmission service the existing firm service customer must agree to accept a contract term at least equal to a competing request by any new Eligible Customer and to pay the current Tariff rate, for such service. Once the Competition Queue is established and if a Transmission Customer has submitted two Rollover Requests covering successive time periods, and the service period of the firm in time Rollover Request is extended due to a competing request, the second in time Rollover Request shall be annulled and the Transmission Customer shall lose its place in the Transmission Queue for the second in time Rollover Request. The Transmission Customer shall be required to submit a new Rollover Request and take a new place in the Transmission Queue to exercise its Rollover Rights in the time period subsequent to the expiration of its first in time Rollover Request. This transmission reservation priority for Rollover Request is an ongoing right that may be exercised at the end of all firm contract terms of one-year or longer. This reservation priority only applies to the facilities of the Transmission Provider where such facility costs have been included as part of the firm service rates that the firm service customer has been paying. If competing Rollover Requests customers apply for service that cannot be fully provided, the priority rights will be ranked in accordance with first-come, first-served principles. If Rollover Request customers tie, then the capacity for which they receive priority rights under this Tariff shall be apportioned on a pro rata basis. Upon the submission of a Rollover Request by a Transmission Customer, the Transmission Customer

must revise, as may be necessary, the contact information in the OASIS transmission service request to provide for a twenty-four (24) hour point of contact. Once the Competition Queue is established and if the Transmission Provider receives a competing request for Transmission Service, the Transmission Provider shall notify the Rollover Request Transmission Customer of such competing request on the same business day the Competition Queue is established. Such notification shall occur on a recorded line of the Transmission Provider to the twenty-four (24) hour point of contact provided by the Transmission Customer. The next business day shall be the three (3) business day window provided in Attachment J to this Tariff, within which the Transmission Customer may agree to match the term of the competing request. In the event, the Transmission Customer is no longer obligated to match a competing request, the same notification process shall be followed.

(a) Rollover Request Reservation Priority: The Transmission Provider shall use the following principles and methodology to determine reservation priority under this Section 2.2:

- (i) Earlier-queued Rollover Requests shall not compete, on contract term, against later-queued new service requests. Rollover Requests that do not compete on contract term shall be accepted on the terms identified in the Rollover Request customer's Service Agreement and associated specification sheets. Rollover Request customers shall confirm their Rollover Requests in accordance with the timing requirements set forth in Attachment J, commensurate with the term of service.
- (ii) A Rollover Request queued after a competing new service request shall be required to match the term of all previously submitted actively competing (i.e., not previously satisfied through acquisition of capacity held by other Rollover Request customers) new service requests to retain capacity. In order to preserve renewal rights, the Rollover Request customer shall confirm its request for rollover transmission service that has been conditionally accepted by the Transmission Provider within the confirmation time periods

set forth in Attachment J, commensurate with the term of service. The condition of acceptance is that the Rollover Request customer may be required to match on term any earlier-queued competing new service request.

- (iii) Where an interface would be fully subscribed if all holders of rollover rights exercised such rights, a new service request shall be denied unless: (a) the new service requestor agrees to a System Impact Study; or (b) the new service requestor agrees to confirm a conditionally accepted request in order to retain queue priority. To retain queue priority, the new service requestor must confirm its request for transmission service that has been conditionally accepted by the Transmission Provider within the confirmation time periods set forth in Attachment J, commensurate with the term of service. The condition of acceptance is that the request is not matched on term by subsequently-queued Rollover Requests. The total capacity under new service requests conditionally accepted and confirmed shall not exceed the capacity held by the existing Rollover Request customers. All new service requests conditionally accepted and confirmed that are not awarded capacity when the queue is processed shall then be denied.
- (iv) In the event that a new service requestor does not confirm a conditional acceptance, the new service request shall be eliminated from the queue.
- (v) Earlier-queued new service requests shall have the opportunity to compete on term against all subsequently-queued Rollover Requests of a lesser term.
- (vi) Rollover Requests subject to competition on term shall be processed based on weakest queue position, i.e., the later-queued rollover request is the first to be asked match a new competing request.
- (vii) A Rollover Request customer shall be required to match the term of any new service request that: (a) was queued prior to the Rollover Request; (b) has been conditionally accepted by the Transmission Provider and subsequently confirmed by the new service requestor; (c) has the same start date as the

Rollover Request and extends beyond the end date of the Rollover Request; and (d) has not already been awarded capacity due to a later-queued Rollover Request(s) declining to match on term. The Rollover Request customer shall have three (93) business days to confirm a matching request. If the Rollover Request customer does not agree to match on term, the Rollover Request customer's capacity shall be awarded to the new service request customer.

2.3 Procedures for Exercising Reservation Priority Rights:

- (a) If, at any time, the Transmission Provider receives a request from an Eligible Customer for new firm transmission service that the Transmission Provider determines it could not provide without performing a System Impact Study if an existing customer were to exercise its transmission reservation priority pursuant to Section 2.2, the Transmission Provider shall promptly notify the existing customer of the new request. Within thirty (30) days of such notification, the existing customer must inform the Transmission Provider whether it exercises its reservation priority pursuant to Section 2.2 and agrees to accept a contract term at least equal to the new request. In the event an existing customer does not exercise its reservation priority or fails to respond within thirty (30) days of such notification, the existing firm service customer shall forfeit its reservation priority.

- (b) In the event an existing firm service customer does not receive a notification pursuant to Section 2.3(a), then the existing customer must notify the Transmission Provider no later than sixty (60) days prior to the end of the term of its firm transmission contract that it is exercising its transmission reservation priority and will take transmission service for an additional term of one year or longer; otherwise it shall forfeit the transmission reservation priority associated with the contract.

- (c) Other procedures related to the exercise of reservation priorities are provided in Attachment E.
- (d) The Transmission Provider may reserve existing transmission capacity needed for future load growth reasonably forecasted within the Transmission Provider's current planning horizon. The Transmission Provider may decline a Customer the ability to rollover its firm transmission service with a term of one year or longer only if the Transmission Provider includes in the service agreement a specific, reasonably forecasted need for the transfer capability to serve load growth at the end of the term of the service agreement.

2.4 Transition: As of the effective date of this Tariff, the rates, terms and conditions of this Tariff shall supersede the rates, terms and conditions of the Transmission Provider's previous tariffs. Notwithstanding the foregoing, transmission service pursuant to a Long-Term Firm Point-to-Point Transmission Service Agreement executed prior to the effective date of this Tariff and transmission service reservations pursuant to an Umbrella Agreement confirmed prior to the effective date of this Tariff shall be governed by the rates, terms and conditions of the Transmission Provider's tariff as in effect on the date of execution of said Service Agreement or confirmation of said reservation.

3. ANCILLARY SERVICES

Ancillary Services are needed with transmission service to maintain reliability within and among the Control Areas affected by the transmission service. The Transmission Provider is required to provide and the Transmission Customer is required to purchase, the following Ancillary Services: (i) Scheduling, System Control and Dispatch; and (ii) Reactive Supply and Voltage Control from Generation Sources.

The Transmission Provider is required to offer to provide the following Ancillary Services only to the Transmission Customer serving load within the Transmission Provider's Control Area: (i) Regulation and Frequency Response; (ii) Energy Imbalance; (iii) Operating Reserve - Spinning; and (iv) Operating Reserve - Supplemental. The Transmission Customer serving load within the Transmission Provider's Control Area is required to acquire these Ancillary Services, whether from the Transmission Provider, from a third party, or by self-supply. The Transmission Customer may not decline the Transmission Provider's offer of Ancillary Services unless it demonstrates that it has acquired the Ancillary Services from another source. The Transmission Customer must list in its Application which Ancillary Services it will purchase from the Transmission Provider.

The Transmission Provider shall specify the rate treatment and all related terms and conditions in the event of an unauthorized use of Ancillary Services by the Transmission Customer in the applicable Rate Schedules 1 through 6.

The specific Ancillary Services, prices and/or compensation methods are described on the Schedules that are attached to and made a part of the Tariff. Three principal requirements apply to discounts for Ancillary Services provided by the Transmission Provider in conjunction with its provision of transmission service as follows: (i) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS; (ii) any customer-initiated

requests for discounts (including requests for use by one's wholesale merchant or an affiliate's use) must occur solely by posting on the OASIS; and (iii) once a discount is negotiated, details must be immediately posted on the OASIS. A discount agreed upon for an Ancillary Service must be offered for the same period to all Eligible Customers on the Transmission Provider's system. Sections 3.1 through 3.6 below list the six Ancillary Services.

- 3.1 Scheduling, System Control and Dispatch Service:** The rates and/or methodology are described in Schedule 1.
- 3.2 Reactive Supply and Voltage Control from Generation Sources Service:** The rates and/or methodology are described in Schedule 2.
- 3.3 Regulation and Frequency Response Service:** Where applicable the rates and/or methodology are described in Schedule 3 .
- 3.4 Energy Imbalance Service:** Where applicable the rates and/or methodology are described in Schedule 4.
- 3.5 Operating Reserve - Spinning Reserve Service:** Where applicable the rates and/or methodology are described in Schedule 5.
- 3.6 Operating Reserve - Supplemental Reserve Service:** Where applicable the rates and/or methodology are described in Schedule 6.

4. OPEN ACCESS SAME-TIME INFORMATION SYSTEM ('OASIS')

Terms and conditions regarding Open Access Same-Time Information System and standards of conduct are set forth in 18 CFR § 37 of the U.S. Federal Energy Regulatory Commission's regulations (Open Access Same-Time Information System and Standards of Conduct for Public Utilities). The Transmission Provider's standards of conduct are posted on the OASIS. In the event available transmission capability as posted on the OASIS is insufficient to accommodate a request for firm transmission service, additional studies may be required as provided by this Tariff pursuant to Sections 19 and 32.

5. INTERPRETATION

5.1 Applicable Law: This Tariff and any Service Agreements executed hereunder shall be governed by and construed in accordance with the laws of the Province of Manitoba, except where the law of the United States is specifically incorporated herein. For greater certainty, The United Nations Convention on Contracts for the International Sale of Goods as adopted by *The International Sale of Goods Act*, S.M. 1989-90, c.18, shall not apply to any Service Agreements executed hereunder.

5.2 Condition Precedent: The Transmission Provider's obligation to provide transmission service pursuant to a Service Agreement executed under this Tariff shall be conditional upon the receipt and continued effectiveness of any regulatory or other approvals required by Canadian law in connection with transmission service hereunder.

5.3 Legislative Requirements: The terms and conditions of this Tariff and any Service Agreements executed hereunder are subject to decisions, orders, rules and regulations of the National Energy Board of Canada and any other Canadian legislative requirements in effect from time to time and this Tariff may be amended without notice in accordance with such decisions, orders, rules, regulations or requirements.

6. RECIPROCITY

A Transmission Customer receiving transmission service under this Tariff agrees to provide comparable transmission service that it is capable of providing to the Transmission Provider on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate affiliates. A Transmission Customer that is a member of a power pool or Regional Transmission Group also agrees to provide comparable transmission service to the members of such power pool and Regional Transmission Group on similar terms and conditions over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer and over facilities used for the transmission of electric energy owned, controlled or operated by the Transmission Customer's corporate affiliates.

This reciprocity requirement applies not only to the Transmission Customer that obtains transmission service under the Tariff, but also to all parties to a transaction that involves the use of transmission service under the Tariff, including the power seller, buyer and any intermediary, such as a power marketer. This reciprocity requirement also applies to any Eligible Customer that owns, controls or operates transmission facilities that uses an intermediary, such as a power marketer, to request transmission service under the Tariff. If the Transmission Customer does not own, control or operate transmission facilities, it must include in its Application a sworn statement of one of its duly

authorized officers or other representatives that the purpose of its Application is not to assist an Eligible Customer to avoid the requirements of this provision.

The requirements of this Section may be waived by the Transmission Provider.

7. BILLING AND PAYMENT

7.1 Billing Procedure: Within a reasonable time after the first day of each month, the Transmission Provider shall submit two invoices to the Transmission Customer for the charges for all services furnished under the Tariff during the preceding month. One invoice relates to all services for which the Midwest ISO will settle, bill, collect and distribute revenues to the Transmission Provider and Transmission Owners. The second invoice relates to the ISO Cost Adder or the service charge for recovering costs associated with the Contractor's operations that are not covered under Schedule 1. These costs are captured within a separate invoice line item, Schedule 10, and include: 1) costs associated with the Contractor's control center, including capital costs and operating expenses and 2) costs for administering this Tariff. The invoices shall be paid by the Transmission Customer within twenty (20) days of receipt. All payments for Network Integration Transmission Service shall be made by wire transfer to the bank named by the Transmission Provider in Appendix 1. All payments for Point-to-Point Transmission Service shall be made in immediately available funds payable to the Midwest ISO, as Contractor for the Transmission Provider. All billing procedures involving invoices under the Tariff for Point-to-Point Transmission Service shall be governed by the Contractor's Accounting and Billing Manual unless specified otherwise herein.

- 7.2 Interest on Unpaid Balances:** Interest on any unpaid amounts (not including amounts placed in trust as financial assurance pursuant to Section 11 of the Tariff) shall be calculated in accordance with the methodology specified for interest on refunds in the Commission's regulations at 18 C.F.R. Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment.
- 7.2a. Financial Assurance Trust Accounts:** All monies deposited by a Transmission Customer as financial assurance will be held in trust by the Transmission Provider or the Contractor in a separate, interest-bearing, money market account and 100% of the interest earned will accrue to the benefit of that Transmission Customer. Interest shall be calculated from the date of receipt of deposit until the date that the deposit is returned or converted into another form of financial assurance. When deposits are made by mail to the Contractor, they shall be considered having been paid on the date of receipt.
- 7.3 Currency:** All rates specified in the Tariff are stated in lawful money of Canada, unless specified otherwise. Unless otherwise agreed, monetary transactions, accounting and cost calculations between the Parties shall be determined and stated in lawful money of Canada. If required for any such monetary transactions, accounting or cost calculation, the rate to be used to convert from the currency of the United States of America to that of Canada for each day shall be the Bank of Canada noon spot exchange rate as published by the Royal Bank of Canada, Winnipeg, Manitoba, Canada, or the last published rate if not published for such day. If any monetary transaction is for a period of time exceeding one day, the weighted average of such noon spot exchange rates for each day in the respective period of time shall be used. The weighting shall be based in proportion to the dollar value of each day's transaction.
- 7.4 Customer Default:** In the event the Transmission Customer fails, for any reason other than a

billing dispute as described below, to make payment to the Transmission Provider or Contractor on or before the due date as described above, and such failure of payment is not corrected within ten (10) business days of receipt by the Transmission Customer of a written notice to cure such failure sent by the Transmission Provider or Contractor by certified mail, a default by the Transmission Customer shall be deemed to exist. Upon the occurrence of a default, the Transmission Provider or Contractor shall annul any confirmed reservations of the Transmission Customer for which there are insufficient financial assurances available to use as collateral to ensure payment for transmission services to be provided subsequent to the date of default and, upon three (3) days notice, may terminate service. In the event of a billing dispute between the Transmission Provider or Contractor and the Transmission Customer, the Transmission Provider will continue to provide service under the Service Agreement as long as the Transmission Customer (i) continues to make all payments not in dispute, and (ii) pays into an independent trust account specified by the Transmission Provider the portion of the invoice in dispute, pending resolution of such dispute. If the Transmission Customer fails to meet these two requirements for continuation of service, then the Transmission Provider or Contractor shall annul any confirmed reservations that the Transmission Customer has in excess of the available financial assurance after the outstanding obligation is settled and may provide notice to the Transmission Customer of its intention to suspend service in accordance with the policy of the Transmission Provider.

8. ACCOUNTING FOR THE TRANSMISSION PROVIDER'S USE OF THE TARIFF

The Transmission Provider shall record the following amounts, as outlined below:

8.1 Transmission Revenues: Include in a separate transmission revenue account the revenues it receives from Transmission Service when making Third-Party Sales under Part II of the Tariff.

8.2 Study Costs and Revenues: Include in a separate transmission general ledger account, costs properly chargeable to expenses that are incurred to perform any System Impact Studies or Facilities Studies which the Transmission Provider conducts to determine if it must construct new transmission facilities or upgrades necessary for its own uses, including making Third-Party Sales under the Tariff; and include in a separate operating revenue account the revenues received for System Impact Studies or Facilities Studies performed when such amounts are separately stated and identified in the Transmission Customer's billing under the Tariff.

9. TARIFF AMENDMENTS

Nothing contained in the Tariff or any Service Agreement shall be construed as affecting in any way the right of the Transmission Provider to unilaterally make a change in rates, terms and conditions, charges, classification of service or a Service Agreement. The Transmission Provider reserves the right to retroactively change the rates for transmission service under Part II and Part III of this Tariff without notice in the event that the U.S. Federal Regulatory Commission rejects the rate-related terms and conditions of the Coordination Agreement between the Transmission Provider and the

Midwest ISO.

10. FORCE MAJEURE AND INDEMNIFICATION

10.1 Force Majeure: An event of Force Majeure means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any Curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include an act of negligence or intentional wrongdoing. Neither the Transmission Provider nor the Transmission Customer will be considered in default as to any obligation under this Tariff if prevented from fulfilling the obligation due to an event of Force Majeure. However, a Party whose performance under this Tariff is hindered by an event of Force Majeure shall make all reasonable efforts to perform its obligations under this Tariff.

10.2 Indemnification: The Transmission Customer shall at all times indemnify, defend, and save the Transmission Provider harmless from any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demands, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the Transmission Provider's performance of its obligations under this Tariff on behalf of the Transmission Customer, except in cases of negligence or intentional wrongdoing by the Transmission Provider.

10.3 LIMITATION OF LIABILITY

- a) **THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE, WHETHER BASED ON CONTRACT, INDEMNIFICATION, WARRANTY, TORT,**

STRICT LIABILITY OR OTHERWISE TO ANY TRANSMISSION CUSTOMER OR ANY THIRD PARTY FOR ANY DAMAGES WHATSOEVER, INCLUDING WITHOUT LIMITATION, DIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECIAL, EXEMPLARY OR INDIRECT DAMAGES ARISING OR RESULTING FROM ANY ACT OR OMISSION IN ANY WAY ASSOCIATED WITH SERVICE PROVIDED UNDER THIS TARIFF, INCLUDING BUT NOT LIMITED TO ANY ACT OR OMISSION THAT RESULTS IN AN INTERRUPTION, DEFICIENCY OR IMPERFECTION OF SERVICE, EXCEPT TO THE EXTENT THAT THE TRANSMISSION PROVIDER IS FOUND LIABLE FOR GROSS NEGLIGENCE OR INTENTIONAL MISCONDUCT, IN WHICH CASE THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECIAL, EXEMPLARY OR INDIRECT DAMAGES.

- b) THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT OF SERVICES PROVIDED UNDER THIS TARIFF, INCLUDING BUT NOT LIMITED TO, ANY ACT OR OMISSION THAT RESULTS IN AN INTERRUPTION, DEFICIENCY OR IMPERFECTION OF SERVICE OCCURRING AS A RESULT OF CONDITIONS OR CIRCUMSTANCES RESULTING FROM ELECTRIC SYSTEM DESIGN COMMON TO THE NORTH AMERICAN ELECTRIC UTILITY INDUSTRY OR ELECTRIC SYSTEM OPERATION PRACTICES OR CONDITIONS COMMON TO THE NORTH AMERICAN ELECTRIC UTILITY INDUSTRY.**

11. CREDITWORTHINESS

For the purpose of determining the ability of the Transmission Customer to meet its obligations

related to service hereunder, the Transmission Provider may require reasonable credit review procedures. This review shall be made in accordance with standard commercial practices and shall include the completion of an Application for Eligible Customer Status (Attachment L) for approval by the Transmission Provider prior to the Transmission Customer's first request for service under the Tariff. In addition, the Transmission Provider may require the Transmission Customer to provide and maintain in effect during the term of the Service Agreement, an unconditional and irrevocable letter of credit as security to meet its responsibilities and obligations under the Tariff, or an alternative form of security proposed by the Transmission Customer and acceptable to the Transmission Provider and consistent with commercial practices established under the laws of the Province of Manitoba that protects the Transmission Provider against the risk of non-payment.

12. DISPUTE RESOLUTION PROCEDURES AND WITHDRAWAL OF TARIFF

12.1 Internal Dispute Resolution Procedures: Any dispute between a Transmission Customer and the Transmission Provider involving transmission service under the Tariff shall be referred to a designated senior representative of the Transmission Provider and a senior representative of the Transmission Customer for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) days [or such other period as the Parties may agree upon] by mutual agreement, such dispute may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.

12.2 External Arbitration Procedures: Any arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) days of the referral of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) days select a third arbitrator to chair the

arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall conduct the arbitration in Winnipeg, Manitoba and shall provide each of the Parties an opportunity to be heard and except as otherwise provided herein, shall generally conduct the arbitration in accordance with The Arbitration Act of Manitoba.

12.3 Arbitration Decisions: Unless otherwise agreed the arbitrator(s) shall render a decision within ninety (90) days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and any Service Agreement entered into under the Tariff and shall have no power to modify or change any of the above in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be either appealed solely on a question of law alone or set aside. Such appeal or application to set aside shall be governed by the provisions of The Arbitration Act of Manitoba.

12.4 Costs: Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:

- (a) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or
- (b) one half the cost of the single arbitrator jointly chosen by the Parties.

12.5 Court Jurisdiction: The Parties agree to the exclusive jurisdiction of the Manitoba Court of Queen's Bench and the Manitoba Court of Appeal for the resolution of disputes which the

Parties do not agree to arbitrate pursuant to Section 12.1 hereof and for the appeal, application to set aside or other reconsideration of an arbitral decision with respect to the Tariff or any Service Agreement under the Tariff.

12.6 Termination or Withdrawal of Tariff: Notwithstanding any other provision in this Tariff, the Transmission Provider may terminate this Tariff and all Service Agreements hereunder, effective immediately and without satisfying the requirements of any other provisions of this Tariff if the U.S. Federal Energy Regulatory Commission issues an order against the Transmission Provider, for any reason, requiring modifications to this Tariff in a manner determined by the Transmission Provider to be unacceptable in its sole discretion. Further, nothing contained in this Tariff shall restrict the Transmission Provider's right unilaterally to withdraw this Tariff on notice for any other reason. Except as otherwise provided in this Section, such withdrawal shall not affect a Transmission Customer's right to receive Long-Term Firm Point-to-Point Transmission Service, confirmed requests for Short-Term Firm Point-to-Point Transmission Service or Network Integration Transmission Service pursuant to existing Service Agreements entered into under the Tariff. Upon such withdrawal of this Tariff, all rights to receive Non-Firm Point-to-Point Transmission Service under Umbrella Agreements shall terminate immediately, provided that the Transmission Provider shall complete Non-Firm Point-to-Point Transmission Service for specific Non-Firm Point-to-Point Transmission Service transactions scheduled prior to the date of termination of the Tariff (not to exceed service for three months). The Transmission Provider shall provide at least thirty (30) days notice of its intent to withdraw this Tariff to Transmission Customers that have entered into Umbrella Agreements for Non-Firm Point-to-Point Transmission Service.

II. POINT-TO-POINT TRANSMISSION SERVICE

Preamble

The Transmission Provider will provide Firm and Non-Firm Point-to-Point Transmission Service pursuant to the applicable terms and conditions of this Tariff. Point-to-Point Transmission Service is

for the receipt of capacity and energy at designated Point(s) of Receipt and the transmission of such capacity and energy to designated Point(s) of Delivery. The processing of Point-to-Point Transmission Service Requests shall be conducted by the Midwest ISO as Contractor on behalf of the Transmission Provider.

13. NATURE OF FIRM POINT-TO-POINT TRANSMISSION SERVICE

13.1 Term: The minimum term of Firm Point-to-Point Transmission Service shall be one day and the maximum term shall be specified in the Service Agreement.

13.2 Reservation Policy: Long-Term Firm Point-to-Point Transmission Service shall be available on a first-come, first-served basis i.e., in the chronological sequence in which each Transmission Customer has reserved service. Reservations for Short-Term Firm Point-to-Point Transmission Service will be conditional based upon the length of the requested transaction. If the Transmission System becomes oversubscribed, requests for longer term service may preempt requests for shorter term service that involve the same source or sink Control Area or controllable device/contract path interface up to the following deadlines: one day before the commencement of daily service, one week before the commencement of weekly service, and one month before the commencement of monthly service. Before the conditional reservation deadline, if available transmission capability is insufficient to satisfy all Applications, an Eligible Customer with a reservation for shorter term service has the right of first refusal to match any longer term reservation before losing its reservation priority. A longer term competing request for Short-Term Firm Point-to-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the competing request within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in Section 13.8) from being notified by the Transmission Provider of a longer-term competing request for Short-Term Firm Point-to-Point

Transmission Service. After the conditional reservation deadline, service will commence pursuant to the terms of Part II of the Tariff. Firm Point-to-Point Transmission Service will always have a reservation priority over Non-Firm Point-to-Point Transmission Service under the Tariff. All Long-Term Firm Point-to-Point Transmission Service will have equal reservation priority with Native Load Customers and Network Customers. Reservation priorities for existing firm service customers are provided in Section 2.2.

13.3 Use of Firm Transmission Service by the Transmission Provider: The Transmission Provider will be subject to the rates, terms and conditions of Part II of the Tariff when making Third-Party Sales under agreements executed on or after the effective date of this Tariff. The Transmission Provider will maintain separate accounting, pursuant to Section 8, for any use of the Point-to-Point Transmission Service to make Third-Party Sales.

13.4 Service Agreements: The Contractor, on behalf of the Transmission Provider shall offer a standard form Long-Term Firm Point-to-Point Transmission Service Agreement (Attachment A) to an Eligible Customer when it submits a Completed Application for Long-Term Firm Point-to-Point Transmission Service. The Contractor, on behalf of the Transmission Provider shall offer a standard form Umbrella Agreement (Attachment B), effective for a maximum term of three years, to an Eligible Customer when it first submits a Completed Application for Short-Term Firm Point-to-Point Transmission Service pursuant to the Tariff. Upon expiry of an Umbrella Agreement, the Eligible Customer shall submit a new Completed Application for Short-Term Firm Point-to-Point Transmission Service if the Eligible Customer wishes to reserve Short-Term Firm Point-to-Point Transmission Service, after which the Contractor, on behalf of the Transmission Provider, shall again offer a standard form Umbrella Agreement to the Eligible Customer.

13.5 Transmission Customer Obligations for Facility Additions or Redispatch Costs: In cases where it is determined that the Transmission System is not capable of providing Firm

Point-to-Point Transmission Service without: (i) degrading or impairing the reliability of service to Native Load Customers, Network Customers and other Transmission Customers taking Firm Point-to-Point Transmission Service; or (ii) interfering with the Transmission Provider's ability to meet prior firm contractual commitments to others, the Transmission Provider will be obligated to expand or upgrade its Transmission System pursuant to the terms of Section 15.4. The Transmission Customer must agree to compensate the Transmission Provider for any necessary transmission facility additions pursuant to the terms of Section 27. To the extent the Transmission Provider can relieve any system constraint more economically by redispatching electric generating resources than through constructing Network Upgrades, it shall do so, provided that the Eligible Customer agrees to compensate the Transmission Provider pursuant to the terms of Section 27. Any redispatch, Network Upgrade or Direct Assignment Facilities costs to be charged to the Transmission Customer on an incremental basis under the Tariff will be specified in the Service Agreement or specified by the Transmission Provider pursuant to the terms of an executed Umbrella Agreement prior to initiating service.

13.6 Curtailment of Firm Transmission Service: In the event that a Curtailment on the Transmission Provider's Transmission System, or a portion thereof, is required to maintain reliable operation of such system, and the systems directly and indirectly interconnected with the Transmission Provider's Transmission System, Curtailments will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint. The Transmission Provider shall implement such Curtailments pursuant to the procedures included as Attachment Q hereto. If multiple transactions require Curtailment, to the extent practicable and consistent with Good Utility Practice, the Transmission Provider will curtail service to Network Customers and Transmission Customers taking Firm Point-to-Point Transmission Service on a basis comparable to the curtailment of service to the Transmission Provider's Native Load Customers. All Curtailments will be made on a non-discriminatory basis, however, Non-Firm Point-to-Point Transmission Service shall be subordinate to Firm

Transmission Service. When the Transmission Provider determines that an electrical emergency exists on its Transmission System and implements emergency procedures to Curtail Firm Transmission Service, the Transmission Customer shall make the required reductions upon request of the Transmission Provider. However, the Transmission Provider reserves the right to Curtail, in whole or in part, any Firm Transmission Service provided under the Tariff when, in the Transmission Provider's sole discretion, an emergency or other unforeseen condition impairs or degrades the reliability of its Transmission System. The Contractor, on behalf of the Transmission Provider, will notify all affected Transmission Customers in a timely manner of any scheduled Curtailments.

13.7 Classification of Firm Transmission Service:

- (a) The Transmission Customer taking Firm Point-to-Point Transmission Service may: (i) change its Receipt and Delivery Points to obtain service on a non-firm basis consistent with the terms of Section 22.1; or (ii) request a modification of the Points of Receipt or Delivery on a firm basis pursuant to the terms of Section 22.2.

- (b) The Transmission Customer may purchase transmission service to make sales of capacity and energy from multiple generating units that are on the Transmission Provider's Transmission System. For such a purchase of transmission service, the resources will be designated as multiple Points of Receipt, unless the multiple generating units are at the same generating plant in which case the units will be treated as a single Point of Receipt unless specified otherwise by the Transmission Provider.

- (c) The Transmission Provider shall provide firm deliveries of capacity and energy from the Point(s) of Receipt to the Point(s) of Delivery. Each Point of

Receipt at which firm transmission capacity is reserved by the Transmission Customer shall be set forth in the Firm Point-to-Point Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Receipt. Points of Receipt and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm Transmission. Each Point of Delivery at which firm transmission capacity is reserved by the Transmission Customer shall be set forth in the Firm Point-to-Point Service Agreement for Long-Term Firm Transmission Service along with a corresponding capacity reservation associated with each Point of Delivery. Points of Delivery and corresponding capacity reservations shall be as mutually agreed upon by the Parties for Short-Term Firm Transmission. The greater of either: (i) the sum of the capacity reservations at the Point (s) of Receipt; or (ii) the sum of the capacity reservations at the Point(s) of Delivery shall be the Transmission Customer's Reserved Capacity. The Transmission Customer will be billed for its Reserved Capacity under the terms of Schedule 7. The Transmission Customer may not exceed its firm capacity reserved at each Point of Receipt and each Point of Delivery except as otherwise specified in Section 22. In the event that a Transmission Customer (including Third-Party Sales by the Transmission Provider) exceeds its firm reserved capacity at any Point of Receipt or Point of Delivery, the Transmission Customer shall pay to the Contractor the applicable Schedule 7 charges, for the amount of capacity that exceeded the firm reserved capacity.

13.8 Scheduling of Firm Point-to-Point Transmission Service: Schedules for the Transmission Customer's Firm Point-to-Point Transmission Service must be submitted to the Contractor in accordance with the times set forth in Attachment J. Transmission schedules shall be submitted electronically in a form specified by the Contractor. Schedules submitted after the

applicable time will be accommodated, if practicable. Hour-to-hour schedules of any capacity and energy that is to be delivered must be stated in increments of 1,000 kW per hour. Transmission Customers within the Transmission Provider's service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their service requests at a common point of receipt into units of 1,000 kW per hour for scheduling and billing purposes. Scheduling changes will be permitted in accordance with Attachment J provided that the Delivering Party and Receiving Party also agree to the schedule modification. The Contractor will furnish to the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and the Transmission Provider shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify the Contractor, and the Transmission Provider shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered.

14. NATURE OF NON-FIRM POINT-TO-POINT TRANSMISSION SERVICE

14.1 Term: Non-Firm Point-to-Point Transmission Service will be available for periods ranging from one (1) hour to one month as provided in Schedule 8. However, a Purchaser of Non-Firm Point-to-Point Transmission Service will be entitled to reserve a sequential term of service (such as a sequential monthly term without having to wait for the initial term to expire before requesting another monthly term) so that the total time period for which the reservation applies is greater than one month, subject to the requirements of Section 18.3.

14.2 Reservation Priority: Non-Firm Point-to-Point Transmission Service shall be available from transmission capability in excess of that needed for reliable service to Native Load Customers, Network Customers and other Transmission Customers taking Long-Term and

Short-Term Firm Point-to-Point Transmission Service. A higher priority will be assigned to reservations with a longer duration of service. In the event the Transmission System is constrained, competing requests of equal duration will be prioritized based on the highest price offered by the Eligible Customer for the Transmission Service. Eligible Customers that have already reserved shorter term service have the right of first refusal to match any longer term reservation before being preempted. A longer term competing request for Non-Firm Point-to-Point Transmission Service will be granted if the Eligible Customer with the right of first refusal does not agree to match the competing request: (i) immediately for hourly Non-Firm Point-to-Point Transmission Service after notification by the Contractor; and (ii) within 24 hours (or earlier if necessary to comply with the scheduling deadlines provided in Section 14.6) for Non-Firm Point-to-Point Transmission Service other than hourly transactions after notification by the Contractor. Transmission service for Network Customers from resources other than designated Network Resources will have a higher priority than any Non-Firm Point-to-Point Transmission Service. Non-Firm Point-to-Point Transmission Service over secondary Point(s) of Receipt and Point(s) of Delivery will have the second lowest reservation priority under the Tariff and next hour hourly Non-Firm Point-to-Point Transmission Service will have the lowest reservation priority under the Tariff.

14.3 Use of Non-Firm Point-to-Point Transmission Service by the Transmission Provider:

The Transmission Provider will be subject to the rates, terms and conditions of Part II of the Tariff when making Third-Party Sales under agreements executed on or after the effective date of the tariff. The Transmission Provider will maintain separate accounting, pursuant to Section 8, for any use of Non-Firm Point-to-Point Transmission Service to make Third-Party Sales.

14.4 Service Agreements: The Contractor, on behalf of the Transmission Provider, shall offer a standard form Umbrella Agreement, effective for a maximum term of three years, (Attachment B) to an Eligible Customer when it first submits a Completed Application for

Non-Firm Point-to-Point Transmission Service pursuant to the Tariff. Upon expiry of an Umbrella Agreement, the Eligible Customer shall submit a new Completed Application for Non-Firm Point-to-Point Transmission Service if the Eligible Customer wishes to reserve Non-Firm Point-to-Point Transmission Service, after which the Contractor, on behalf of the Transmission Provider, shall again offer a standard form Umbrella Agreement to the Eligible Customer.

14.5 Classification of Non-Firm Point-to-Point Transmission Service: Non-Firm Point-to-Point Transmission Service shall be offered under terms and conditions contained in Part II of the Tariff. The Transmission Provider undertakes no obligation under the Tariff to plan its Transmission System in order to have sufficient capacity for Non-Firm Point-to-Point Transmission Service. Parties requesting Non-Firm Point-to-Point Transmission Service for the transmission of firm power do so with the full realization that such service is subject to availability and to Curtailment or Interruption under the terms of the Tariff. In the event that a Transmission Customer (including Third-Party Sales by the Transmission Provider) exceeds its non-firm capacity reservation, the Transmission Customer shall pay to the Contractor the applicable Schedule 8 charges for the amount of capacity that exceeded the non-firm Reserved Capacity. Non-Firm Point-to-Point Transmission Service shall include transmission of energy on an hourly basis and transmission of scheduled short-term capacity and energy on a daily, weekly, or monthly basis, but not to exceed one month's reservation for any one Application, as provided in Schedule 8.

14.6 Scheduling of Non-Firm Point-to-Point Transmission Service: Schedules for Non-Firm Point-to-Point Transmission Service must be submitted to the Contractor in accordance with the times set forth in Attachment J. Schedules submitted after the applicable time will be accommodated, if practicable. Transmission Customers shall submit schedules electronically in a form specified by the Contractor. Hour-to-Hour schedules of energy that is to be delivered must be stated in increments of 1,000 kW per hour. Transmission

Customers within the Transmission Provider's service area with multiple requests for Transmission Service at a Point of Receipt, each of which is under 1,000 kW per hour, may consolidate their schedules at a common Point of Receipt into units of 1,000 kW per hour. Scheduling changes will be permitted in accordance with Attachment J provided that the Delivering Party and Receiving Party also agree to the schedule modification. The Contractor will furnish to the Delivering Party's system operator, hour-to-hour schedules equal to those furnished by the Receiving Party (unless reduced for losses) and the Transmission Provider shall deliver the capacity and energy provided by such schedules. Should the Transmission Customer, Delivering Party or Receiving Party revise or terminate any schedule, such party shall immediately notify the Contractor, and the Transmission Provider shall have the right to adjust accordingly the schedule for capacity and energy to be received and to be delivered. Schedules submitted less than 20 minutes prior to the start of the Schedule will be accommodated if practicable.

14.6(a) After The Fact Scheduling: Notwithstanding the provisions of Section 14.6, schedules for Non-Firm Point-to-Point Transmission Service used to deliver emergency energy to a Receiving Party, pursuant to a contractual obligation between the Transmission Provider and Receiving Party (including, but not limited to, generation reserve sharing agreements), may be submitted after-the-fact to the Contractor. The Contractor shall enter the appropriate reservations after-the-fact into the OASIS for billing purposes and shall bill the Receiving Party for hourly Non-Firm Point-to-Point Transmission Service pursuant to Schedule 8. The transmission capacity required for such Transmission Service shall be reserved through the Transmission Provider's retention of a Transmission Reliability Margin (as referenced in Attachment C), if required pursuant to contractual obligations between the Transmission Provider and the Receiving Party, and shall not be subject to the reservation procedures of this tariff. In the absence of such a requirement, the Transmission Provider shall determine if sufficient capacity is available to transmit the emergency energy prior to scheduling.

14.7 Curtailment or Interruption of Service: The Transmission Provider reserves the right to Curtail, in whole or in part, Non-Firm Point-to-Point Transmission Service provided under the Tariff for reliability reasons when, an emergency or other unforeseen condition threatens to impair or degrade the reliability of its Transmission System or the systems directly and indirectly interconnected with the Transmission Provider's Transmission System. The Transmission Provider shall implement such Curtailments pursuant to the procedures included as Attachment Q hereto. The Transmission Provider reserves the right to Interrupt, in whole or in part, Non-Firm Point-to-Point Transmission Service provided under the Tariff for economic reasons in order to accommodate: (i) a request for Firm Transmission Service; (ii) a request for Non-Firm Point-to-Point Transmission Service of greater duration; (iii) a request for Non-Firm Point-to-Point Transmission Service of equal duration with a higher price; or (iv) transmission service for Network Customers from non-designated resources. The Transmission Provider also will discontinue or reduce service to the Transmission Customer to the extent that deliveries for transmission are discontinued or reduced at the Point(s) of Receipt. Where required, Curtailments or Interruptions will be made on a non-discriminatory basis to the transaction(s) that effectively relieve the constraint, however, Non-Firm Point-to-Point Transmission Service shall be subordinate to Firm Transmission Service. If multiple transactions require Curtailment or Interruption, to the extent practicable and consistent with Good Utility Practice, Curtailments or Interruptions will be made first to next hour hourly Non-Firm Point-to-Point Transmission Service and then to transactions of the shortest term (e.g. hourly non-firm transactions will be Curtailed or Interrupted before daily non-firm transactions and daily non-firm transactions will be Curtailed or Interrupted before weekly non-firm transactions). Transmission service for Network Customers from resources other than designated Network Resources will have a higher priority than any Non-Firm Point-to-Point Transmission Service under the Tariff. Non-Firm Point-to-Point Transmission Service over secondary Point(s) of Receipt and Point(s) of Delivery will have a lower priority than any Non-Firm Point to Point Transmission Service under the Tariff. The Contractor, on behalf of the Transmission Provider will provide advance notice of

Curtailment or Interruption where such notice can be provided consistent with Good Utility Practice.

15. SERVICE AVAILABILITY

- 15.1 General Conditions:** The Transmission Provider will provide Firm and Non-Firm Point-to-Point Transmission Service over, on or across its Transmission System to any Transmission Customer that has met the requirements of Section 16.
- 15.2 Determination of Available Transmission Capability:** A description of the Transmission Provider's specific methodology for assessing available transmission capability posted on the OASIS (Section 4) used by the Transmission Provider is contained in Attachment C of this Tariff. In the event sufficient transmission capability may not exist to accommodate a service request, the Transmission Provider will respond by offering to perform a System Impact Study.
- 15.3 Obligation to Provide Transmission Service that Requires Expansion or Modification of the Transmission System:** If the Transmission Provider determines that it cannot accommodate a Completed Application for Firm Point-to-Point Transmission Service because of insufficient capability on its Transmission System, the Transmission Provider will use due diligence to expand or modify its Transmission System to provide the requested Firm Transmission Service, provided the Transmission Customer agrees to compensate the Transmission Provider for such costs pursuant to the terms of Section 27. The Transmission Provider will conform to Good Utility Practice in determining the need for new facilities and in the design and construction of such facilities. The obligation applies only to those facilities that the Transmission Provider has the right to expand or modify.
- 15.4 Deferral of Service:** The Transmission Provider may defer providing service until it completes construction of new transmission facilities or upgrades needed to provide Firm Point-to-Point Transmission Service whenever the Transmission Provider determines that providing the requested service would, without such new facilities or upgrades, impair or

degrade reliability to any existing firm services.

15.5 Real Power Losses: Real Power Losses are associated with all transmission service. The Transmission Provider is not obligated to replace Real Power Losses. The Transmission Customer is responsible for losses associated with all transmission service as calculated by the Contractor in accordance with Attachment M. The applicable Real Power Loss factors for the Transmission Provider are set forth in Schedule 9 of this Tariff.

16. TRANSMISSION CUSTOMER RESPONSIBILITIES

16.1 Conditions Required of Transmission Customers: Point-to-Point Transmission Service shall be provided by the Transmission Provider only if the following conditions are satisfied by the Transmission Customer:

- (a) The Transmission Customer has executed an Application for Eligible Customer Status in the form of Attachment L and has pending a Completed Application for service;
- (b) The Transmission Customer meets the creditworthiness criteria set forth in Section 11;
- (c) The Transmission Customer will have arrangements in place for any other transmission service necessary to effect the delivery from the generating source to the Transmission Provider prior to the time service under Part II of the Tariff commences;
- (d) The Transmission Customer agrees to pay for any facilities constructed and chargeable to such Transmission Customer under Part II of the Tariff, whether or not the Transmission Customer takes service for the full term of its reservations; and
- (e) The Transmission Customer has executed a Point-to-Point Service

Agreement.

- (f) The Transmission Customer has provided the Transmission Provider with a copy of the National Energy Board export permit(s) or license(s) authorizing each export of electricity from Canada to the United States of America effected by the provision of transmission service pursuant to this Tariff.

16.2 Transmission Customer Responsibility for Third-Party Arrangements: Any scheduling arrangements that may be required by other electric systems shall be the responsibility of the Transmission Customer requesting service. The Transmission Customer shall provide, unless waived by the Transmission Provider, notification to the Contractor identifying such systems and authorizing them to schedule the capacity and energy to be transmitted by the Transmission Provider pursuant to Part II of the Tariff on behalf of the Receiving Party at the Point of Delivery or the Delivering Party at the Point of Receipt. However, the Contractor will undertake reasonable efforts to assist the Transmission Customer in making such arrangements, including without limitation, providing any information or data required by such other electric system pursuant to Good Utility Practice.

17. PROCEDURES FOR ARRANGING FIRM POINT-TO-POINT TRANSMISSION SERVICE

17.1 Application: A request for Firm Point-to-Point Transmission Service for periods of one year or longer must contain a written Application to the Contractor in accordance with the time requirements of Attachment J. The Transmission Provider will consider requests for such firm service on shorter notice when feasible. All Firm Point-to-Point Transmission Service requests should be submitted by entering the information listed below on the OASIS used by the Contractor. If the OASIS used by the Contractor is not functioning, a Completed Application may be submitted by transmitting the required information to the Contractor by

facsimile in a form approved by the Contractor pursuant to its Business Practices Manual.

17.2 Completed Application: A Completed Application shall provide all of the information listed below:

- (a) The identity, address, telephone number and facsimile number of the entity requesting service;
- (b) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (c) The location of the Point(s) of Receipt and Point(s) of Delivery and the identities of the Delivering Parties and the Receiving Parties;
- (d) The location of the generating facility(ies) supplying the capacity and energy and the location of the load ultimately served by the capacity and energy transmitted. The Transmission Provider and the Contractor will treat this information as confidential except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order, or by Canadian law, for reliability purposes pursuant to Good Utility Practice or pursuant to transmission information sharing agreements. The Transmission Provider shall treat this information consistent with its standards of conduct;
- (e) A description of the supply characteristics of the capacity and energy to be delivered;
- (f) An estimate of the capacity and energy expected to be delivered to the Receiving Party;
- (g) The Service Commencement Date and the term of the requested Transmission Service; and
- (h) The transmission capacity requested for each Point of Receipt and each Point of Delivery on the Transmission Provider's Transmission System; customers may combine their requests for service in order to satisfy the minimum

transmission capacity requirement.

- (i) Where transmission service is requested for the purposes of exporting electricity generated in Canada to the United States of America, the National Energy Board permit or license number authorizing the export, a copy of which permit or license shall have been provided to the Transmission Provider pursuant to Section 16.1(f) of the Tariff.

The Transmission Provider and the Contractor shall treat this information consistent with the Transmission Provider's standards of conduct.

17.3 Deposit: A Completed Application for Firm Point-to-Point Transmission Service also shall include a deposit of either one month's charge for Reserved Capacity or the full charge for Reserved Capacity for service requests of less than one month unless waived by the Transmission Provider. If the Application is rejected by the Transmission Provider because it does not meet the conditions for service as set forth herein, or in the case of requests for service arising in connection with losing bidders in a Request for Proposals ("RFP"), said deposit shall be returned with interest less any reasonable costs incurred by the Transmission Provider in connection with the review of the losing bidder's Application. The deposit also will be returned with interest less any reasonable costs incurred by the Transmission Provider if the Transmission Provider is unable to complete new facilities needed to provide the service. If an Application is withdrawn or the Eligible Customer decides not to enter into a Service Agreement for Firm Point-to-Point Transmission Service, the deposit shall be refunded in full, with interest, less reasonable costs incurred by the Transmission Provider to the extent such costs have not already been recovered by the Transmission Provider from the Eligible Customer. The Transmission Provider will provide to the Eligible Customer a complete accounting of all costs deducted from the refunded deposit, which the Eligible Customer may contest if there is a dispute concerning the deducted costs. Deposits associated with construction of new facilities are subject to the provisions of Section 19. If a

Service Agreement for Firm Point-to-Point Transmission Service is executed, the deposit, with interest, will be returned to the Transmission Customer upon expiration or termination of the Service Agreement for Firm Point-to-Point Transmission Service. Applicable interest shall be computed at a rate equal to two percent per annum plus the Prime Lending Rate of interest per annum in effect and applicable to each day of the interest period, and shall be calculated from the day the deposit cheque is credited to the Transmission Provider's account.

17.4 Notice of Deficient Application: If an Application fails to meet the requirements of the Tariff, the Contractor shall notify the entity requesting service within fifteen (15) days of receipt of the reasons for such failure. The Contractor will attempt to remedy minor deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful, the Contractor shall return the Application, along with any deposit, with interest. Upon receipt of a new or revised Application that fully complies with the requirements of Part II of the Tariff, the Eligible Customer shall be assigned a new priority consistent with the date of the new or revised Application.

17.5 Response to a Completed Application: Following receipt of a Completed Application for Firm Point-to-Point Transmission Service, the Contractor shall make a determination of available transmission capability as required in Section 15.2. The Contractor shall notify the Eligible Customer in accordance with the time periods specified in Attachment J either: (i) if the Transmission Provider will be able to provide service without performing a System Impact Study; or (ii) if such a study is needed to evaluate the impact of the Application pursuant to Section 19.1, provided that, if in connection with the request, the Contractor must provide notification to an existing customer pursuant to Section 2.3, the deadline shall be extended to forty-five (45) days after the date of receipt of a Completed Application. Responses by the Contractor must be made as soon as practicable to all completed applications (including applications by its own merchant function) and the timing of such

responses must be made on a non-discriminatory basis.

17.6 Execution of Service Agreement: Whenever the Contractor determines that a System Impact Study is not required and that the service can be provided, it shall notify the Eligible Customer as soon as practicable but no later than thirty (30) days after receipt of the Completed Application. Where a System Impact Study is required, the provisions of Section 19 will govern the execution of a Service Agreement. Failure of an Eligible Customer to execute and return the Service Agreement within the time periods specified in Attachment J, or confirm an approved request pursuant to the terms of an executed Umbrella Agreement will be deemed a withdrawal and termination of the Application and any deposit submitted shall be refunded with interest. Nothing herein limits the rights of an Eligible Customer to file another Application after such withdrawal and termination.

17.7 Extensions for Commencement of Service: The Transmission Customer can obtain up to five (5) one-year extensions for the commencement of service. The Transmission Customer may postpone service by paying a non-refundable annual reservation fee equal to one-month's charge for Firm Transmission Service for each year or fraction thereof. If during any extension for the commencement of service an Eligible Customer submits a Completed Application for Firm Transmission Service, and such request can be satisfied only by releasing all or part of the Transmission Customer's Reserved Capacity, the original Reserved Capacity will be released unless the following condition is satisfied. Within thirty (30) days, the original Transmission Customer agrees to pay the Firm Point-to-Point transmission rate for its Reserved Capacity concurrent with the new Service Commencement Date. In the event the Transmission Customer elects to release the Reserved Capacity, the reservation fees or portions thereof previously paid will be forfeited.

18. PROCEDURES FOR ARRANGING NON-FIRM POINT-TO-POINT

TRANSMISSION SERVICE

18.1 Application: Eligible Customers seeking Non-Firm Point-to-Point Transmission Service must submit a Completed Application to the Contractor. Applications should be submitted by entering the information listed below on the OASIS used by the Contractor. If the OASIS used by the Contractor is not functioning, a Completed Application may be submitted by transmitting the required information to the Contractor by facsimile in a form approved by the Contractor pursuant to its Business Practices Manual.

18.2 Completed Application: A Completed Application shall provide all of the information listed below:

- (a) The identity, address, telephone number and facsimile number of the entity requesting service;
- (b) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (c) The Point(s) of Receipt and the Point(s) of Delivery;
- (d) The maximum amount of capacity requested at each Point of Receipt and Point of Delivery; and
- (e) The proposed dates and hours for initiating and terminating transmission service hereunder.

In addition to the information specified above, when required to properly evaluate system conditions, the Contractor or Transmission Provider also may ask the Transmission Customer to provide the following:

- (f) The electrical location of the initial source of the power to be transmitted pursuant to the Transmission Customer's request for service; and

- (g) The electrical location of the ultimate load;
- (h) Where transmission service is requested for the purposes of exporting electricity generated in Canada to the United States of America, the National Energy Board permit or license number authorizing the export, a copy of which permit or license shall have been provided to the Transmission Provider pursuant to Section 16.1(f) of the Tariff.

The Transmission Provider and the Contractor will treat this information in (f) and (g) as confidential at the request of the Transmission Customer except to the extent that disclosure of this information is required by this Tariff, by regulatory or judicial order or by Canadian law, for reliability purposes pursuant to Good Utility Practice, or pursuant to transmission information sharing agreements. The Transmission Provider and the Contractor shall treat this information consistent with the Transmission Provider's standards of conduct.

18.3 Reservation of Non-Firm Point-to-Point Transmission Service: Requests for monthly service shall be submitted in accordance with the time periods specified in Attachment J. Requests for service received later than the applicable time will be accommodated if practicable.

18.4 Determination of Available Transmission Capability: Following receipt of a tendered schedule the Contractor will make a determination on a non-discriminatory basis of available transmission capability pursuant to Section 15.2. Such determination shall be made as soon as reasonably practicable after receipt, but not later than the time periods specified in Attachment J.

19. ADDITIONAL STUDY PROCEDURES FOR FIRM POINT-TO-POINT TRANSMISSION SERVICE REQUESTS

19.1 Notice of Need for System Impact Study: After receiving a request for service, the Contractor shall determine on a non-discriminatory basis whether a System Impact Study is needed to be performed by the Transmission Provider. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. If the Contractor determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer within the time period specified in Attachment J. In such cases, the Transmission Provider shall within thirty (30) days of receipt by the Contractor, of a Completed Application, tender a System Impact Study Agreement in the form of Attachment D-1 pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required System Impact Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the System Impact Study Agreement and return it to the Transmission Provider within fifteen (15) days. If the Eligible Customer elects not to execute the System Impact Study Agreement, its Application shall be deemed withdrawn and its deposit, pursuant to Section 17.3, shall be returned with interest.

19.2 System Impact Study Agreement and Cost Reimbursement:

- (a) The System Impact Study Agreement will clearly specify the Transmission Provider's estimate of the actual cost, and time for completion of the System Impact Study. The charge shall not exceed the actual cost of the study. In performing the System Impact Study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing transmission planning studies. The Eligible Customer will not be assessed a charge for such existing studies; however, the Eligible Customer will be responsible for charges associated with any modifications to existing planning studies that are reasonably necessary to evaluate the impact of the Eligible Customer's request for

service on the Transmission System.

- (b) If in response to multiple Eligible Customers requesting service in relation to the same competitive solicitation, a single System Impact Study is sufficient for the Transmission Provider to accommodate the requests for service, the costs of that study shall be pro-rated among the Eligible Customers.

- (c) For System Impact Studies that the Transmission Provider conducts on its own behalf, the Transmission Provider shall record the cost of the System Impact Studies pursuant to Section 8.

19.3 System Impact Study Procedures: Upon receipt of an executed System Impact Study Agreement, the Transmission Provider will use due diligence to complete the required System Impact Study within a sixty (60) day period. The System Impact Study shall identify any system constraints and redispatch options, additional Direct Assignment Facilities or Network Upgrades required to provide the requested service. In the event that the Transmission Provider is unable to complete the required System Impact Study within such time period, it shall so notify the Eligible Customer and provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the required studies. A copy of the completed System Impact Study and related work papers shall be made available to the Eligible Customer. The Transmission Provider will use the same due diligence in completing the System Impact Study for an Eligible Customer as it uses when completing studies for itself. The Transmission Provider shall notify the Eligible Customer immediately upon completion of the System Impact Study if the Transmission System will be adequate to accommodate all or part of a request for service or that no costs are likely to be incurred for new transmission facilities or upgrades. In order for a request to remain a Completed Application, within fifteen (15) days of completion of the System Impact Study the Eligible Customer must execute a Service Agreement, or provide confirmation to the Transmission Provider pursuant to the terms of an executed Umbrella Agreement or the Application shall be deemed terminated and withdrawn.

19.4 Facilities Study Procedures: If a System Impact Study indicates that additions or upgrades to the Transmission System are needed to supply the Eligible Customer's service request, the Transmission Provider, within thirty (30) days of the completion of the System Impact Study, shall tender to the Eligible Customer a Facilities Study Agreement in the form of Attachment D-2 pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required Facilities Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it to the Transmission Provider within fifteen (15) days. If the Eligible

Customer elects not to execute the Facilities Study Agreement, its Application shall be deemed withdrawn and its deposit, pursuant to Section 17.3, shall be returned with interest. Upon receipt of an executed Facilities Study Agreement, the Transmission Provider will use due diligence to complete the required Facilities Study within a sixty (60) day period. If the Transmission Provider is unable to complete the Facilities Study in the allotted time period, the Transmission Provider shall notify the Transmission Customer and provide an estimate of the time needed to reach a final determination along with an explanation of the reasons that additional time is required to complete the study. When completed, the Facilities Study will include a good faith estimate of: (i) the cost of Direct Assignment Facilities to be charged to the Transmission Customer; (ii) the Transmission Customer's appropriate share of the cost of any required Network Upgrades as determined pursuant to the provisions of Part II of the Tariff; and (iii) the time required to complete such construction and initiate the requested service. The Transmission Customer shall provide the Transmission Provider with a letter of credit or other reasonable form of security acceptable to the Transmission Provider equivalent to the costs of new facilities or upgrades consistent with commercial practices as established under the laws of the Province of Manitoba. The Transmission Customer shall have thirty (30) days to execute a Service Agreement or provide written confirmation to the Transmission Provider pursuant to the terms of an executed Umbrella Agreement and provide the required letter of credit or other form of security or the request will no longer be a Completed Application and shall be deemed terminated and withdrawn.

19.5 Facilities Study Modifications: Any change in design arising from inability to site or construct facilities as proposed will require development of a revised good faith estimate. New good faith estimates also will be required in the event of new statutory or regulatory requirements that are effective before the completion of construction or other circumstances beyond the control of the Transmission Provider that significantly affect the final cost of new facilities or upgrades to be charged to the Transmission Customer pursuant to the provisions of Part II of the Tariff.

19.6 Due Diligence in Completing New Facilities: The Transmission Provider shall use due diligence to add necessary facilities or upgrade its Transmission System within a reasonable time. The Transmission Provider will not upgrade its existing or planned Transmission System in order to provide the requested Firm Point-to-Point Transmission Service if doing so would impair system reliability or otherwise impair or degrade existing firm service.

19.7 Partial Interim Service:

a) If the Contractor or Transmission Provider determines that the Transmission Provider will not have adequate transmission capability to satisfy the full amount of a Completed Application for Firm Point-to-Point Transmission Service, the Transmission Provider nonetheless shall be obligated to offer and provide the portion of the requested Firm Point-to-Point Transmission Service that can be accommodated without addition of any facilities and through redispatch. However, the Transmission Provider shall not be obligated to provide the incremental amount of requested Firm Point-to-Point Transmission Service that requires the addition of facilities or upgrades to the Transmission System until such facilities or upgrades have been placed in service.

b) If the Contractor or Transmission Provider determines that the Transmission Provider will not have adequate transmission capability to satisfy the full amount of a Completed Application for Firm Point-to-Point Transmission Service on an interface with an off load tap-changing transformer, the Transmission Provider nonetheless shall be obligated to offer and provide the portion of the requested Firm Point-to-Point Transmission Service with scheduling restrictions that can be accommodated without addition of any facilities. The scheduling restrictions for that portion of the Firm Point-to-Point Transmission Service that can be accommodated shall be included in the Long Term Point-to-Point Transmission Service Agreement. However, the Transmission Provider shall not be obligated to provide the incremental amount of requested Firm Point-to-Point Transmission Service that requires

the addition of facilities or upgrades to the Transmission System until such facilities or upgrades have been placed in service.

19.8 Expedited Procedures for New Facilities: In lieu of the procedures set forth above, the Eligible Customer shall have the option to expedite the process by requesting the Transmission Provider to tender at one time, together with the results of required studies, an “Expedited Service Agreement” pursuant to which the Eligible Customer would agree to compensate the Transmission Provider for all costs incurred pursuant to the terms of the Tariff. In order to exercise this option, the Eligible Customer shall request in writing an expedited Service Agreement covering all of the above-specified items within thirty (30) days of receiving the results of the System Impact Study identifying needed facility additions or upgrades or costs incurred in providing the requested service. While the Transmission Provider agrees to provide the Eligible Customer with its best estimate of the new facility costs and other charges that may be incurred, such estimate shall not be binding and the Eligible Customer must agree in writing to compensate the Transmission Provider for all costs incurred pursuant to the provisions of the Tariff. The Eligible Customer shall execute and return such an Expedited Service Agreement within fifteen (15) days of its receipt or the Eligible Customer’s request for service will cease to be a Completed Application and will be deemed terminated and withdrawn.

20. PROCEDURES IF THE TRANSMISSION PROVIDER IS UNABLE TO COMPLETE NEW TRANSMISSION FACILITIES FOR FIRM POINT-TO-POINT TRANSMISSION SERVICE

20.1 Delays in Construction of New Facilities: If any event occurs that will materially affect the time for completion of new facilities, or the ability to complete them, the Transmission Provider shall promptly notify the Transmission Customer. In such circumstances, the

Transmission Provider shall within thirty (30) days of notifying the Transmission Customer of such delays, convene a technical meeting with the Transmission Customer to evaluate the alternatives available to the Transmission Customer. The Transmission Provider also shall make available to the Transmission Customer studies and work papers related to the delay, including all information that is in the possession of the Transmission Provider that is reasonably needed by the Transmission Customer to evaluate any alternatives.

20.2 Alternatives to the Original Facility Additions: When the review process of Section 20.1 determines that one or more alternatives exist to the originally planned construction project, the Transmission Provider shall present such alternatives for consideration by the Transmission Customer. If, upon review of any alternatives, the Transmission Customer desires to maintain its Completed Application subject to construction of the alternative facilities, it may request the Transmission Provider to submit a revised Service Agreement for Long-Term Firm Point-to-Point Transmission Service. If the alternative approach solely involves Short-Term Firm or Non-Firm Point-to-Point Transmission Service, the Transmission Provider shall promptly tender an Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service providing for the service. In the event the Transmission Provider concludes that no reasonable alternative exists and the Transmission Customer disagrees, the Transmission Customer may seek relief under the dispute resolution procedures pursuant to Section 12.

20.3 Refund Obligation for Unfinished Facility Additions: If the Transmission Provider and the Transmission Customer mutually agree that no other reasonable alternatives exist and the requested service cannot be provided out of existing capability under the conditions of Part II of the Tariff, the obligation to provide the requested Firm Point-to-Point Transmission Service shall terminate and any deposit made by the Transmission Customer shall be returned with interest calculated at a rate equal to two percent per annum plus the Prime Lending Rate of interest per annum in effect and applicable to each day of the interest period.

However, the Transmission Customer shall be responsible for all prudently incurred costs by the Transmission Provider through the time construction was suspended.

21. PROVISIONS RELATING TO TRANSMISSION CONSTRUCTION AND SERVICES ON THE SYSTEMS OF OTHER UTILITIES

21.1 Responsibility for Third-Party System Additions: The Transmission Provider shall not be responsible for making arrangements for any necessary engineering, permitting, and construction of transmission or distribution facilities on the system(s) of any other entity or for obtaining any regulatory approval for such facilities. The Transmission Provider will undertake reasonable efforts to assist the Transmission Customer in obtaining such arrangements, including without limitation, providing any information or data required by such other electric system pursuant to Good Utility Practice. The Transmission Customer shall reimburse the Transmission Provider for all prudently incurred costs arising from the Transmission Provider's obligation to undertake such efforts.

21.2 Coordination of Third-Party System Additions: In circumstances where the need for transmission facilities or upgrades is identified pursuant to the provisions of Part II of the Tariff, and if such upgrades further require the addition of transmission facilities on other systems, the Transmission Provider shall have the right to coordinate construction on its own system with the construction required by others. The Transmission Provider, after consultation with the Transmission Customer and representatives of such other systems, may defer construction of its new transmission facilities, if the new transmission facilities on another system cannot be completed in a timely manner. The Transmission Provider shall notify the Transmission Customer in writing of the basis for any decision to defer construction and the specific problems which must be resolved before it will initiate or resume construction of new facilities. Within sixty (60) days of receiving written

notification by the Transmission Provider of its intent to defer construction pursuant to this section, the Transmission Customer may challenge the decision in accordance with the dispute resolution procedures pursuant to Section 12.

22. CHANGES IN SERVICE SPECIFICATIONS

22.1 Modifications on a Non-Firm Basis: The Transmission Customer taking Firm Point-to-Point Transmission Service may request the Transmission Provider to provide transmission service on a non-firm basis over Receipt and Delivery Points other than those specified in the Service Agreement or agreed on pursuant to an Umbrella Agreement (“Secondary Receipt and Delivery Points”), in amounts not to exceed its firm capacity reservation, without incurring an additional Non-Firm Point-to-Point Transmission Service charge or executing a new Service Agreement subject to the following conditions.

- (a) Service provided over Secondary Receipt and Delivery Points will be non-firm only, on an as-available basis and will not displace any firm or non-firm service reserved or scheduled by third-parties under the Tariff or by the Transmission Provider on behalf of its Native Load Customers.
- (b) The sum of all Firm and Non-Firm Point-to-Point Transmission Service provided to the Transmission Customer at any time pursuant to this section shall not exceed the Reserved Capacity in the relevant Service Agreement or agreed on pursuant to an Umbrella Agreement under which such services are provided.
- (c) The Transmission Customer shall retain its right to schedule Firm Point-to-Point Transmission Service at the Receipt and Delivery Points specified in

the relevant Service Agreement or agreed on pursuant to an Umbrella Agreement in the amount of its original capacity reservation.

- (d) Service over Secondary Receipt and Delivery Points on a non-firm basis shall not require the filing of an Application for Non-Firm Point-to-Point Transmission Service under the Tariff. However, all other requirements of Part II of the Tariff (except as to transmission rates) shall apply to transmission service on a non-firm basis over Secondary Receipt and Delivery Points.

22.2 Modifications on a Firm Basis: Any request by a Transmission Customer to modify Receipt and Delivery Points on a firm basis shall be treated as a new request for service in accordance with Section 17 hereof, except that such Transmission Customer shall not be obligated to pay any additional deposit if the capacity reservation does not exceed the amount reserved in the existing Service Agreement or agreed on pursuant to an Umbrella Agreement. While such new request is pending, the Transmission Customer shall retain its priority for service at the existing firm Receipt and Delivery Points specified in its Service Agreement or agreed on pursuant to an Umbrella Agreement.

23. SALE OR ASSIGNMENT OF TRANSMISSION SERVICE

23.1 Procedures for Assignment or Transfer of Service: Subject to regulatory approval of any necessary filings, a Transmission Customer may sell, assign, or transfer all or a portion of its rights under its Service Agreement, but only to another Eligible Customer (the “Assignee”). The Transmission Customer that sells, assigns or transfers its rights under its Service Agreement is hereafter referred to as the Reseller. Compensation to the Reseller shall not exceed the higher of: (i) the original rate paid by the Reseller; (ii) the Transmission

Provider's maximum rate in effect at the time of the assignment; or (iii) the Reseller's opportunity cost capped at the Transmission Provider's cost of expansion. If the Assignee does not request any change in the Point(s) of Receipt or the Point(s) of Delivery, or a change in any other term or condition set forth in the original Service Agreement, the Assignee will receive the same services as did the Reseller and the priority of service for the Assignee will be the same as that of the Reseller. A Reseller should notify the Contractor as soon as possible after any assignment or transfer of service occurs but in any event, notification must be provided prior to any provision of service to the Assignee. The Assignee will be subject to all terms and conditions of this Tariff. If the Assignee requests a change in service, the reservation priority of service will be determined by the Contractor pursuant to Section 13.2.

23.2 Limitations on Assignment or Transfer of Service: If the Assignee requests a change in the Point(s) of Receipt or Point(s) of Delivery, or a change in any other specifications set forth in the original Service Agreement, the Transmission Provider will consent to such change subject to the provisions of the Tariff, provided that the change will not impair the operation and reliability of the Transmission Provider's generation, transmission, or distribution systems. The Assignee also will pay for any additional charges, including Ancillary Services, Congestion, Losses, or other Transmission Provider charges. In addition, the Transmission Customer changing its service shall be responsible for supplying any additional losses required under Attachment M if the Transmission Customer is not purchasing losses under Attachment M. The Assignee shall compensate the Transmission Provider for performing any System Impact Study needed to evaluate the capability of the Transmission System to accommodate the proposed change and any additional costs resulting from such change. The Reseller shall remain liable for the performance of all obligations under the Service Agreement except as specifically agreed to by the Parties through an amendment to the Service Agreement.

23.3 Information on Assignment or Transfer of Service: In accordance with Section 4, Resellers may use the OASIS used by the Contractor to post transmission capacity available for resale.

24. METERING AND POWER FACTOR CORRECTION AT RECEIPT AND DELIVERY POINT(S)

24.1 Transmission Customer Obligations: Unless otherwise agreed, the Transmission Customer shall be responsible for installing and maintaining compatible metering and communications equipment to accurately account for the capacity and energy being transmitted under Part II of the Tariff and to communicate the information to the Contractor. Such equipment shall remain the property of the Transmission Customer.

24.2 Transmission Provider Access to Metering Data: The Contractor shall have access to metering data, which may reasonably be required to facilitate measurements and billing under the Service Agreement.

24.3 Power Factor: Unless otherwise agreed, the Transmission Customer is required to maintain a power factor within the same range as the Transmission Provider pursuant to Good Utility Practice. The power factor requirements are specified in the Service Agreement where applicable.

25. COMPENSATION FOR TRANSMISSION SERVICE

Rates for Firm and Non-Firm Point-to-Point Transmission Service are provided in the Schedules appended to the Tariff: Firm Point-to-Point Transmission Service (Schedules 7 and 14); and Non-Firm Point-to-Point Transmission Service (Schedules 8 and 14). In addition, the Transmission Customer shall pay for any applicable Ancillary Service charges, congestion management charges, any applicable loss compensation, and shall also pay the Cost Recovery Adder pursuant to Schedule 10. The Transmission Provider shall use Part II of the Tariff to make its Third-Party Sales. The Transmission Provider shall account for such use at the applicable Tariff rates, pursuant to Section 8.

26. STRANDED COST RECOVERY

The Transmission Provider may seek to recover stranded costs from the Transmission Customer pursuant to this Tariff subject to the Dispute Resolution provisions in Section 12.

27. COMPENSATION FOR NEW FACILITIES AND REDISPATCH COSTS

Whenever a System Impact Study performed by the Transmission Provider in connection with the provision of Firm Point-to-Point Transmission Service identifies the need for new facilities, the Transmission Customer shall be responsible for costs of new facilities to the extent consistent with law and/or Board policy governing the Transmission Provider. Whenever a System Impact Study

performed by the Transmission Provider identifies capacity constraints that may be relieved more economically by redispatching the Transmission Provider's resources than by building new facilities or upgrading existing facilities to eliminate such constraints, the Transmission Customer shall be responsible for the redispatch costs to the extent consistent with law and/or Board policy governing the Transmission Provider.

III. NETWORK INTEGRATION TRANSMISSION SERVICE

Preamble

The Transmission Provider will provide Network Integration Transmission Service pursuant to the applicable terms and conditions contained in the Tariff and Service Agreement. Network Integration Transmission Service allows the Network Customer to integrate, economically dispatch and regulate its current and planned Network Resources to serve its Network Load in a manner comparable to that in which the Transmission Provider utilizes its Transmission System to serve its Native Load Customers. Network Integration Transmission Service also may be used by the Network Customer to deliver economy energy purchases to its Network Load from non-designated resources on an as-available basis without additional charge. Transmission service for sales to non-designated loads will be provided pursuant to the applicable terms and conditions of Part II of the Tariff.

28. NATURE OF NETWORK INTEGRATION TRANSMISSION SERVICE

28.1 Scope of Service: Network Integration Transmission Service is a transmission service that allows Network Customers to efficiently and economically utilize their Network Resources (as well as other non-designated generation resources) to serve their Network Load located in the Transmission Provider's Control Area and any additional load that may be designated

pursuant to Section 31.3 of the Tariff. The Network Customer taking Network Integration Transmission Service must obtain or provide Ancillary Services pursuant to Section 3.

- 28.2 Transmission Provider Responsibilities:** The Transmission Provider will plan, construct, operate and maintain its Transmission System in accordance with Good Utility Practice in order to provide the Network Customer with Network Integration Transmission Service over the Transmission Provider's Transmission System. The Transmission Provider, on behalf of its Native Load Customers, shall be required to designate resources and loads in the same manner as any Network Customer under Part III of this Tariff. This information must be consistent with the information used by the Transmission Provider to calculate available transmission capability. The Transmission Provider shall include the Network Customer's Network Load in its Transmission System planning and shall, consistent with Good Utility Practice, endeavor to construct and place into service sufficient transmission capacity to deliver the Network Customer's Network Resources to serve its Network Load on a basis comparable to the Transmission Provider's delivery of its own generating and purchased resources to its Native Load Customers.
- 28.3 Network Integration Transmission Service:** The Transmission Provider will provide firm transmission service over its Transmission System to the Network Customer for the delivery of capacity and energy from its designated Network Resources to service its Network Loads on a basis that is comparable to the Transmission Provider's use of the Transmission System to reliably serve its Native Load Customers.
- 28.4 Secondary Service:** The Network Customer may use the Transmission Provider's Transmission System to deliver energy to its Network Loads from Generation resources that have not been designated as Network Resources. Such energy shall be transmitted, on an as-available

basis, at no additional charge. Deliveries from resources other than Network Resources will have a higher priority than any Non-Firm Point-to-Point Transmission Service under Part II of the Tariff.

- 28.5 Real Power Losses:** Real Power Losses are associated with all transmission service. The Transmission Provider is not obligated to replace Real Power Losses. The Network Customer is responsible for losses associated with all transmission service as calculated by the Transmission Provider in accordance with Attachment M. The applicable Real Power Loss factors for the Transmission Provider are as set forth in Schedule 9 of this Tariff.
- 28.6 Restrictions on Use of Service:** The Network Customer shall not use Network Integration Transmission Service for: (i) sales of capacity and energy to non-designated loads; or (ii) direct or indirect provision of transmission service by the Network Customer to third parties. All Network Customers taking Network Integration Transmission Service shall use Point-to-Point Transmission Service under Part II of the Tariff for any Third-Party Sale which requires use of the Transmission Provider's Transmission System.
- 28.7 Identity of Network Customer:** If the Network Customer is: (i) acting as an intermediary for the provision of Network Integration Transmission Service to a load-serving entity; or (ii) does not control the generation designated as a Network Resource; or (iii) does not own/operate the facilities interconnected with the Transmission System, any references in the Tariff to the Network Customer's or Eligible Customer's transmission system, facilities, Network Resources or operations shall be interpreted as including the transmission system, facilities, resources and operations of the load-serving entity, resource owner/operator or facility owner/operator as applicable. Under such circumstances, the Network Customer shall be responsible for ensuring that contractual arrangements acceptable to the Transmission Provider are in place with the applicable load-serving entity, resource owner/operator and facility owner/operator to ensure that all Tariff obligations are fulfilled.

29. INITIATING SERVICE

29.1 Condition Precedent for Receiving Service: Subject to the terms and conditions of Part III of the Tariff, the Transmission Provider will provide Network Integration Transmission Service to any Eligible Customer, provided that: (i) the Eligible Customer completes an Application for Eligible Customer Status pursuant to Attachment L; (ii) the Eligible Customer completes an Application for service as provided under Part III of the Tariff; (iii) the Eligible Customer and the Transmission Provider complete the technical arrangements set forth in Sections 29.3 and 29.4; (iv) the Eligible Customer executes a Service Agreement pursuant to Attachment F for service under Part III of the Tariff; and (v) the Eligible Customer executes a Network Operating Agreement with the Transmission Provider pursuant to Attachment G.

29.2 Application Procedures: An Eligible Customer requesting service under Part III of the Tariff must submit an Application, with a deposit approximating the charge for one month of service, to the Transmission Provider as far as possible in advance of the month in which service is to commence. Unless subject to the procedures in Section 2, Completed Applications for Network Integration Transmission Service will be assigned a priority according to the date and time the Application is received, with the earliest Application receiving the highest priority. Applications should be submitted by entering the information listed below on the OASIS used by the Transmission Provider. If the OASIS used by the Transmission Provider is not functioning, a Completed Application may be submitted by: (i) transmitting the required information to the Transmission Provider by telefax; or (ii) providing the information by telephone over the Transmission Provider's time recorded telephone line. Each of these methods will provide a time-stamped record for establishing the service priority of the Application. A Completed Application shall provide all of the information listed below:

- (a) The identity, address, telephone number and facsimile number of the party requesting service;
- (b) A statement that the party requesting service is, or will be upon commencement of service, an Eligible Customer under the Tariff;
- (c) A description of the Network Load at each delivery point. This description should separately identify and provide the Eligible Customer's best estimate of the total loads to be served at each transmission voltage level, and the loads to be served from each Transmission Provider substation at the same transmission voltage level. The description should include a ten (10) year forecast of summer and winter load and resource requirements beginning with the first year after the service is scheduled to commence;
- (d) The amount and location of any interruptible loads included in the Network Load. This shall include the summer and winter capacity requirements for each interruptible load (had such load not been interruptible), that portion of the load subject to interruption, the conditions under which an interruption can be implemented and any limitations on the amount and frequency of interruptions. An Eligible Customer should identify the amount of interruptible customer load (if any) included in the 10 year load forecast provided in response to (c) above;
- (e) A description of Network Resources (current and 10 year projection), which shall include, for each Network Resource:

X Unit size and amount of capacity from that unit to be designated as Network Resource

- X VAR capability (both leading and lagging) of all generators
- X Operating restrictions
 - X Any periods of restricted operations throughout the year
 - X Maintenance schedules
 - X Minimum loading level of unit
 - X Normal operating level of unit
 - X Any must-run unit designations required for system reliability or contract reasons
- X Load and frequency control capability
- X Dispatchability and manoeuverability
- X Approximate variable cost (\$/MWH) for redispatch computations
- X Arrangements governing sale and delivery of power to third parties from generating facilities located in the Transmission Provider Control Area, where only a portion of unit output is designated as a Network Resource
- X Description of purchased power designated as a Network Resource including source of supply, Control Area location, transmission arrangements and delivery point(s) to the Transmission Provider's Transmission System;

(f) Description of Eligible Customer's transmission system:

- X Load flow and stability data, such as real and reactive parts of the load, lines, transformers, reactive devices and load type, including normal and emergency ratings of all transmission equipment in formats compatible with those used by the Transmission Provider
- X Operating restrictions needed for reliability
- X Operating guides employed by system operators

- X Contractual restrictions or committed uses of the Eligible Customer's transmission system, other than the Eligible Customer's Network Loads and Resources
 - X Location of Network Resources described in subsection (e) above
 - X 10 year projection of system expansions or upgrades
 - X Transmission System maps that include any proposed expansions or upgrades
 - X Thermal ratings of Eligible Customer's Control Area ties with other Control Areas; and
- (g) Service Commencement Date and the term of the requested Network Integration Transmission Service. The minimum term for Network Integration Transmission Service is one (1) year.

Unless the Parties agree to a different time frame, the Transmission Provider must acknowledge the request within ten (10) days of receipt. The acknowledgment must include a date by which a response, including a Service Agreement, will be sent to the Eligible Customer. If an Application fails to meet the requirements of this section, the Transmission Provider shall notify the Eligible Customer requesting service within fifteen (15) days of receipt and specify the reasons for such failure. Wherever possible, the Transmission Provider will attempt to remedy deficiencies in the Application through informal communications with the Eligible Customer. If such efforts are unsuccessful, the Transmission Provider shall return the Application without prejudice to the Eligible Customer filing a new or revised Application that fully complies with the requirements of this section. The Eligible Customer will be assigned a new priority consistent with the date of the new or revised Application. The Transmission Provider shall treat this information consistent with its standards of conduct.

29.3 Technical Arrangements to be Completed Prior to Commencement of Service:

Network Integration Transmission Service shall not commence until the Transmission Provider and the Network Customer, or a third party, have completed installation of all equipment specified under the Network Operating Agreement consistent with Good Utility Practice and any additional requirements reasonably and consistently imposed to ensure the reliable operation of the Transmission System. The Transmission Provider shall exercise reasonable efforts, in coordination with the Network Customer, to complete such arrangements as soon as practicable taking into consideration the Service Commencement Date.

29.4 Network Customer Facilities: The provision of Network Integration Transmission Service shall be conditioned upon the Network Customer's constructing, maintaining and operating the facilities on its side of each delivery point or interconnection necessary to reliably deliver capacity and energy from the Transmission Provider's Transmission System to the Network Customer. The Network Customer shall be solely responsible for constructing or installing all facilities on the Network Customer's side of each such delivery point or interconnection.

30. NETWORK RESOURCES

30.1 Designation of Network Resources: Network Resources shall include all generation and dedicated transmission equipment owned, purchased or leased by the Network Customer, and by the load-serving entity where the Network Customer is acting as an intermediary for the load-serving entity, designated to serve Network Load under the Tariff. Network Resources may not include resources, or any portion thereof, that are committed for sale to non-designated third party load (other than the load-serving entity on whose behalf a Network Customer is acting) or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis. Any owned or purchased resources

that were serving the Network Customer's loads under firm agreements entered into on or before the Service Commencement Date shall initially be designated as Network Resources until the Network Customer terminates the designation of such resources.

30.2 Designation of New Network Resources: The Network Customer may designate a new Network Resource by providing the Transmission Provider with as much advance notice as practicable. A designation of a new Network Resource must be made by a request for modification of service by submitting a new Application under Section 29.

30.2.1 Designation of a Temporary Network Resource: A Transmission Customer may designate a resource as a Network Resource for a period of not less than one (1) month and not exceeding twelve (12) consecutive months provided that.

- i) An existing Network Resource has Inoperable Capacity which may make additional Network Integration Transmission Service available.
- ii) The request to designate a resource as a Network Resource is submitted to the Transmission Provider no earlier than 12 months prior and no later than 30 days prior to the requested start date.
- iii) In the event that a competing Point-to-Point Transmission Service request is received by the Transmission Provider, the Point-to-Point Transmission request and the request to convert the resource to a Network Resource shall be ranked in accordance with first-come, first served principles.

The Transmission Provider shall determine the available transmission capacity within 30 days of receipt of the request from the Transmission Customer to designate a resource a Network Resource in a form acceptable to the Transmission Provider and notify the Network Customer accordingly.

30.3 Termination of Network Resources: The Network Customer may terminate the

designation of all or part of a generating resource as a Network Resource upon approval of the Transmission Provider. The Transmission Provider shall not withhold its approval if the termination of such designation does not, in the Transmission Provider's sole discretion, create or aggravate a constrained interface in the Transmission Provider's Transmission System or if the Network Customer has no control over such termination.

- 30.4 Operation of Network Resources:** The Network Customer shall not operate its designated Network Resources located in the Network Customer's or Transmission Provider's Control Area such that the output of those facilities exceeds its designated Network Load, plus non-firm sales delivered pursuant to Part II of the Tariff, plus losses. This limitation shall not apply to changes in the operation of a Transmission Customer's Network Resources at the request of the Transmission Provider to respond to an emergency or other unforeseen condition which may impair or degrade the reliability of the Transmission System.
- 30.5 Network Customer Redispatch Obligation:** As a condition to receiving Network Integration Transmission Service, the Network Customer agrees to redispatch its Network Resources as requested by the Transmission Provider pursuant to Section 33.2. To the extent practical, the redispatch of resources pursuant to this section shall be on a least cost, non-discriminatory basis between all Network Customers, and the Transmission Provider.
- 30.6 Transmission Arrangements for Network Resources not Physically Interconnected with the Transmission Provider:** The Network Customer shall be responsible for any arrangements necessary to deliver capacity and energy from a Network Resource not physically interconnected with the Transmission Provider's Transmission System. The Transmission Provider will undertake reasonable efforts to assist the Network Customer in obtaining such arrangements, including without limitation, providing any information or data required by such other entity pursuant to Good Utility Practice.

30.7 Limitation on Designation of Network Resources: The Network Customer must demonstrate that it owns or has committed to purchase generation pursuant to an executed contract in order to designate a generating resource as a Network Resource. Alternatively, the Network Customer may establish that execution of a contract is contingent upon the availability of transmission service under Part III of the Tariff.

30.8 Use of Interface Capacity by the Network Customer: There is no limitation upon a Network Customer's use of the Transmission Provider's Transmission System at any particular interface to integrate the Network Customer's Network Resources (or substitute economy purchases) with its Network Loads. However, a Network Customer's use of the Transmission Provider's total interface capacity with other transmission systems may not exceed the Network Customer's Load.

30.9 Network Customer Owned Transmission Facilities: The Network Customer that owns existing transmission facilities that are integrated with the Transmission Provider's Transmission System may be eligible to receive consideration either through a billing credit or some other mechanism. In order to receive such consideration the Network Customer must demonstrate that its transmission facilities are integrated into the plans or operations of the Transmission Provider to serve its power and transmission customers. For facilities constructed by the Network Customer subsequent to the Service Commencement Date under Part III of the Tariff, the Network Customer shall receive credit where such facilities are jointly planned and installed in coordination with the Transmission Provider. Calculation of the credit shall be addressed in either the Network Customer's Service Agreement or any other agreement between the Parties.

31. DESIGNATION OF NETWORK LOAD

31.1 Network Load: The Network Customer must designate the individual Network Loads on

whose behalf the Transmission Provider will provide Network Integration Transmission Service. The Network Loads shall be specified in the Service Agreement.

31.2 New Network Loads Connected with the Transmission Provider: The Network Customer shall provide the Transmission Provider with as much advance notice as reasonably practicable of the designation of new Network Load that will be added to its Transmission System. A designation of new Network Load must be made through a modification of service pursuant to a new Application. The Transmission Provider will use due diligence to install any transmission facilities required to interconnect a new Network Load designated by the Network Customer. The costs of new facilities required to interconnect a new Network Load shall be determined in accordance with the procedures provided in Section 32.4 and shall be charged to the Network Customer in accordance with law and/or Board policy governing the Transmission Provider.

31.3 Network Load not Physically Interconnected with the Transmission Provider: This section applies to both initial designation pursuant to Section 31.1 and the subsequent addition of new Network Load not physically interconnected with the Transmission Provider. To the extent that the Network Customer desires to obtain transmission service for a load outside the Transmission Provider's Transmission System, the Network Customer shall have the option of: (i) electing to include the entire load as Network Load for all purposes under Part III of the Tariff and designating Network Resources in connection with such additional Network Load; or (ii) excluding that entire load from its Network Load and purchasing Point-to-Point Transmission Service under Part II of the Tariff. To the extent that the Network Customer gives notice of its intent to add a new Network Load as part of its Network Load pursuant to this section the request must be made through a modification of service pursuant to a new Application.

31.4 New Interconnection Points: To the extent the Network Customer desires to add a new

Delivery Point or interconnection point between the Transmission Provider's Transmission System and a Network Load, the Network Customer shall provide the Transmission Provider with as much advance notice as reasonably practicable.

31.5 Changes in Service Requests:

- (a) Under no circumstances shall the Network Customer's decision to cancel or delay a requested change in Network Integration Transmission Service (e.g. the addition of a new Network Resource or designation of a new Network Load) in any way relieve the Network Customer of its obligation to pay the costs of transmission facilities constructed by the Transmission Provider and charged to the Network Customer as reflected in the Service Agreement. However, the Transmission Provider must treat any requested change in Network Integration Transmission Service in a non-discriminatory manner.

31.6 Annual Load and Resource Information Updates: The Network Customer shall provide the Transmission Provider with annual updates of Network Load and Network Resource forecasts consistent with those included in its Application for Network Integration Transmission Service under Part III of the Tariff. The Network Customer also shall provide the Transmission Provider with timely written notice of material changes in any other information provided in its Application relating to the Network Customer's Network Load, Network Resources, its transmission system or other aspects of its facilities or operations affecting the Transmission Provider's ability to provide reliable service.

32. ADDITIONAL STUDY PROCEDURES FOR NETWORK INTEGRATION TRANSMISSION SERVICE REQUESTS

32.1 Notice of Need for System Impact Study: After receiving a request for service, the Transmission Provider shall determine on a non-discriminatory basis whether a System Impact Study is needed. A description of the Transmission Provider's methodology for completing a System Impact Study is provided in Attachment D. If the Transmission Provider determines that a System Impact Study is necessary to accommodate the requested service, it shall so inform the Eligible Customer, as soon as practicable. In such cases, the Transmission Provider shall within thirty (30) days of receipt of a Completed Application, tender a System Impact Study Agreement in the form of Attachment D-1 pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required System Impact Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the System Impact Study Agreement and return it to the Transmission Provider within fifteen (15) days. If the Eligible Customer elects not to execute the System Impact Study Agreement, its Application shall be deemed withdrawn and its deposit shall be returned with interest.

32.2 System Impact Study Agreement and Cost Reimbursement:

- (a) The System Impact Study Agreement will clearly specify the Transmission Provider's estimate of the actual cost and time for completion of the System Impact Study. The charge shall not exceed the actual cost of the study. In performing the System Impact Study, the Transmission Provider shall rely, to the extent reasonably practicable, on existing transmission planning studies. The Eligible Customer will not be assessed a charge for such existing studies; however, the Eligible Customer will be responsible for charges associated with any modifications to existing planning studies that are reasonably necessary to evaluate the impact of the Eligible Customer's request for service on the Transmission System.
- (b) If in response to multiple Eligible Customers requesting service in relation to the same competitive solicitation, a single System Impact Study is sufficient for the Transmission Provider to accommodate the service requests, the costs of that study shall be pro-rated among the Eligible Customers.
- (c) For System Impact Studies that the Transmission Provider conducts on its own behalf, the Transmission Provider shall record the cost of the System Impact Studies pursuant to Section 8.

32.3 System Impact Study Procedures: Upon receipt of an executed System Impact Study Agreement, the Transmission Provider will use due diligence to complete the required System Impact Study within a sixty (60) day period. The System Impact Study shall identify any system constraints and redispatch options, additional Direct Assignment Facilities or Network Upgrades required to provide the requested service. In the event that the Transmission Provider is unable to complete the required System Impact Study within such time period, it shall so notify the Eligible Customer and provide an estimated completion date along with an explanation of the reasons why additional time is required to complete the

required studies. A copy of the completed System Impact Study and related work papers shall be made available to the Eligible Customer. The Transmission Provider will use the same due diligence in completing the System Impact Study for an Eligible Customer as it uses when completing studies for itself. The Transmission Provider shall notify the Eligible Customer immediately upon completion of the System Impact Study if the Transmission System will be adequate to accommodate all or part of a request for service or that no costs are likely to be incurred for new transmission facilities or upgrades. In order for a request to remain a Completed Application, within fifteen (15) days of completion of the System Impact Study the Eligible Customer must execute a Service Agreement, or the Application shall be deemed terminated and withdrawn.

32.4 Facilities Study Procedures: If a System Impact Study indicates that additions or upgrades to the Transmission System are needed to supply the Eligible Customer's service request, the Transmission Provider, within thirty (30) days of the completion of the System Impact Study, shall tender to the Eligible Customer a Facilities Study Agreement in the form of Attachment D-2 pursuant to which the Eligible Customer shall agree to reimburse the Transmission Provider for performing the required Facilities Study. For a service request to remain a Completed Application, the Eligible Customer shall execute the Facilities Study Agreement and return it to the Transmission Provider within fifteen (15) days. If the Eligible Customer elects not to execute the Facilities Study Agreement, its Application shall be deemed withdrawn and its deposit shall be returned with interest. Upon receipt of an executed Facilities Study Agreement, the Transmission Provider will use due diligence to complete the required Facilities Study within a sixty (60) day period. If the Transmission Provider is unable to complete the Facilities Study in the allotted time period, the Transmission Provider shall notify the Eligible Customer and provide an estimate of the time needed to reach a final determination along with an explanation of the reasons that additional time is required to complete the study. When completed, the Facilities Study will include a good faith estimate of: (i) the cost of Direct Assignment Facilities to be charged to the

Eligible Customer; (ii) the Eligible Customer's appropriate share of the cost of any required Network Upgrades; and (iii) the time required to complete such construction and initiate the requested service. The Eligible Customer shall provide the Transmission Provider with a letter of credit or other reasonable form of security acceptable to the Transmission Provider equivalent to the costs of new facilities or upgrades consistent with commercial practices as established under the laws of the Province of Manitoba. The Eligible Customer shall have thirty (30) days to execute a Service Agreement and provide the required letter of credit or other form of security or the request no longer will be a Completed Application and shall be deemed terminated and withdrawn.

33. LOAD SHEDDING AND CURTAILMENTS

33.1 Procedures: Prior to the Service Commencement Date, the Transmission Provider and the Network Customer shall establish Load Shedding and Curtailment procedures pursuant to the Network Operating Agreement with the objective of responding to contingencies on the Transmission System and on systems directly and indirectly interconnected with the Transmission Provider's Transmission System. The Parties will implement such programs during any period when the Transmission Provider determines that a system contingency exists and such procedures are necessary to alleviate such contingency. The Transmission Provider will notify all affected Network Customers in a timely manner of any scheduled Curtailment.

33.2 Transmission Constraints: During any period when the Transmission Provider determines that a transmission constraint exists on the Transmission System, and such constraint may impair the reliability of the Transmission Provider's system, the Transmission Provider will take whatever actions, consistent with Good Utility Practice, that are reasonably necessary to maintain the reliability of the Transmission Provider's system. To the extent the

Transmission Provider determines that the reliability of the Transmission System can be maintained by redispatching resources, the Transmission Provider will initiate procedures pursuant to the Network Operating Agreement to redispatch all Network Resources and the Transmission Provider's own resources on a least-cost basis without regard to the ownership of such resources. Any redispatch under this section may not unduly discriminate between the Transmission Provider's use of the Transmission System on behalf of its Native Load Customers and any Network Customer's use of the Transmission System to serve its designated Network Load.

- 33.3 Cost Responsibility for Relieving Transmission Constraints:** Whenever the Transmission Provider implements least-cost redispatch procedures in response to a transmission constraint, the Transmission Provider and Network Customers will each bear a proportionate share of the total redispatch cost based on their respective Load Ratio shares.
- 33.4 Curtailments of Scheduled Deliveries:** If a transmission constraint on the Transmission Provider's Transmission System cannot be relieved through the implementation of least-cost redispatch procedures and the Transmission Provider determines that it is necessary to Curtail scheduled deliveries, the Parties shall Curtail such schedules in accordance with the Network Operating Agreement pursuant to the procedures specified in Attachment Q hereto.
- 33.5 Allocation of Curtailments:** The Transmission Provider shall, on a non-discriminatory basis, Curtail the transaction(s) that effectively relieve the constraint. However, to the extent practicable and consistent with Good Utility Practice, any Curtailment will be shared by the Transmission Provider and Network Customer in proportion to their respective Load Ratio Shares. The Transmission Provider shall not direct the Network Customer to Curtail schedules to an extent greater than the Transmission Provider would Curtail the Transmission Provider's schedules under similar circumstances.

33.6 Load Shedding: To the extent that a system contingency exists on the Transmission Provider's Transmission System and the Transmission Provider determines that it is necessary for the Transmission Provider and the Network Customer to shed load, the Parties shall shed load in accordance with previously established procedures under the Network Operating Agreement.

33.7 System Reliability: Notwithstanding any other provisions of this Tariff, the Transmission Provider reserves the right, consistent with Good Utility Practice and on a not unduly discriminatory basis, to Curtail Network Integration Transmission Service without liability on the Transmission Provider's part for the purpose of making necessary adjustments to, changes in, or repairs on its lines, substations and facilities, and in cases where the continuance of Network Integration Transmission Service would endanger persons or property. In the event of any adverse condition(s) or disturbances(s) on the Transmission Provider's Transmission System or on any other system(s) directly or indirectly interconnected with the Transmission Provider's Transmission System, the Transmission Provider, consistent with Good Utility Practice, also may Curtail Network Integration Transmission Service in order to: (i) limit the extent or damage of the adverse condition (s) or disturbance(s); (ii) prevent damage to generating or transmission facilities; or (iii) expedite restoration of service. The Transmission Provider will give the Network Customer as much advance notice as is practicable in the event of such Curtailment. Any Curtailment of Network Integration Transmission Service will be not unduly discriminatory relative to the Transmission Provider's use of the Transmission System on behalf of its Native Load Customers. The Transmission Provider shall specify the rate treatment and all related terms and conditions applicable in the event that the Network Customer fails to respond to established Load Shedding and Curtailment procedures.

34. RATES AND CHARGES

The Network Customer shall pay the Transmission Provider for any Direct Assignment Facilities, Ancillary Services, and applicable study costs, consistent with law and/or Board policy governing the Transmission Provider, along with the following:

- 34.1 Monthly Demand Charge:** The Network Customer shall pay a monthly Demand Charge, which shall be determined by multiplying its Load Ratio Share times one twelfth (1/12) of the Transmission Provider's Annual Transmission Revenue Requirement specified in Attachment O.
- 34.2 Determination of Network Customer's Monthly Network Load:** The Network Customer's monthly Network Load is its hourly load (including its designated Network Load not physically interconnected with the Transmission Provider under Section 31.3) coincident with the Transmission Provider's Monthly Transmission System Peak.
- 34.3 Determination of Transmission Provider's Monthly Transmission System Load:** The Transmission Provider's monthly Transmission System load is the Transmission Provider's Monthly Transmission System Peak minus the coincident peak usage of all Firm Point-to-Point Transmission Service customers pursuant to Part II of this Tariff plus the Reserved Capacity of all Firm Point-to-Point Transmission Service customers.
- 34.4 Redispatch Charge:** The Network Customer shall pay a Load Ratio Share of any redispatch costs allocated between the Network Customer and the Transmission Provider pursuant to Section 33. To the extent that the Transmission Provider incurs an obligation to the Network Customer for redispatch costs in accordance with 33, such amounts shall be credited against the Network Customer's bill for the applicable month.

34.5 Stranded Cost Recovery: The Transmission Provider may seek to recover stranded costs from the Network Customer pursuant to this Tariff subject to the dispute resolution provisions of Section 12.

35. OPERATING ARRANGEMENTS

35.1 Operation under The Network Operating Agreement: The Network Customer shall plan, construct, operate and maintain its facilities in accordance with Good Utility Practice and in conformance with the Network Operating Agreement.

35.2 Network Operating Agreement: The terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Part III of the Tariff shall be specified in the Network Operating Agreement. The Network Operating Agreement shall provide for the Parties to: (i) operate and maintain equipment necessary for integrating the Network Customer within the Transmission Provider's Transmission System (including, but not limited to, remote terminal units, metering, communications equipment and relaying equipment); (ii) transfer data between the Transmission Provider and the Network Customer (including, but not limited to, heat rates and operational characteristics of Network Resources, generation schedules for units outside the Transmission Provider's Transmission System, interchange schedules, unit outputs for redispatch required under Section 33, voltage schedules, loss factors and other real time data); (iii) use software programs required for data links and constraint dispatching; (iv) exchange data on forecasted loads and resources necessary for long-term planning; and (v) address any other technical and operational considerations required for implementation of Part III of the Tariff, including scheduling protocols. The Network Operating Agreement will recognize that the Network Customer shall either: (i) operate as a Control Area under applicable guidelines of the North American Electric Reliability Council ("NERC"), and the Mid-Continent Area Power Pool ("MAPP"); (ii) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with the Transmission Provider; or (iii) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with another entity, consistent with Good Utility Practice, which satisfies NERC and MAPP requirements. The Transmission Provider shall not unreasonably refuse to accept contractual arrangements with another entity for Ancillary Services. The Network Operating Agreement is included in Attachment G.

35.3 Network Operating Committee: A Network Operating Committee ('Committee') shall be established to coordinate operating criteria for the Parties' respective responsibilities under the Network Operating Agreement. Each Network Customer shall be entitled to have at least

one representative on the Committee. The Committee shall meet from time to time as need requires, but no less than once each calendar year.

SCHEDULE 1

Scheduling, System Control and Dispatch Service

I. General

This service is required to schedule the movement of power through, out of, within, or into a Control Area. This service can be provided only by the operator of the Control Area in which the transmission facilities used for transmission service are located. Scheduling, System Control and Dispatch Service is to be provided directly by the Transmission Provider. The Transmission Customer must purchase this service from the Transmission Provider. The charges for Scheduling, System Control and Dispatch Service are as set forth below:

II. Rates

The annual rate for this service is calculated on a regional basis within the Midwest ISO as follows: $(1-2) \div 3$,

Where:

- 1 = The sum of all costs booked to FERC Account No. 561 for all Midwest ISO Transmission Owners and the equivalent account for Coordinating Owners in the prior calendar or fiscal year.
- 2 = The sum of all charges under this Schedule assessed to firm transactions of less than one year, all non-firm transactions, and any other transactions whose loads are not included in the Divisor on Page 1 of Attachment O for Drive-Out and Drive Through Transmission Service.
- 3 = The Divisor on Page 1 of Attachment O for Drive-Out and Drive-Through Transmission Service.

The Transmission Provider's revenue requirement for inclusion in item number 1 is \$4,700,919 (Cdn). Such rate shall be calculated and put into effect on June 1 of each year, based on data for the prior calendar year.

On-Peak:

Annual Rate/MW	Annual Rate
Monthly Rate/MW	Annual Rate divided by 12
Weekly Rate/MW	Annual Rate divided by 52
Daily Rate/MW	Annual Rate divided by 260
Hourly Rate/MW	Annual Rate divided by 4160

Off-Peak

Daily Rate/MW	Annual Rate divided by 365
Hourly Rate/MW	Annual Rate divided by 8760

III. Charges

The charges for Transmission Customers taking Point-to-Point Transmission Service under Part II of the Tariff shall be calculated by multiplying the appropriate rate calculated above by each megawatt of Reserved Capacity.

The charges for Transmission Customers taking Network Transmission Service under Part III of the Tariff shall be calculated by multiplying the Monthly Rate calculated above by each megawatt of Network Load determined in accordance with Section 34.2 of the Tariff.

The Transmission Provider shall waive charges under this schedule for transmission service to load in the MISO Tariff Zone.

SCHEDULE 2

Reactive Supply and Voltage Control from Generation Sources Service

I. General

In order to maintain transmission voltages on the Transmission Provider's transmission facilities within acceptable limits, generation facilities under the control of the Control Area operator are operated to produce (or absorb) reactive power. Thus, Reactive Supply and Voltage Control from Generation Sources Service must be provided for each transaction on the Transmission Provider's transmission facilities. The amount of Reactive Supply and Voltage Control from Generation Sources Service that must be supplied with respect to the Transmission Customer's transaction will be determined based on the reactive power support necessary to maintain transmission voltages within limits that are generally accepted in the region and consistently adhered to by the Transmission Provider.

Reactive Supply and Voltage Control from Generation Sources Service is to be provided directly by the Transmission Provider. Except as specified below, the Transmission Customer must purchase this service from the Transmission Provider. The charges for such service will be as set forth below:

For the purposes of determining the charge applicable to transactions under this Tariff where the load is located within the MISO Tariff Zone, this service will be provided by the Control Area operator within the MISO Tariff Zone where the load is located and there shall be no charge by the Transmission Provider under this Schedule. Transactions within the Transmission Provider's Control Area will be charged the following rate: \$198.00 (Cdn)/MW-Month.

In instances where the load is located outside the Midwest ISO, the charge for service under this Schedule 2 shall be an average rate. The average rate charged each month shall be calculated based on the weighted average of the Midwest ISO Transmission Owners' and Coordinating Owners' Reactive Supply and Voltage Control from Generator Source rates. The weighting will be based on the Transmission Owners' and Coordinating Owners' peak loads. The weighted average Schedule 2 rate applicable to service to loads located outside the Midwest ISO shall be recalculated once each year, on June 1, based on the previous year's peak load data and the Transmission Owners' Schedule 2 rates on file with the Commission and any Coordinating Owners' Schedule 2 rates.

SCHEDULE 3

Regulation and Frequency Response Service

Regulation and Frequency Response Service is necessary to provide for the continuous balancing of resources (generation and interchange) with load and for maintaining scheduled Interconnection frequency at sixty cycles per second (60 Hz). Regulation and Frequency Response Service is accomplished by committing on-line generation whose output is raised or lowered (predominantly through the use of automatic generating control equipment) as necessary to follow the moment-by-moment changes in load. The obligation to maintain this balance between resources and load lies with the Transmission Provider. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Regulation and Frequency Response Service obligation. The amount of and charges for Regulation and Frequency Response Service are set forth below:

Amount: The Transmission Customer shall be required to purchase an amount of reserved capacity equal to 1.48% of the Transmission Customer's reserved capacity for Point-to-Point Transmission Service or 1.48% of the Network Customer's Network Load responsibility for Network Integration Transmission Service.

Rate: \$66.20 (Cdn)/MW-Month

SCHEDULE 4

Energy Imbalance Service

Energy Imbalance Service is provided when a difference occurs between the scheduled and the actual delivery of energy to a load located within a Control Area over a single hour. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Energy Imbalance Service obligation.

The Transmission Provider shall establish a deviation band of +/- 1.5 percent (with a minimum of 2 MW) of the scheduled transaction to be applied hourly to any energy imbalance that occurs as a result of the Transmission Customer's scheduled transaction(s). Parties should attempt to eliminate energy imbalances within the limits of the deviation band within thirty (30) days or within such other reasonable period of time as is generally accepted in the region and consistently adhered to by the Transmission Provider. If an energy imbalance is not corrected within thirty (30) days or a reasonable period of time that is generally accepted in the region and consistently adhered to by the Transmission Provider, the Transmission Customer will compensate the Transmission Provider for such service. Energy imbalances outside the deviation band will be subject to charges to be specified by the Transmission Provider. The charges for Energy Imbalance Service are set forth below.

There shall be no charge for imbalances less than +/- 1.5%. Any imbalance energy within this bandwidth which occurs shall be accounted for in an imbalance energy exchange account and repaid as energy in kind between the Transmission Customer and Transmission Provider at mutually agreed times and payback amounts. Any energy imbalance on-peak or off-peak, that is not repaid in kind by the Transmission Customer within 30 days following the agreed to times and conditions

stated above shall be billed at the greater of 110% of the Transmission Provider's incremental cost at the time of occurrence or the current MAPP filed rate for Emergency Energy Interchange Service. Any energy imbalance, on-peak or off-peak, that is not repaid in kind by the Transmission Provider within 30 days following the agreed to times and conditions stated above shall be billed at 90% of the Transmission Provider's decremental cost.

The rate for hourly energy imbalances greater than +/- 1.5% (Transmission Customer receives at the delivery point(s) more or less than it scheduled) shall be the greater of 110% of the Transmission Provider's incremental cost at the time of occurrence or 90% of the Transmission Provider's decremental cost.

SCHEDULE 5

Operating Reserve - Spinning Reserve Service

Spinning Reserve Service is needed to serve load immediately in the event of a system contingency. Spinning Reserve Service may be provided by generating units that are on-line and loaded at less than maximum output. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Spinning Reserve Service obligation. The amount of and charges for Spinning Reserve Service are set forth below.

Amount: The Transmission Customer shall be required to purchase an amount of reserved capacity equal to 1.33% of the Transmission Customer's reserved capacity for Point-to-Point Transmission Service or 1.33% of the Network Customer's Network Load responsibility for Network Integration Transmission Service.

Rate: \$59.58 (Cdn)/MW-Month

SCHEDULE 6

Operating Reserve - Supplemental Reserve Service

Supplemental Reserve Service is needed to serve load in the event of a system contingency; however, it is not available immediately to serve load but rather within a short period of time. Supplemental Reserve Service may be provided by generating units that are on-line but unloaded, by quick-start generation or by interruptible load. The Transmission Provider must offer this service when the transmission service is used to serve load within its Control Area. The Transmission Customer must either purchase this service from the Transmission Provider or make alternative comparable arrangements to satisfy its Supplemental Reserve Service obligation. The amount of and charges for Supplemental Reserve Service are set forth below.

Amount: The Transmission Customer shall be required to purchase an amount of reserved capacity equal to 2.01% of the Transmission Customer's reserved capacity for Point-to-Point Transmission Service or 2.01% of the Network Customer's Network Load responsibility for Network Integration Transmission Service.

Rate: \$62.05 (Cdn)/MW-Month

SCHEDULE 7

Long-Term Firm and Short-Term Firm Point-to-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider each month for Reserved Capacity at the sum of the applicable charges set forth below in addition to other applicable charges set forth in the Tariff:

A. Transmission Service to Load in Manitoba Hydro Zone

The following charges apply for service to load located within the Manitoba Hydro Zone:

All rates are stated in Canadian (“Cdn”) dollars.

- 1) Annual Rate: \$52,164 (Cdn)/MW of Reserved Capacity.
- 2) Monthly Rate: \$4,347 (Cdn)/MW of Reserved Capacity.
- 3) Weekly Rate: \$1003.16 (Cdn)/MW of Reserved Capacity.
- 4) a) Daily Peak Rate: \$200.63 (Cdn)/MW of Reserved Capacity.
b) Daily Off-Peak Rate: \$142.92 (Cdn)/MW of Reserved Capacity.

Caps: The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any day during such week.

B. Transmission Service to Load in MISO Tariff Zone

The charges under this Schedule shall be waived by the Transmission Provider for Transmission Customers who are MISO members taking service to serve load in the MISO Tariff Zone.

C. Drive-Out and Drive Through Transmission Service

The Transmission Customer shall pay a single system-wide rate for: (1) Firm Point-to-Point Transmission Service where the generation source is located in the Manitoba Hydro Zone or the MISO Tariff Zone and the load is located outside both the Manitoba Hydro Zone and the MISO Tariff Zone (“Drive Out”); and (2) Firm Point-to-Point Transmission Service where the generation source is located outside both the Manitoba Hydro Zone and the MISO Tariff Zone and the load is located outside both the Manitoba Hydro Zone and the MISO Tariff Zone (“Drive-Through”).

The system wide rate shall be calculated in accordance with Attachment O of this Tariff and Attachment O of the Midwest ISO Tariff and shall be posted on the Contractor’s OASIS. The rates will be calculated each June 1 based on the prior full calendar year. The initial rates will be calculated based on a prior full calendar year period. However, if this Tariff becomes effective between January 1 and June 1 of a given year, then the calendar year used in deriving the rates shall be the calendar year preceding the last calendar year prior to the effective date of this Tariff.

D. Discounts

Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS; (2) any customer-initiated requests for discounts (including requests for use by one’s Wholesale Merchant or an affiliate’s use) must occur solely by posting on the

OASIS; and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

E. Credit for Charges During Transmission Loading Relief (TLR) Events

In the event that the Transmission Provider initiates Curtailment of confirmed Point-to-Point Transmission Service on the Transmission System due to a TLR event in accordance with Attachment Q, credit will be given to the Transmission Customer(s) that are actually requested to Curtail their energy schedules associated with the confirmed Point-to-Point Transmission Service. No credits will be given for: (1) TLR events external to the Transmission System; or (2) Non-Firm Secondary Point-to-Point Transmission Service under a Firm Point-to-Point reservation. Under no circumstances shall the amount credited exceed the amount the customer was actually curtailed nor will credit be given for any hours other than those in which the Curtailment was requested.

SCHEDULE 8

Non-Firm Point-to-Point Transmission Service

The Transmission Customer shall compensate the Transmission Provider for Non-Firm Point-to-Point Transmission Service up to the sum of the applicable charges set forth below in addition to other applicable charges set forth in the Tariff:

A. Transmission Service to Load in Manitoba Hydro Zone

The following charges apply for service to load located within the Manitoba Hydro Zone.

All rates are stated in Canadian (“Cdn”) dollars.

- 1) Monthly Rate: 4,347 (Cdn)/MW of Reserved Capacity.
- 2) Weekly Rate: \$1003.16 (Cdn)/MW of Reserved Capacity.
- 3)
 - a) Daily Peak Rate: \$200.63 (Cdn)/MW of Reserved Capacity.
 - b) Daily Off-Peak Rate: \$142.92 (Cdn)/MW of Reserved Capacity.
- 4)
 - a) Hourly Peak Rate: \$12.54 (Cdn)/MWh of Reserved Capacity.
 - b) Hourly Off-Peak Rate: \$5.95 (Cdn)/MWh of Reserved Capacity.

Caps: The total demand charge in any week, pursuant to a reservation for Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any day during such week. The total demand charge in any day, pursuant to a reservation for Hourly delivery, shall not exceed the applicable rate specified in section (3) above times the highest amount in kilowatts of Reserved Capacity in any hour during such day. In addition, the total demand charge in any week, pursuant to a reservation for Hourly or Daily delivery, shall not exceed the rate specified in section (2) above times the highest amount in kilowatts of Reserved Capacity in any hour during such week.

B. Transmission Service to Load in MISO Tariff Zone

The charges under this Schedule shall be waived by the Transmission Provider for Transmission Customers who are MISO members for service to serve load in the MISO Tariff Zone.

C. Drive-Out and Drive Through Transmission Service

The Transmission Customer shall pay a single system-wide rate for: (1) Non-Firm Point-to-Point Transmission Service where the generation source is located in the Manitoba Hydro Zone or the MISO Tariff Zone and the load is located outside both the Manitoba Hydro Zone and the MISO Tariff Zone (“Drive Out”); and (2) Non-Firm Point-to-Point Transmission Service where the generation source is located outside both the Manitoba Hydro Zone and the MISO Tariff Zone and the load is located outside both the Manitoba Hydro Zone and the MISO Tariff Zone (“Drive-Through”).

The system wide rate shall be calculated in accordance with Attachment O of this Tariff and Attachment O of the Midwest ISO Tariff and shall be posted on the Contractor’s OASIS. The rates will be calculated each June 1 based on the prior full calendar year. The initial rates will be calculated based on a prior full calendar year period. However, if this Tariff becomes effective between January 1 and June 1 of a given year, then the calendar year used in deriving the rates shall be the calendar year preceding the last calendar year prior to the effective date of this Tariff.

D. Discounts:

Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS; (2) any customer-initiated requests for discounts (including requests

for use by one's Wholesale Merchant or an affiliate's use) must occur solely by posting on the OASIS; and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path from point(s) of receipt to point(s) of delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same point(s) of delivery on the Transmission System.

E. Credit for Charges During Transmission Loading Relief (TLR) Events

In the event that the Transmission Provider initiates Curtailment of confirmed Point-to-Point Transmission Service on the Transmission System due to a TLR event in accordance with Attachment Q, credit will be given to the Transmission Customer(s) that are actually requested to Curtail their energy schedules associated with the confirmed Point-to-Point Transmission Service. No credits will be given for: (1) TLR events external to the Transmission System; or (2) Non-Firm Secondary Point-to-Point Transmission Service under a Firm Point-to-Point reservation. Under no circumstances shall the amount credited exceed the amount the customer was actually curtailed nor will credit be given for any hours other than those in which the Curtailment was requested.

SCHEDULE 9

Real Power Loss Factors

All point-to-point transactions will incur real power losses of 2.333% on the energy delivered to the Point of Receipt.

All network transactions will incur real power losses of 2.333% on the energy delivered to the network, measured at all delivery points.

The Transmission Provider may replace these rates by specific rates, which may vary for different transmission paths and different time periods. The new rates are posted on the Transmission Provider's OASIS page.

SCHEDULE 10
Cost Recovery Adder

I. GENERAL

The Contractor shall recover its costs pursuant to the terms of this Schedule 10 from Point-to-Point Transmission Service Customers under this Tariff. Part II of this Schedule 10 presents the cost recovery mechanism and charges applicable to all Point-to-Point Transmission Customers.

II. COST RECOVERY ADDER

Determination of Monthly Charge

The costs associated with the Contractor's operations exclusive of those costs recovered pursuant to Schedules 1, 16 or 17 of the MISO Tariff and Schedule 1 of this Tariff shall be recovered through Schedule 10 charges. The Contractor's costs to be recovered under this Schedule 10 shall include the Contractor's deferred pre-operating costs; the costs associated with building and operating the Security Center, including capital costs and operating expenses; and costs associated with administering the MISO Tariff and this Tariff. For capital costs, the contractor shall not recover a rate of return on equity, but instead will recover its actual costs of financing any such capital costs.

During the Transition Period, the Cost Recovery Adder shall be capped at 15 cents (U.S.)/MWh. That portion of the Contractor's monthly capital and operating costs in excess of the 15 cents (U.S.)/MWh cap shall be added to the Contractor's pre-operating costs and the sum shall collectively be known as the "Deferred Costs". The accumulated amount of such Deferred Costs shall be recovered under one of the following two cost recovery methods: (1) during the Transition Period, accumulated Deferred Costs may be recovered in any month that the Cost Recovery Adder

for that month, based on budgeted costs, is less than 15 cents (U.S.)/MWh through an increase in the charges under this Schedule, subject to the overall Cost Recovery Adder cap of 15 cents/MWh during the Transition Period; or (2) beginning on the first day after the Transition Period, accumulated Deferred Costs will be amortized monthly over five years and recovered under this Schedule 10 (the “Post-Transition Period Deferred Cost Recovery Adder”). Included in the definition of Deferred Costs shall be the costs associated with financing the Deferred Costs.

A. Rates and Billing Units/Determinants

Each month, the Contractor shall determine two rates, a “Reserved Capacity Rate” and an “Energy Rate” for application under this section. The two rates are necessary because each will be multiplied by a different type of billing determinant. The Reserved Capacity Rate will be multiplied by billing units of Reserved Capacity, and the Energy Rate will be multiplied by billing units of MWhs of scheduled energy.

The methodology employed by the Contractor for determining the billing units shall move towards increasing the use of MWhs of scheduled energy as described in the remainder of this paragraph. The general principle shall be that, when load grows such that the Contractor can revise the billing units to include a portion of them in a MWhs of scheduled energy form without creating additional cost deferrals, then it shall do so. Each quarter, the Contractor shall analyze increases in the load paying the Schedule 10 charge and determine whether the billing units can be changed to reflect greater use of MWhs of scheduled energy consistent with the overriding principle above. The Contractor shall also perform this same analysis whenever any new transmission owner or group of transmission owners joins by executing the Agreement of Transmission Facilities Owners to Organize the Midwest Independent Transmission System Operator, Inc., a Delaware Non-Stock Corporation (“Midwest ISO Agreement”), as it may be amended from time to time. If the billings units can be revised such that on an annual basis at least an additional ten percent of the billing units to be used can be based on MWhs of scheduled energy without creating additional cost deferrals,

then the Contractor shall revise the billing units beginning on the first day of the next billing period that the collective load to be billed can accommodate the planned change in billing determinants.

The Contractor shall determine the dollar target for recovery under the Cost Recovery Adder for each month based on the Contractor's budgeted costs to be recovered under this Schedule 10 for that month and a true-up amount from the prior month (the "Targeted Monthly Recovery Amount"). The true-up amount is the difference between the Contractor's actual costs to be recovered under this Schedule 10 for the prior month and the actual amount of Schedule 10 revenue received for that prior month. Consistent with the principles in the preceding paragraph, the Contractor shall separate the Targeted Monthly Recovery Amount into two components – one for recovery through the Energy Rate and one for the recovery through the Reserved Capacity Rate. The methodology for determining these two rates is as follows:

$$ER_t = X_t\% \times TMRA_t / FE_t); \text{ and}$$

$$CR_t = [(1 - X_t\%) \times TMRA_t] / (FMET_t) \text{ where:}$$

t = effective month

ER = Energy Rate

CR = Reserved Capacity Rate

X% = The percent of the Targeted Monthly Recovery Amount to be recovered using the Energy Rate as established by the Contractor in accordance with this Part II, Section A (as of March 1, 2003, X is equal to 0%)

TMRA = Targeted Monthly Recovery Amount as defined in this Part II, Section A,

FSE = Contractor's Forecast of Scheduled Energy for Transmission Service,

FMET = The Transmission Provider's Forecast of Maximum Energy Transfer for the billing month in MWhs defined as the Reserved Capacity for all Point-To-Point reservations multiplied by the duration of each reservation within the month.

The Contractor will bill the Transmission Customers for their respective shares of the costs. The

foregoing provisions in this Part II, Section A shall constitute a formula rate, and changes to the relative percentages of the Targeted Monthly Recovery Amount to be recovered under the two components will not require a filing. The Contractor shall notify its Transmission Customers in advance of invoicing any change in the relative percentages.

The maximum sum of the Energy Rate and the Reserved Capacity Rate for the Cost Recovery Adder during the Transition Period is 15 cents/MWh.

Each monthly charge shall be calculated based on budgeted costs and estimated MWhs of Transmission Service, which will be trued up in the following month's calculation to reflect actual costs and actual MWhs of Transmission Service.

B. Charges

The Schedule 10 charges for Transmission Customers taking Point-to-Point Transmission Service under Part III of the Tariff shall be calculated as follows:

$$PtP_t = (ER_t \times ES_t) + (CR_t \times RC_t \times HR_t); \text{ where;}$$

t = Effective month

PtP = An individual Transmission Customer's Schedule 10 charges associated with Point-to-Point Transmission Service

ER = Energy Rate established by the Contractor in accordance with Part II, Section A of this Schedule 10

CR = Reserved Capacity Rate established by the Contractor in accordance with Part II, Section A of this Schedule 10

ES = Actual MWhs of scheduled energy for Point-to-Point Transmission Service

RC = Actual Reserved Capacity of Point-to-Point Transmission Service multiplied by the duration of the reservation within the month.

HR = the duration, in hours, of the reservation within the month.

The Transmission Provider shall waive charges under this Schedule for transmission service to serve load in the MISO Tariff Zone. Confirmed Point-to-Point Transmission Service reservations made by a Transmission Customer shall be exempt from Schedule 10 charges if such reservations sink in the Manitoba Hydro Zone.

Schedule 11

Reserved

Schedule 12

Reserved

Schedule 13

Reserved

Schedule 14

Regional Through and Out Rate

Each Transmission Customer taking Drive-Out Transmission Service or Drive-Through Transmission Service using the Transmission Provider's Transmission System shall compensate the Transmission Provider for a Regional Through and Out Rate ("RTOR") charge, which is in addition to the charges in Schedules 7 and 8 and any other applicable charges in the Tariff.

The RTOR charge is as follows:

Annual	\$9360.00 (U.S.) MW/Year
Monthly	\$780.00 (U.S.) MW/Month
Weekly	\$180.00 (U.S.) MW/Week
On-Peak Daily	\$36.00 (U.S.) MW/Day
On-Peak Hourly	\$2.25 (U.S.) MWH
Off-Peak Daily	\$26.00 (U.S.) MW/Day
Off-Peak Hourly	\$1.071 (U.S.) MWH

Discounts: Three principal requirements apply to discounts for transmission service as follows: (1) any offer of a discount made by the Transmission Provider must be announced to all Eligible Customers solely by posting on the OASIS, (2) any customer-initiated requests for discounts (including requests for use by one's wholesale merchant or an affiliate's use) must occur solely by posted on the OASIS, and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount agreed upon for service on a path, from Point(s) of Receipt to Point(s) of Delivery, the Transmission Provider must offer the same discounted transmission service rate for the same time period to all Eligible Customers on all unconstrained transmission paths that go to the same Point(s) of Delivery on the Transmission System.

Schedule 15

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Schedule 16

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Schedule 17

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Schedule 18

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Schedule 19

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Schedule 20

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Schedule 21

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Schedule 22

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ATTACHMENT A

Form of Service Agreement for Long-Term Firm Point-to-Point Transmission Service

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between Manitoba Hydro (the 'Transmission Provider'), and _____ (the 'Transmission Customer').
- 2.0 The Transmission Customer has been determined by the Contractor to have a Completed Application for Long-Term Firm Point-to-Point Transmission Service and an approved Application for Eligible Customer Status under the Tariff.
- 3.0 The Transmission Customer has provided to the Contractor an Application deposit in accordance with the provisions of Section 17.3 of the Tariff, if required.
- 4.0 Service under this agreement shall commence on the later of: (1) the requested service commencement date; or (2) the date on which construction of any Direct Assignment Facilities and/or Network Upgrades are completed. Service under this agreement shall terminate on such date as set forth in the attached Specifications for Long-Term Firm Point-to-Point Transmission Service incorporated herein.
- 5.0 The Transmission Provider agrees to provide and the Transmission Customer agrees to take and pay for Firm Point-to-Point Transmission Service in accordance with the provisions of Part II of the Tariff and this Service Agreement.
- 6.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Transmission Customer:

- 7.0 No failure by the Transmission Provider or the Transmission Customer at any time or from time to time to enforce or require a strict observance of any of the provisions of this Service Agreement shall constitute a waiver of the provision or affect or impair such provisions or the right of the Transmission Provider or the Transmission Customer at any time to enforce such provisions or to avail itself of any remedy it may have.
- 8.0 This Service Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors and any Assignees of the Transmission Customer authorized pursuant to s.23.1 of the Tariff.
- 9.0 The Tariff and the attached Specifications for Long-Term Firm Point-to-Point Transmission Service are incorporated herein and made a part hereof.
- 10.0 Applicable taxes shall be added to all charges set forth in the Tariff.
- 11.0 The Transmission Customer shall not use transmission service provided pursuant to this Agreement for the purpose of exporting electricity from Canada to the United States of America without first providing the Transmission Provider with a copy of the export permit or license granted by the National Energy Board of Canada authorizing the proposed export of electricity. The Transmission Customer shall provide the Transmission Provider with the appropriate National Energy Board permit or license number at the time of submitting schedules for exports pursuant to this Agreement.

12.0 At the termination of this Service Agreement MW of transmission capacity will be available for the exercising of reservation priority rights pursuant to Section 2.2 of the Tariff.

13.0 a) THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE, WHETHER BASED ON CONTRACT, INDEMNIFICATION, WARRANTY, TORT, STRICT LIABILITY OR OTHERWISE TO ANY TRANSMISSION CUSTOMER OR ANY THIRD PARTY FOR ANY DAMAGES WHATSOEVER, INCLUDING WITHOUT LIMITATION, DIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECIAL, EXEMPLARY OR INDIRECT DAMAGES ARISING OR RESULTING FROM ANY ACT OR OMISSION IN ANY WAY ASSOCIATED WITH SERVICE PROVIDED UNDER THIS TARIFF, INCLUDING BUT NOT LIMITED TO ANY ACT OR OMISSION THAT RESULTS IN AN INTERRUPTION, DEFICIENCY OR IMPERFECTION OF SERVICE, EXCEPT TO THE EXTENT THAT THE TRANSMISSION PROVIDER IS FOUND LIABLE FOR GROSS NEGLIGENCE OR INTENTIONAL MISCONDUCT, IN WHICH CASE THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECIAL, EXEMPLARY OR INDIRECT DAMAGES.

b) THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT OF SERVICES PROVIDED UNDER THIS TARIFF, INCLUDING BUT NOT LIMITED TO, ANY ACT OR OMISSION THAT RESULTS IN AN INTERRUPTION, DEFICIENCY OR IMPERFECTION OF SERVICE OCCURRING AS A RESULT OF CONDITIONS OR CIRCUMSTANCES RESULTING FROM ELECTRIC SYSTEM DESIGN COMMON TO THE NORTH AMERICAN ELECTRIC UTILITY INDUSTRY OR ELECTRIC SYSTEM OPERATION PRACTICES OR CONDITIONS COMMON TO THE NORTH AMERICAN ELECTRIC UTILITY INDUSTRY.

8.0 Service under this Agreement may be subject to some combination of the charges detailed below. (The appropriate charges for individual transactions will be determined in accordance with the terms and conditions of the Tariff).

8.1 Transmission Charge:

8.2 System Impact and/or Facilities Study Charge(s):

8.3 Redispatch Charge:

8.4 Network Upgrade Charge:

8.5 Direct Assignment Facilities Charge:

8.6 Ancillary Services Charges:

ATTACHMENT B

Umbrella Agreement for Short-Term Firm or Non-Firm Point-to-Point Transmission Service

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between Manitoba Hydro (the "Transmission Provider"), and _____ (the "Transmission Customer").
- 2.0 The Transmission Customer has been determined by the Contractor to be a Transmission Customer under Part II of the Tariff and has submitted a Completed Application for Short-Term Firm or Non-Firm Point-to-Point Transmission Service in accordance with the Tariff.
- 3.0 This Agreement shall come into force upon execution by both Parties. During the term of this Service Agreement, the Transmission Customer shall be entitled to arrange Short-Term Firm or Non-Firm Point-to-Point Transmission Service over the OASIS used by the Transmission Provider provided that such transactions do not exceed \$_____ in any calendar month. The Transmission Provider reserves the right to consent to larger monthly transactions on a case-by-case basis.
- 4.0 Identify any affiliates that own, control or operate any transmission facilities. If there are none, include a sworn statement pursuant to Section 6.0 of the Tariff.
- 5.0 This Service Agreement shall remain in effect for a period of three years from the date of execution.

6.0 Conditions Precedent

- 6.1 Unless a System Impact Study is required, service under this Agreement shall be provided by the Transmission Provider following: 1) the submission, by entry on the OASIS, of a Completed Application for Short-Term Firm or Non-Firm Point-to-Point Transmission Service by an authorized representative of the Transmission Customer; 2) the Contractor's signification on the OASIS that the Completed Application has been accepted; 3) confirmation by the Transmission Customer on the OASIS within the time frames specified herein, unless the Transmission Customer designates that the transaction is preconfirmed.
- 6.2 Where a System Impact Study must be performed for Short-Term Firm Point-to-Point Transmission Service and the Transmission Customer executes a System Impact Study Agreement, Transmission Service shall be provided by the Transmission Provider if, after receiving a System Impact Study which indicates that the request can be accommodated through redispatch and the costs of redispatch, the Transmission Customer provides written confirmation to the Transmission Provider that the Transmission Customer is willing to pay for any redispatch costs associated with the requested service in accordance with section 27 of the Tariff. Where redispatch and/or new facilities are not required, Transmission Service shall be provided upon confirmation by the Transmission Customer on the OASIS of the Transmission Provider's acceptance of the request, within the time frames specified herein, unless the Transmission Customer designates that the transaction is pre-confirmed.
- 6.3 Where a Facilities Study must be performed for Short Term Firm Point-to-Point Transmission Service and the Transmission Customer executes a Facilities Study Agreement, Transmission Service shall be provided by the Transmission Provider if after receiving the Facilities Study, the Transmission Customer provides written confirmation to the Transmission Provider that the Transmission Customer is willing to pay for the costs of any required Network Upgrades and/or Direct Assignment Facilities and provides the necessary security in accordance with sections 19.4 and 27 of the Tariff.

- 7.0 The Transmission Customer agrees to supply information the Transmission Provider or Contractor deems reasonably necessary in accordance with Good Utility Practice in order for it to provide the requested service.
- 8.0 The Transmission Provider agrees to provide and the Transmission Customer agrees to take and pay for Short-Term Firm or Non-Firm Point-to-Point Transmission Service in accordance with the provisions of Part II of the Tariff and this Service Agreement.
- 9.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Manitoba Hydro-Electric Board
820 Taylor Avenue
or P.O. Box 815
WINNIPEG, Manitoba, CANADA
R3C 2P4
Attn: Manager, Transmission Services Department
Telephone: 204-487-5302
Facsimile: 204-487-5368

Transmission Customer:

- 10.0 No failure by the Transmission Provider or the Transmission Customer at any time or from time to time to enforce or require a strict observance of any of the provisions of this Service Agreement shall constitute a waiver of the provision or affect or impair such provisions or the right of the Transmission Provider or the Transmission Customer at any time to enforce such provisions or to avail itself of any remedy it may have.
- 11.0 This Agreement shall inure to the benefit of and be binding upon the Parties and their

respective successors and any Assignees of the Transmission Customer authorized pursuant to s.23.1 of the Tariff.

- 12.0 The Tariff is incorporated herein and made a part hereof.
- 13.0 The Transmission Provider shall archive records of digitally transmitted information submitted pursuant to this Service Agreement. Such records shall be treated as accurate records of the transactions hereunder for the purposes of admission in to evidence in any dispute resolution proceedings conducted pursuant to this Service Agreement.
- 14.0 Applicable taxes shall be added to all charges set forth in the Tariff.
- 15.0 The Transmission Customer shall not use transmission service provided pursuant to this Agreement for the purpose of exporting electricity from Canada to the United States without first providing the Transmission Provider with a copy of the export permit or license granted by the National Energy Board of Canada authorizing the proposed export of electricity. The Transmission Customer shall provide the Transmission Provider with the appropriate National Energy Board permit or license number at the time of submitting schedules for exports pursuant to this Agreement.
- 16.0 a) **THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE, WHETHER BASED ON CONTRACT, INDEMNIFICATION, WARRANTY, TORT, STRICT LIABILITY OR OTHERWISE TO ANY TRANSMISSION CUSTOMER OR ANY THIRD PARTY FOR ANY DAMAGES WHATSOEVER, INCLUDING WITHOUT LIMITATION, DIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECIAL, EXEMPLARY OR INDIRECT DAMAGES ARISING OR RESULTING FROM ANY ACT OR OMISSION IN ANY WAY ASSOCIATED WITH SERVICE PROVIDED UNDER THIS TARIFF, INCLUDING BUT NOT LIMITED TO ANY ACT OR OMISSION THAT RESULTS IN AN INTERRUPTION, DEFICIENCY OR IMPERFECTION OF SERVICE, EXCEPT TO THE EXTENT THAT THE**

TRANSMISSION PROVIDER IS FOUND LIABLE FOR GROSS NEGLIGENCE OR INTENTIONAL MISCONDUCT, IN WHICH CASE THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECIAL, EXEMPLARY OR INDIRECT DAMAGES.

b) THE TRANSMISSION PROVIDER SHALL NOT BE LIABLE FOR DAMAGES ARISING OUT OF SERVICES PROVIDED UNDER THIS TARIFF, INCLUDING BUT NOT LIMITED TO, ANY ACT OR OMISSION THAT RESULTS IN AN INTERRUPTION, DEFICIENCY OR IMPERFECTION OF SERVICE OCCURRING AS A RESULT OF CONDITIONS OR CIRCUMSTANCES RESULTING FROM ELECTRIC SYSTEM DESIGN COMMON TO THE NORTH AMERICAN ELECTRIC UTILITY INDUSTRY OR ELECTRIC SYSTEM OPERATION PRACTICES OR CONDITIONS COMMON TO THE NORTH AMERICAN ELECTRIC UTILITY INDUSTRY.

IN WITNESS WHEREOF, the Parties have caused this Service Agreement to be executed by their respective authorized officials.

Transmission Provider:

By:

Name

Title

Date

Transmission Customer:

By: _____ Name

ATTACHMENT C

Methodology to Assess Available Transmission Capability

In response to a valid Application for Short-Term transmission service under this Tariff, studies shall be performed pursuant to this Attachment C to assess whether sufficient transmission capability is available to accommodate the service requested in the Application. The assessment of Available Transmission Capability (“ATC”) to sustain Long-Term Firm Point-to-Point Transmission Service shall be conducted pursuant to the Methodology for Completing a System Impact Study, Attachment D to this Tariff.

These studies shall be made using a flow-based approach to determine the capability of the Manitoba Hydro-Midwest ISO interconnected network to accommodate the request for transmission service. A flow-based approach determines ATC of constrained facilities. Constrained facility ATC represents capacity remaining on constrained facilities after reduction for base flows, previously approved transmission service requests and a margin (if appropriate). Requests for transmission service are made on a point-to-point basis from source(s) to sink(s). However, ATC has been determined on a constrained facility basis. In order to evaluate a transmission service request, response factors are used to decrement ATC of constrained facilities. If ATC of all constrained facilities is positive after decrementing, the interconnected network has capability to accommodate the request.

The transmission capability studies analyze the impact of the proposed transmission request on the thermal capability, voltage profile, and stability of the Transmission System(s) in accordance with the reliability and transmission planning criteria of the North American Electric Reliability Council (“NERC”) (or its successor organization) and the NERC Regional Reliability Organization (“RRO”) governing the constrained facility. The ATC for firm transactions shall be the transmission capability (determined under the appropriate reliability criteria) remaining after providing for prior contractual commitments (including any transmission service contract(s) previously executed and pending Applications for Firm Point-to-Point Transmission Service) and planned emergency generation import requirements of network customers. The ATC for firm transactions shall also account for power flows reasonably expected to occur on the Transmission System that cannot be controlled by the Transmission Provider (e.g. parallel path flows and inertial response power flows due to the tripping of a generator on the interconnected system). The analysis will also consider the

ability of the network to withstand, under transfer conditions, a severe but credible disturbance without experiencing cascading outages, voltage collapse or widespread blackouts.

In conducting studies, the Transmission Provider will adhere to Good Utility Practice, including NERC (or its successor organization) and NERC RRO reliability and transmission planning criteria and the OASIS Automation processes described as follows:

1. ATC

The Contractor has developed an automated process to determine ATC and to respond to transmission service requests. This process is called OASIS Automation. OASIS Automation automatically processes requests for transmission service using a flow-based approach to determine ATC on constrained facilities. OASIS Automation is integrated with the Midwest ISO energy management system and uses power flow models developed from the real-time system.

OASIS Automation computes constrained facility hourly available flowgate capability ("AFC") for the first 7 days and daily AFC for days 8 through 31. Off-line planning models are used to compute constrained facility monthly AFC for months 2 through 36. The Contractor performs studies to determine AFC during three different time periods.

The first time period is the operating horizon, which includes those hours when the Midwest ISO has schedules to indicate the scheduled use of transmission reservations. The operating horizon includes all hours of the current day and, after 3:00 p.m., all hours of the next day. Once an hour, an hourly resynchronization occurs for the operating horizon. Resynchronization is the process of building power flow models that will be used to determine AFC for each of the constrained facilities and to determine response factors a transaction has on constrained facilities. Only response factors above a threshold are considered to have a significant impact on constrained facilities. This means hourly AFCs are determined for each hour of the remaining hours in the current day and, after 3:00 p.m., all hours of the next day using power flow models developed from the real-time system. The updated AFCs are posted on OASIS and are used along with response factors to sell transmission service during the hour.

The second time period is the planning horizon, which includes those hours and days when schedules are not available for use in power flow models. In this case, reservations are used in

place of schedules. This second time period extends from day 2 through day 31. Once next day schedules have been received by 3:00 p.m., the day prior, the day 2 time period is moved from the planning horizon to the operating horizon. There are two resynchronizations that occur during the planning horizon. At midnight, a daily resynchronization occurs for the planning horizon. This means hourly AFC will be determined for days 2 through 7, and daily AFC will be determined for days 8 through 31 using power flow models developed from the real-time system. Every 6 hours (other than at midnight), another resynchronization occurs for days 2 through 8 (an hourly resynchronization occurs for days 3 through 8 after 3:00 p.m. of the current day) of the planning horizon. This means hourly AFC will be determined for days 2 through 7 using power flow models developed from the real-time system.

The third time period is the study horizon, which includes months 2 through 36. The power flow models used in the study horizon are from off-line planning models that are representative of monthly peak-hour conditions. The power flow models are developed using reservations from OASIS, monthly peak load forecasts from Control Areas, generation and transmission outages from maintenance schedules and generation dispatch information from generators. Resynchronization of the study horizon is done periodically as needed but will occur no more frequently than once a day.

Resynchronization produces constrained facility AFCs that reflect system conditions and transmission reservations that have been scheduled (or if prior to the scheduling deadline, all transmission reservations are included, even those that have not been scheduled) and produces transaction response factors for all constrained facilities with a significant impact. After resynchronization starts, OASIS Automation will continue to use the constrained facility AFC at the start of the resynchronization to process requests for transmission service. This means OASIS Automation will continue to act on requests even when resynchronization is underway.

If requests were processed during resynchronization and they resulted in adjusting AFC in the operating and planning horizons, the AFC from the resynchronization will be “caught-up” to reflect AFC adjustments once resynchronization is complete. This catch-up is performed by decrementing AFC using response factors of the 15 most limiting constrained facilities for a source/sink pair.

During the period between resynchronization, AFC posted on the OASIS will be continuously updated as requests are processed and AFC on the 15 most limiting constrained facilities are adjusted. At the time of resynchronization, the effects of all previously processed requests are included in the resynchronization. This means newly approved transmission service requests are included as part of the power flow base model, and the effects of those newly approved requests are not dependent on the use of response factors.

During the period between resynchronization in both the operating horizon and the planning horizon, events will occur that are not reflected in the latest AFCs posted on the OASIS (i.e. a change in the system conditions) or a transmission service request will be processed and its effects are limited to the 15 most limiting constrained facilities using response factors that assume a linear relationship between ATC and the request. Because the operating horizon and the planning horizon follow a fixed resynchronization schedule, the Tariff Administrator (“TA”) can initiate a manual resynchronization any time the TA determines a change has occurred and the AFC may no longer be valid. Once a manual resynchronization has started, the time resynchronization will not start while the manual resynchronization is underway.

In order to produce credible constrained facility AFCs, the Contractor must consider the effects of system conditions and transmission service that has been sold by other transmission providers. The Contractor has committed to honouring the constrained facility limits of other transmission providers to the extent these transmission providers honour their own constrained facilities. The Contractor has also agreed to exchange near-term planning information, reservations and schedules with other transmission providers in order that their power flow models contain details for both their system and the Contractor’s. This will allow the Contractor and other transmission providers to consider the effects of parallel flows as they sell transmission service. The Contractor and the other transmission providers have also agreed to periodically exchange constrained facility AFC. The Transmission Provider will have the most detail for its own system. Consequently, it is in the best position to calculate its constrained facility AFC and to exchange this information for use by other transmission providers. The other transmission providers use the exchanged constrained facility AFC along with its own calculated AFC to sell transmission service. This guarantees all transmission providers are using the same constrained facility AFC as they sell transmission service (the transmission provider with responsibility for a constrained facility will always calculate the AFC).

The flow-based approach being used to process requests under this Tariff requires computing constrained facility AFC for the planning horizon and the operating horizon. Constrained facility AFC represents remaining capacity available on a constrained facility. Transmission Customers, however, are interested in ATC that is available between Points of Receipt (“POR”) and Points of Delivery (“POD”) and not necessarily the capacity that is available on a constrained facility. To meet the needs of customers, the Contractor will provide a Scenario Analyzer as part of OASIS Automation, which allows Transmission Customers to enter transmission service requests for analysis of available capacity without submitting requests on OASIS. The Scenario Analyzer evaluates availability of capacity on certain designated constrained facilities for the POR/POD pair but does not decrement AFC since no request has been submitted.

2.

OASIS Automation computes firm AFC for the planning horizon only. Firm AFC is the capacity that remains on the constrained facility after reducing its rating for serving native load, Network Service and firm transactions. Firm AFC will be determined at least once a day during the daily resynchronization. Resynchronization for the planning horizon solves a power flow model that has both firm and non-firm transmission reservations. The flows on constrained facilities should represent base flows that serve native load. After the power flow model has been solved for a time segment, OASIS Automation takes the base flows of constrained facilities and adjusts them to consider the effects of firm reservations in OASIS. Reservations in OASIS have a POR/POD set. The constrained facilities that have a positive response factor that exceeds a threshold level for a POR/POD pair will have their base flow decreased for non-firm reservations to remove the non-firm reservation contribution to constrained facility loading. The certain designated constrained facilities that have a negative response factor for a POR/POD pair will have their base flow increased for firm and non-firm reservations to remove the firm and non-firm reservation contribution to constrained facility loading. The non-firm contribution is removed to totally remove the effects of non-firm reservations on firm AFC. The firm contribution is removed because the Contractor does not consider the effects of counter flows associated with reservations.

After adjusting base flows for the effects of firm and non-firm reservations, OASIS Automation uses the following formula to determine firm AFC:

$$\text{Firm AFC}_{\text{Planning Horizon}} = \text{Rating} - \text{TRM} - \text{CBM} - \text{Base Flow}_{\text{Firm}}$$

3. Non-Firm AFC

OASIS Automation computes non-firm AFC for both the planning horizon and the operating horizon. Non-firm AFC is the capacity that remains on a constrained facility after reducing its rating for serving native load, Network Service, firm transactions and non-firm transactions. Non-firm AFC is computed in the planning horizon using the same power flow solution as used for firm AFC. The certain designated constrained facilities that have a positive response factor for a POR/POD pair will not have their base flow decreased for non-firm reservations. The base flows of constrained facilities with positive response factors reflect increased loading of both firm and non-firm reservations. The certain designated constrained facilities that have a negative response factor for a POR/POD pair will have their base flow increased for firm and non-firm reservation contribution to constrained facility loading. the firm and non-firm contributions are removed because the Midwest ISO does not consider the effects of counter-flows associated with reservations.

After adjusting base flows for the effects of firm and non-firm reservations, OASIS Automation uses the following formula to determine non-firm AFC in the planning horizon:

$$\text{Non-Firm AFC}_{\text{Planning Horizon}} = \text{Rating} - (A * \text{TRM}) - \text{CBM} - \text{Base Flows}_{\text{Non-Firm}}$$

Non-firm AFC is computed differently in the operating horizon than in the planning horizon. The operating horizon consists of the current day 24 hours and after 2 p.m. the next day 24 hours and deals exclusively with schedules. Firm Transmission Service cannot be purchased in the operating horizon (a Transmission Customer cannot request firm Transmission Service today with a begin date of today, and a Transmission Customer cannot request firm Transmission Service after 10:00 a.m. today with a begin date of tomorrow). Since OASIS Automation does not distinguish between firm and non-firm schedules and because there is not a commercial need to compute firm AFC in the operating horizon, a single calculation is made to determine non-firm AFC. This calculation is made by including all schedules in the power flow model, solving it and using the base flows of the constrained facilities.

OASIS Automation uses the following formula to determine non-firm AFC in the operating horizon:

Non-Firm AFC_{Operating Horizon} = Rating – B*TRM) – CBM – Base Flow_{Non-Firm}

ATTACHMENT D

Methodology for Completing a System Impact Study

Upon receipt of a Completed Application, the Contractor will determine whether ATC will be available to accommodate the Transmission Service requested in such Application. The Contractor will apply the criteria and practices described in Attachment C to determine ATC. If sufficient ATC will exist to support the transaction described in the Eligible Customer's Application, as supplemented with necessary details such as the sources and sinks of the power to be scheduled under the request, the Contractor will so inform the Eligible Customer. If the Contractor determines that existing ATC is insufficient to provide the requested service, the Contractor will notify the Eligible Customer. Upon a request by the Eligible Customer, the Transmission Provider will tender a System Impact Study Agreement ("Study Agreement") to the Eligible Customer for a System Impact Study.

Upon receipt of a completed Study Agreement, the Transmission Provider will perform a System Impact Study to determine whether the request for transmission service can be accommodated through construction of Direct Assignment Facilities or Network Upgrades or through redispatch, if available.

If the studies predict that a constraint will occur in the system of a utility other than the Transmission Provider, the Transmission Provider will so inform the Eligible Customer requesting service. The Transmission Provider and Eligible Customer will need to work with the appropriate third parties to determine if the limitation is valid and to determine the facility additions or redispatch that may be required by third parties to support the transfer. The Eligible Customer requesting service shall have the option to reduce the request to a level that can be sustained without experiencing the constraint.

ATTACHMENT D-1

Form Of System Impact Study Agreement

THIS AGREEMENT is made and entered into this ____ day of _____, 20__ by and between _____, [corporate description of Eligible Customer] existing under the laws of _____, sometimes hereinafter referred to as “Eligible Customer,” and Manitoba Hydro, a Crown Corporation incorporated pursuant to The Manitoba Hydro Act, R.S.M. 1987, c.H190. Eligible Customer and Manitoba Hydro each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, Eligible Customer has submitted a Completed Application (the “Application”) for Firm Point-To-Point Transmission Service pursuant to Section 17.2 of the Open Access Transmission Tariff of Manitoba Hydro (as may be supplemented, modified, or replaced, the “Tariff”) or for Network Integration Transmission Service pursuant to Section 29.2 of the Tariff;

WHEREAS, Eligible Customer has received notice from Manitoba Hydro that a System Impact Study is necessary to accommodate the service requested in the Application; and

WHEREAS, Eligible Customer has requested that Manitoba Hydro prepare a System Impact Study to assess the adequacy of the Transmission System and any other affected systems to accommodate the Application.

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein, it is agreed:

ARTICLE 1

DEFINITIONS

The terms used in this Agreement with initial capitalization shall have the meanings specified in the

Tariff.

ARTICLE 2

TERMINATION

- 2.1 Effective Date.** This Agreement shall become effective on the date on which this Agreement is made and entered into by the Parties.
- 2.2 Term.** This Agreement shall become effective as provided in Section 2.1 and shall continue in full force and effect until (i) the Parties agree to mutually terminate this Agreement, (ii) _____ months after the date of this Agreement; or (iii) earlier termination as provided for under this Agreement.
- 2.3 Termination for Breach.** Either Party may terminate this Agreement upon _____ days notice to the other Party of a breach by the other Party of this Agreement provided that such breach remains uncured during such ____ day period and further, provided that such terminating Party complies with any and all applicable laws, rules and regulations relating to such termination.
- 2.4 Liability on Termination.** Eligible Customer shall remain liable to Manitoba Hydro for costs of the System Impact Study already incurred, costs of the System Impact Study that cannot be reasonably avoided and for the costs of terminating the System Impact Study.

ARTICLE 3

STUDY

- 3.1 Study.** Manitoba Hydro shall perform a System Impact Study in accordance with the applicable provisions of the Tariff. Manitoba Hydro shall rely on existing transmission planning studies as provided in Section 19 or 32 of the Tariff. All terms and conditions of the Tariff are incorporated herein by reference.

3.2 Scope. The scope of the System Impact Study shall be as set forth in the Tariff and shall be subject to the data and other information provided in the Application and any additional information, assumptions or procedures set forth in Exhibit A of this Agreement. Eligible Customer shall review the data and information that it has provided to Manitoba Hydro and provide updated data and information upon request of Manitoba Hydro. Manitoba Hydro will advise Eligible Customer of additional information as may be reasonably deemed necessary by Manitoba Hydro to complete the System Impact Study. Such additional information shall be obtained only if required by Good Utility Practice and shall be subject to the consent of Eligible Customer, not to be unreasonably withheld, conditional or delayed.

3.3 Report. The final report of the System Impact Study shall provide the following information:

3.3.1 Any system constraints due to thermal overload, voltage limit violations, or instability or inadequately damped response to system disturbances resulting from the service requested by the Application.

3.3.2 Redispatch Options identified, if any, which would be required to accommodate the Application. The Eligible Customer is responsible for securing any redispatch arrangements identified, in order to accommodate the Application.

3.3.3 A preliminary estimate of the scope of any Direct Assignment Facilities or Network Upgrades required to accommodate the Application.

Together with a copy of the final report, the related work papers shall be made available to the Eligible Customer.

3.4 Coordination. Manitoba Hydro will coordinate the System Impact Study with all affected transmission owner(s) and/or their respective Regional Transmission Organizations. If the required study coordination effort increases the expected study scope, study cost or delays the expected completion date, Manitoba Hydro will inform the Eligible Customer. Eligible Customer acknowledges and agrees that Manitoba Hydro will provide all Confidential Information and/or study data that is reasonably needed by transmission owners participating in the System Impact Study to any affected RTO's, and to other parties as may be required by the Tariff or applicable federal, provincial, or local law, rule or regulation.

3.5 Estimated Time. The estimated time for completion of the System Impact Study is ___days. Manitoba Hydro shall use due diligence to complete the System Impact Study within the estimated time.

3.6 Representative. Eligible Customer shall appoint and make available to Manitoba Hydro a designated and authorized representative through which Manitoba Hydro can coordinate work pertaining to the System Impact Study.

ARTICLE 4

COSTS AND PAYMENT

4.1 Estimated Cost. The estimated cost for performance of the System Impact Study is \$_____. The estimated cost is Manitoba Hydro's good faith estimate of its costs to perform the System Impact Study. The estimated cost does not include _____.

4.2 Reimbursement. Eligible Customer shall reimburse Manitoba Hydro in full for performing the System Impact Study. This reimbursement shall include payment for all actual costs of the System Impact Study. As provided in the Tariff, Eligible Customer shall not be charged for existing transmission planning studies, but will be responsible for charges associated with modifications to the existing transmission planning studies that are reasonable necessary to evaluate the impact of the Application.

4.3 Deposit and Payment. The Eligible Customer shall submit with this Impact Study Agreement a refundable deposit in the amount of \$_____ (the "Deposit"). The Deposit will be applied toward the costs of the System Impact Study to be reimbursed by the Eligible Customer pursuant to Paragraph 4.2 of this Agreement. Manitoba Hydro shall refund to the Eligible Customer any portion of the Deposit that exceeds the amount of the costs to be

reimbursed pursuant to Paragraph 4.2, and shall invoice the Eligible Customer, from time to time, for the amount(s) by which costs to be reimbursed pursuant to Paragraph 4.2 exceed the amount of the Deposit and any prepayments. The Eligible Customer shall pay any such invoice within _____ days of receipt.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

Manitoba Hydro

[Insert name of Eligible Customer]

By: _____

By: _____

Name (typed or printed): _____

Name (typed or printed): _____

Title: _____

Title: _____

EXHIBIT A
to
System Impact Study Agreement

The System Impact Study will be based upon the following information, assumptions and procedures, in addition to the information provided in the Completed Application:

ATTACHMENT D-2

Form of Facilities Study Agreement

THIS AGREEMENT is made and entered into this ____ day of _____, 20__ by and between _____, [corporate description of Eligible Customer] existing under the laws of _____, sometimes hereinafter referred to as “Eligible Customer,” and Manitoba Hydro, a Crown Corporation incorporated pursuant to The Manitoba Hydro Act, R.S.M. 1987, c.H190. Eligible Customer and Manitoba Hydro each may be referred to as a “Party,” or collectively as the “Parties.”

RECITALS

WHEREAS, Eligible Customer has submitted a Completed Application (the “Application”) for Firm Point-To-Point Transmission Service pursuant to Section 17.2 of the Open Access Transmission Tariff for Manitoba Hydro (as may be supplemented, modified, or replaced, the “Tariff”) or for Network Integration Transmission Service pursuant to Section 29.2 of the Tariff;

WHEREAS, the System Impact Study by Manitoba Hydro indicated that additions or upgrades to the Transmission System are needed to supply the service requested in the Application; and

WHEREAS, Eligible Customer has requested that Manitoba Hydro prepare a Facilities Study to review alternatives and detail the facilities identified in the System Impact Study as needed to reliably satisfy the Eligible Customer’s request for service;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein, it is agreed:

ARTICLE 1

DEFINITIONS

The terms used in this Agreement with initial capitalization shall have the meanings specified in the

Tariff.

ARTICLE 2

TERM AND TERMINATION

- 2.1 Effective Date.** This Agreement shall become effective on the date on which this Agreement is made and entered into by the Parties.
- 2.2 Term.** This Agreement shall become effective as provided in Section 2.1 and shall continue in full force and effect until (i) the Parties agree to mutually terminate this Agreement, (ii) _____ months after the date of this Agreement; or (iii) earlier termination as provided for under this Agreement.
- 2.3 Termination for Breach.** Either Party may terminate this Agreement upon _____ days notice to the other Party of a breach by the other Party of this Agreement provided that such breach remains uncured during such ____ day period and further, provided that such terminating Party complies with any and all applicable laws, rules and regulations relating to such termination.
- 2.4 Liability on Termination.** Eligible Customer shall remain liable to Manitoba Hydro for costs of the Facilities Study already incurred, costs of the Facilities Study that cannot be reasonably avoided and for the costs of terminating the Facilities Study.

ARTICLE 3

STUDY

- 3.1 Study.** Manitoba Hydro shall perform a Facilities Study in accordance with the applicable provisions of the Tariff. All terms and conditions of the Tariff are incorporated herein by reference.
- 3.2 Scope.** The scope of the Facilities Study shall be as set forth in the Tariff and shall be subject to the data and other information provided in the Application. The data and other information provided in connection with the System Impact Study Agreement, any additional information, assumptions or procedures set forth in Exhibit A of this Agreement, the results of the System Impact Study attached as Exhibit B of this Agreement, and any additional information provided pursuant to this Agreement. Eligible Customer shall review the data and information that it has provided to Manitoba Hydro and provide updated data and information upon request of Manitoba Hydro. Manitoba Hydro will advise Eligible Customer of additional information as may be reasonably deemed necessary by Manitoba Hydro to complete the Facilities Study. Such additional information shall be obtained only if required by Good Utility Practice and shall be subject to the consent of Eligible Customer, not to be unreasonably withheld, conditional or delayed.
- 3.3 Coordination.** Manitoba Hydro will coordinate the Facilities Study with all affected transmission owner(s) and/or their respective Regional Transmission Organizations. If the required study coordination effort increases the expected study scope, study cost or delays the expected completion date, Manitoba Hydro will inform the Eligible Customer. Eligible Customer acknowledges and agrees that Manitoba Hydro will provide all Confidential Information and/or study data that is reasonably needed by transmission owners participating in the Facilities Study to any affected RTO's, and to other parties as may be required by the Tariff or applicable federal, provincial or local law, rule or regulation.
- 3.4 Estimated Time.** The estimated time for completion of the Facilities Study is ___days. Manitoba Hydro shall use due diligence to complete the Facilities Study within the estimated time.

- 3.5 Representative.** Eligible Customer shall appoint and make available to Manitoba Hydro a designated and authorized representative through which Manitoba Hydro can coordinate work pertaining to the Facilities Study.

ARTICLE 4

COSTS AND PAYMENTS

- 4.1 Estimated Cost.** The estimated cost for performance of the Facilities Study is \$_____. The estimated cost is Manitoba Hydro's good faith estimate of its costs to perform the Facilities Study. The estimated cost does not include _____ . Eligible Customer acknowledges that the estimate may be revised as provided in Section 19.5 of the Tariff. Eligible Customer shall reimburse Manitoba Hydro in full for performing the Facilities Study. These reimbursements shall include payment for all actual costs of the Facilities Study.
- 4.2 Deposit and Payment.** The Eligible Customer shall submit with this Facilities Study Agreement a refundable deposit in the amount of \$_____ (the "Deposit"). The Deposit will be applied toward the costs of the Facilities Study to be reimbursed by the Eligible Customer pursuant to Paragraph 4.1 of this Agreement. Manitoba Hydro shall refund to the Eligible Customer any portion of the Deposit that exceeds the amount of the costs to be reimbursed pursuant to Paragraph 4.1, and shall invoice the Eligible Customer, from time to time, for the amount(s) by which costs to be reimbursed pursuant to Paragraph 4.1 exceed the amount of the Deposit and any prepayments. The Eligible Customer shall pay any such invoice within _____ days of receipt.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

Manitoba Hydro

[Insert name of Eligible Customer]

By: _____

By: _____

Name (typed or printed): _____

Name (typed or printed): _____

Title: _____

Title: _____

EXHIBIT A
to
Facilities Study Agreement

The Facilities Study will be based upon the following additional information, assumptions and simulated reliability test procedures:

ATTACHMENT E

Reservation Priority Procedures

1. All Customers with long-term firm contracts (firm transmission service or firm bundled energy service of one year or longer) (“Customers”) have a reservation priority (“roll over rights” or “rights of first refusal”).
2. Roll over rights apply to existing transmission capacity, and the Transmission Provider is not obligated to build transmission capacity in order to maintain the same amount of service.
3. A Customer may roll over its usage of the transmission system for as long a term as it wants, regardless of the length of existing pending long-term contracts. For example, a Customer with a one year firm contract may choose to exercise its roll over rights and enter into a ten-year firm contract.
4. A Customer has the option to exercise its roll over rights for less than one year. This new service will of course not have roll over rights in the subsequent year because it is no longer a long-term contract.
5. A Customer with multiple existing long-term firm agreements that all provide for service between the same points of receipt and same points of delivery has the option to combine them into a single transmission reservation when rolled over.
6. A Transmission Customer that upgrades short term firm service to long term firm service acquires roll over rights when it does so.

7. The Contractor, on behalf of the Transmission Provider, may not grant a request for transmission service that would interfere with another Customer's roll over rights, even if the new request is for a different term or does not possess the same points of receipt and or the same points of delivery. Therefore the Transmission Provider shall model its system as if all the existing long-term firm contracts continue their service when it evaluates any requests for new service, including service commencing several years in the future.
8. The following "tie breaker rules" apply in order to allocate roll over rights when dealing with competing requests. Tie breaker roll over allocation only applies if the new request for transmission service is substantially similar in all respects to the roll over Customer's service. The roll over Customer in these cases, can obtain the first right of refusal by matching the term of service requested by the new Transmission Customer.
9. A Transmission Customer taking long-term firm transmission service may modify its points of delivery and/or points of receipt on a firm basis for part of the contract term without losing its roll over rights, even if the modification results in the Transmission Customer not taking service at the same points of receipt and/or delivery for a full year.

ATTACHMENT F

Service Agreement for Network Integration Transmission Service

- 1.0 This Service Agreement, dated as of _____, is entered into, by and between Manitoba Hydro (the “Transmission Provider”), and _____ (the “Network Customer”).
- 2.0 The Network Customer has been determined by the Transmission Provider to have a Completed Application for Network Integration Transmission Service under the Tariff.
- 3.0 The Network Customer has provided to the Transmission Provider an Application deposit in the amount of \$ _____, in accordance with the provisions of Section 29.2 of the Tariff.
- 4.0 Service under this agreement shall commence on the later of: (1) the requested Service Commencement Date; or (2) the date on which construction of all interconnection equipment, any Direct Assignment Facilities and/or Network Upgrades are completed; or (3) the date on which a Network Operating Agreement is executed and all requirements of said Agreement have been completed. Service under this agreement shall terminate on _____.
- 5.0 The Transmission Provider agrees to provide and the Network Customer agrees to take and pay for Network Integration Transmission Service in accordance with the provisions of Part III of the Tariff and this Service Agreement.

6.0 Any notice or request made to or by either Party regarding this Service Agreement shall be made to the representative of the other Party as indicated below.

Transmission Provider:

Network Customer:

7.0 No failure by the Transmission Provider or the Network Customer at any time or from time to time to enforce or require a strict observance of any of the provisions of this Service Agreement shall constitute a waiver of the provision or affect or impair such provisions or the right of the Transmission Provider or the Transmission Customer at any time to enforce such provisions or to avail itself of any remedy it may have.

8.0 The Tariff, the attached Specifications for Network Integration Transmission Service, and the Network Operating Agreement between the Transmission Provider and the Network Customer are incorporated herein and made a part hereof.

9.0 Applicable taxes shall be added to all charges set forth in the Tariff.

10.0 This Service Agreement shall inure to the benefit of and be binding upon the Parties and their respective successors and assigns, but shall not be assigned by either Party without the written consent of the other Party.

5.0 Detailed description of each Network Resource, including any operating restrictions:

a) Network Customer Owned Generation:

Resource	Capacity	Capacity Designated as Network Resource
_____	_____	
_____	_____	

b) Generation Purchased by Network Customer:

Resource	Capacity	Capacity Designated as Network Resource
_____	_____	
_____	_____	

c) Total Network Resources:

6.0 Detailed description of the Transmission Customer's anticipated use of Transmission Provider's interfaces:

7.0 Description of any transmission system owned or controlled by the Transmission Customer:

8.0 Name(s) of any Intervening Transmission Providers:

9.0 Calculation of Load Ratio Share:

$$\frac{\text{Network Customer's Monthly Network Load}}{\text{Transmission Provider's Monthly Transmission System Load}} =$$

10.0 The Network Customer agrees to take the following Ancillary Services from the Transmission Provider:

		Source
1.	Scheduling, System Control and Dispatch	Yes
2.	Reactive Supply and Voltage Control	Yes
3.	Regulation and Frequency Response	_____*
4.	Energy Imbalance	_____*
5.	Spinning Reserve	_____*
6.	Supplemental Reserve	_____*

* If "No", indicate source of this service

11.0 Description of required Direct Assignment Facilities:

12.0 In addition to the Monthly Demand Charge for Transmission Service (Load Ratio Share x (1/12) Annual Transmission Revenue Requirement) and charges for Ancillary Services as set forth in the Tariff, the Network Customer will be subject to the following charges:

12.1 System Impact and/or Facilities Study Charge(s):

12.2 Direct Assignment Facilities Charges:

12.3 Redispatch Charges:

12.4 Network Upgrade Charges:

13.0 Credit for Network Customer Owned Transmission Facilities (per s.30.9 of Tariff):

ATTACHMENT G

Network Operating Agreement

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SCHEDULE A: METERING REQUIREMENTS

SCHEDULE B: INFORMATION REQUIREMENTS

MH FACILITY CONNECTION REQUIREMENTS

NETWORK OPERATING AGREEMENT

THIS NETWORK OPERATING AGREEMENT, made and entered into this ___ day of _____, ____, by and between _____ (hereinafter referred to as “Network Customer”), a (legal/corporate description of Network Customer), and Manitoba Hydro (hereinafter referred to as “Transmission Provider”). Network Customer and Transmission Provider may be hereinafter referred to individually as “Party” and collectively as “Parties” where appropriate.

In consideration of the mutual covenants and agreements herein contained, the Parties hereto covenant and agree as follows:

ARTICLE I PURPOSE

- 1.1 This Agreement defines the terms and conditions under which the Network Customer shall operate its facilities, the interconnections between the Parties and associated responsibilities, the operational procedures to be utilized by the Parties, and any other technical or operational requirements needed for implementation of Network Integration Transmission Service under the Transmission Provider’s Transmission Tariff (the “Tariff”).

ARTICLE II DEFINITIONS

- 2.1 Unless specified otherwise, the capitalized terms shall be defined in accordance with the definitions contained in Part I of the Tariff.

- 2.2 **Interconnection Equipment:** The equipment specified by the Parties as Interconnection Equipment in the Interconnection Agreement between the Parties.
- 2.3 **MAPP Reliability Council:** The Mid-Continent Area Power Pool Reliability Council or its successor reliability organization within NERC.
- 2.4 **NERC:** The North American Electric Reliability Council or its successor organization.
- 2.5 **Control Area Operator:** A Control Area Operator is a party that operates a NERC-recognized Control Area as defined in the Tariff and is responsible for meeting all policies, procedures and guidelines established by NERC and any applicable Regional Reliability Council(s).

ARTICLE III RELIABILITY STANDARDS

- 3.1 **Adherence to Reliability Standards:** The Network Customer shall plan, construct, operate and maintain its facilities and system in accordance with Good Utility Practice, which shall include, but not be limited to, all applicable standards, rules, procedures or guidelines of NERC and the MAPP Reliability Council as they may be modified from time to time.
- 3.2 **Reliability Reporting:** The Network Customer shall be responsible for providing to the Transmission Provider in a timely manner all information required by NERC and the MAPP Reliability Council.

**ARTICLE IV
CONTROL AREA RESPONSIBILITY**

- 4.1 **Control Area Requirements:** Pursuant to section 35.2 of the Tariff, the Network Customer shall: (1) operate as a Control Area Operator under applicable guidelines of NERC and the MAPP Reliability Council, or (2) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with the Transmission Provider; or (3) satisfy its Control Area requirements, including all necessary Ancillary Services, by contracting with another Control Area Operator which can satisfy those requirements in a manner that is consistent with Good Utility Practice and which satisfies NERC and MAPP Reliability Council requirements.

**ARTICLE V
NETWORK RESOURCES**

- 5.1 **Reserves:** The Network Customer shall maintain or provide for generating capacity planning and operating reserves consistent with MAPP Reliability Council guidelines. If the Network Customer's designated Network Resources are judged not to meet the MAPP Reliability Council accreditation guidelines or the Network Customer's generating capacity reserves are inadequate to meet the MAPP Reliability Council guidelines, the Customer shall pay any and all applicable charges or penalties imposed on the Transmission Provider.

**ARTICLE VI
REDISPATCH PROCEDURES**

- 6.1 **Right to Redispatch Network Resources:** If the Transmission Provider determines or is advised by a NERC Regional Security Coordinator that redispatching Network Resources (including reductions in off-system purchases and sales) to relieve an existing or potential transmission constraint is the most effective way to ensure the reliable operation of the

Transmission System, the Transmission Provider shall have the right to direct redispatch of the Transmission Provider's and the Network Customers' Network Resources on a least-cost basis, without regard to the ownership of such Network Resources. The Network Customer shall respond immediately to directions to redispatch from the Transmission Provider. Redispatch shall be implemented consistent with the Transmission Provider's contractual obligations and its practices and procedures for its own Network Resources in effect from time to time.

- 6.2 **Reliability Redispatch Cost:** Pursuant to s.33.3 of the Tariff, the Transmission Provider and the Network Customer shall each bear a proportionate share of the total redispatch cost based on their respective Load Ratio Shares, unless specified otherwise in a policy developed by the Network Operating Committee. The total redispatch cost shall be the greater of (i) verifiable opportunity costs or; (ii) current verifiable start up, shut down incremental and decremental costs of changing the generation output of the applicable Network Resources.
- 6.3 **Cost Data:** The Network Customer shall submit to the Transmission Provider the (i) verifiable opportunity costs and (ii) current verifiable start up, shut down, incremental and decremental cost data for its Network Resources, which estimate the cost to the Network Customer of changing the generation output of each of its Network Resources. This cost data along with similar data for the Transmission Provider shall be used as the basis for determining least-cost redispatch. The Transmission Provider shall keep this data confidential, except where disclosure is required by Canadian law. If the Network Customer experiences changes to its costs, the Network Customer shall submit those changes to the Transmission Provider.
- 6.4 **Audits:** The Network Customer may audit, at its own expense, particular redispatch events (such as the cause or necessity of the redispatch) during normal business hours following reasonable notice to the Transmission Provider. If an audit conducted pursuant to this section reveals that the Transmission Provider's Network Resources have been redispatched in preference to lower cost alternatives for reasons other than an emergency,

the cost of the audit shall be borne by the Transmission Provider. In addition to the right to audit redispatch events, both the Transmission Provider and the Network Customer may request an audit of the other Party's redispatch cost data. Any audit of redispatch cost data shall be performed by an independent agent at the requesting Party's cost. Such independent agent shall be a nationally recognized accounting firm and shall be required to keep all cost data confidential to the extent permitted by Canadian law.

ARTICLE VII

FACILITY CONNECTION AND OPERATING REQUIREMENTS

- 7.1 **Interconnection Equipment:** The Network Customer's Interconnection Equipment shall meet all standards of Good Utility Practice and the Transmission Provider's Facility Connection Requirements as in effect from time to time. Interconnection Equipment shall be installed, maintained and repaired at the Network Customer's expense, with the exception of cost-shared facilities as determined by the Network Operating Committee.
- 7.2 **Load Shedding Equipment:** The Network Customer shall, at its own expense, provide, operate and maintain in service high-speed load shedding equipment as specified by the Transmission Provider. The Parties shall test and inspect their load shedding scheme in accordance with procedures and schedules determined by the Network Operating Committee. A Party may request a test of the other Party's load shedding scheme with reasonable notice.
- 7.3 **Connection Requirements:** The Network Customer shall comply with the Transmission Provider's Facility Connection Requirements as published and as in effect from time to time for new and existing generation facilities, transmission facilities and electricity end-user facilities.

- 7.4 **New Generators:** The Network Customer shall not connect any new or re-rated generators after execution of this Agreement without first informing the Transmission Provider in writing one hundred and eighty days in advance of any such connection. Any generating facilities owned by third parties that are connected after the date of execution of this Agreement shall comply with the Facility Connection Requirements established by the Transmission Provider as in effect from time to time. If any generating facilities referred to in this section incorporate a synchronous generator, the Network Customer shall furnish, install and maintain equipment necessary to establish and maintain synchronism with the Transmission Provider's transmission system.
- 7.5 **Switching:** The Network Customer shall comply with all of the guidelines and operating instructions issued by the Transmission Provider and shall not conduct any switching on Critical Facilities (as defined by the Network Operating Committee) or other activity likely to affect the Transmission Provider's System without first contacting and receiving the consent of the Transmission Provider.
- 7.6 **Power and Energy Flow:** The Parties recognize the interconnected nature of the Transmission Provider's transmission system and that operating and technical problems may arise in the control of the frequency and in the flow of real and reactive power over the Parties interconnected transmission systems. The Network Operating Committee shall adopt operating rules and procedures as necessary to ensure that as far as practicable, the delivery and receipt of real and reactive power and energy hereunder shall be accomplished in a manner that causes the least interference with such interconnected systems. The Network Operating Committee shall also, from time to time as necessary, determine methods to ensure the maximum delivery of power and energy at the delivery points and at such additional or alternate delivery points as may be established by the Parties.
- 7.7 **Regulating Reserve:** The Network Customer shall meet its Load Ratio Share of Regulating Reserve carried by the Transmission Provider (in accordance with NERC or MAPP Reliability Council requirements) by either:

- a) purchasing Regulation and Frequency Response Service from the Transmission Provider pursuant to Schedule 3 of the Tariff; or
- b) contributing or arranging for a third party to contribute generating resources to meet the Regulating Reserve requirement.

7.8 **Self Supply and Third Party Supply:** A Network Customer who does not purchase Regulation and Frequency Response Service from the Transmission Provider shall either operate its generating resources or ensure that the supplier of such service operates its generating resources so as to comply with all NERC and MAPP Reliability Council requirements.

7.9 **System Operations:** If at any point in time, in the Transmission Provider's sole judgment, the Network Customer is operating its equipment in a manner that would adversely impact the quality of service to the Transmission Provider's customers, reliability or safe operation of the Transmission Provider's transmission system, the Transmission Provider may discontinue Network Integration Transmission Service without notice if necessary, until such time as the condition has been corrected.

7.10 **Emergencies:** If, in the Transmission Provider's sole judgment, an emergency exists or significant adverse impact is imminent, Transmission Service to the Network Customer may be discontinued without notice. The Transmission Provider has the right to direct the Network Customer to take whatever actions the Transmission Provider deems necessary in response to an emergency including, but not limited to: running generation at maximum or minimum capability, voltage reduction, load shedding, transferring load between delivery points, public appeals for load reduction, implementation of interruptible load programs and bringing stand-by and idle generation into service.

7.11 **Curtailment Procedures (s.33.1 of Tariff):** The Transmission Provider reserves the right to Curtail Transmission Service to the Network Customer, in whole or in part, when the

Transmission Provider determines that a transmission constraint exists on the Transmission System or on systems directly and indirectly interconnected with the Transmission System. Such Curtailments shall be made pursuant to sections 33.4 and 33.5 of the Tariff and all operating guidelines of the Transmission Provider. In the event of a failure to respond to Curtailment directions or procedures or follow operating guidelines, the Network Customer shall indemnify the Transmission Provider for any costs, penalties or damages arising from such failure to respond as directed or follow operating guidelines.

7.12 **Load Shedding Procedures:** The Parties shall implement load shedding programs to maintain the reliability and integrity of the Transmission System. Load shedding shall include: (1) automatic load shedding relay or (2) manual load shedding. The Transmission Provider shall implement load shedding to maintain the relative sizes of load served, unless otherwise required by circumstances beyond the control of the Transmission Provider or the Network Customer. Automatic load shedding devices shall operate without notice. When manual load shedding is necessary, the Transmission Provider shall notify the Network Customer's operators or schedulers of the required action and the Network Customer shall comply within the time specified by the Transmission Provider. In the event that the Network Customer fails to respond to the Transmission Provider's directions to shed load, the Network Customer shall indemnify the Transmission Provider for all costs, penalties or damages arising from such failure to respond as directed.

7.13 **Reliability:** Insofar as practicable, the Network Customer shall protect, operate and maintain its system consistent with Good Utility Practice so as to avoid or minimize the likelihood of disturbances which might cause impairment of services on other systems.

ARTICLE VIII MAINTENANCE AND REPAIR OF FACILITIES

8.1 **Submission of Schedules:** The Network Operating Committee shall establish procedures to coordinate the maintenance schedules of the generating resources and transmission and substation facilities, to the greatest extent practical, to ensure sufficient transmission resources are available to maintain system reliability and reliability of service. Prior to the effective date of this Agreement and thereafter by December 1st of each year, the Network Customer shall provide to the Transmission Provider the maintenance schedules and planned outages of each Critical Facility (as defined by the Network Operating Committee) for the next year and update the information at least thirty (30) days in advance of the date specified for the forecasted maintenance outage. Such information shall include, but not be limited to the expected time that the Critical Facility will be separated from the system and the time at which the Critical Facility is available for:

- a) synchronizing/parallel operation;
- b) loading; and
- c) if applicable, to be put on automatic generation control.

8.2 **Scheduled Maintenance:** The Network Customer shall obtain:

- (a) Concurrence from the Transmission Provider, at least forty-eight (48) hours before beginning any scheduled maintenance of its Critical Facilities; and
- (b) Clearance from the Transmission Provider when the Network Customer is ready to begin maintenance on a Critical Facility.

8.3 **Unscheduled Outages:** The Network Customer shall immediately notify the Transmission Provider at the time when any unscheduled or forced outages occur and again when such unscheduled or forced outages end. The Network Customer shall notify and coordinate with the Transmission Provider prior to placing a Critical Facility back in service.

8.4 **Failure to Maintain:** If the Transmission Provider in its reasonable judgment determines that the Network Customer's Interconnection Equipment is, in any substantial respect, being maintained otherwise than in accordance with Good Utility Practice or the provisions of this

Agreement, the Transmission Provider may so notify the Network Customer in writing. Within thirty (30) days of the date of notification, the Network Customer shall conform its maintenance practices to the requirements of Good Utility Practice and of this Agreement. In the event that the Network Customer fails to bring its maintenance practices into conformance with said requirements within that thirty (30) day period, the Transmission Provider may immediately de-energize the interconnection between the Network Customer and the Transmission Provider until the Network Customer has conformed its maintenance practices as provided herein or seek any other remedy available at law.

ARTICLE IX MODIFICATIONS TO FACILITIES

- 9.1 **Notice of Modifications:** The Network Customer shall give the Transmission Provider adequate written notice of any modification or replacement of the Network Customer's Interconnection Equipment. All additions, modifications or replacements must meet the requirements of this Agreement and all standards of Good Utility Practice. If the Network Customer makes changes without notice to the Transmission Provider, and if the Transmission Provider has reasonable cause to believe that the changes may create dangerous conditions, the Transmission Provider may immediately and without notice de-energize the interconnection between the Network Customer and the Transmission Provider. Such de-energizing shall take place in accordance with procedures, if any, developed by the Network Operating Committee.
- 9.2 **Changing Requirements:** The Network Customer at its expense, shall change the Network Customer's Interconnection Equipment as may be reasonably required by the Transmission Provider or as may otherwise be required to conform to Good Utility Practice to meet changing requirements of the Transmission Provider's system.
- 9.3 **De-energization:** In the event that de-energization of the interconnection is required by the provisions of this Agreement, the Transmission Provider will only de-energize the

interconnection at the affected delivery points.

ARTICLE X
METERING AND RECORDS

- 10.1 **Revenue Metering:** Unless otherwise agreed, the Network Customer shall be responsible for installing and maintaining compatible metering and communications equipment to accurately account for the capacity and energy being transmitted pursuant to the Network Integration Transmission Service Agreement between the Parties. Meters shall be installed (including verification and sealing), maintained, repaired and replaced in accordance with the provisions of the Electricity and Gas Inspection Act (R.S.C. 1985, c.E-4) as amended from time to time and any regulations thereunder and any policies developed by the Network Operating Committee.
- 10.2 **Revenue and Operational Metering:** Metering equipment shall consist of meters approved for revenue metering by Industry Canada potential and current transformers and such other devices or equipment as shall be necessary to give the instantaneous values of kilowatts and kilovars, and an automatic record of kilowatt-hours for each clock hour. When there is a possibility of flows of electricity in either direction, metering equipment shall be installed to provide metering data for each direction of flow. The specific types of metering equipment, timing devices, locations of meters, the details of the metering arrangement and the records to be kept shall be as specified by the Transmission Provider in Schedule A hereto.
- 10.3 **Revenue Meter Readings:** The Network Customer shall read the meters required under this Agreement on the last day of each month, except as may be mutually agreed by the Parties, and shall furnish to the Transmission Provider all meter readings and other information required for operators and for billing purposes by the end of the first working day of each month. Such information shall remain available to the Transmission Provider for three (3) years. This section shall be implemented in accordance with meter reading and accounting procedures adopted by the Network Operating Committee.

10.4 **Testing:** (a) Each Party shall, at its expense, test its metering components associated with this Agreement as provided by the Electricity and Gas Inspection Act and perform a functional field test of the metering installation at least once every year. If requested to do so, each Party shall make additional tests or inspections of such installations, the expenses of which shall be paid by such other requesting Party unless such additional tests or inspections show the measurements of such installations to be registering outside the prescribed limit of error. Each Party shall give reasonable notice of the time when any such test or inspection is to be made to the other Party who may have representatives present at such test or inspection. Any component of such installations found to be defective or inaccurate shall be adjusted, repaired or replaced to provide accurate metering.

(a) If a meter is found to be not functioning accurately, the energy being transmitted shall be determined as provided for in the Electricity and Gas Inspection Act.

(b) Meter testing performed pursuant to this section shall be requested and conducted pursuant to the policies and procedures of the Network Operating Committee.

10.5 **Audits:** For the purpose of checking the records of the metering equipment, the Transmission Provider shall have the right to install check-metering equipment at the metering points. Metering equipment so installed by the Transmission Provider shall be owned and maintained by the Transmission Provider. Upon termination of the Network Integration Transmission Service Agreement under the Tariff, the Transmission Provider shall remove its meters from the premises of the Network Customer. Authorized representatives of both Parties shall have access at all reasonable business hours to the premises where any meters required by this Agreement are located and to the records made by the meters.

**ARTICLE XI
COMMUNICATIONS**

- 11.1 **Communication Link:** The Network Customer shall, at its own expense, install and maintain a voice communication link to the Transmission Provider for scheduling.
- 11.2 **Telemetry Equipment:** A Network Customer contributing to Regulation and Frequency Response requirements and/or Operating Reserve requirements or securing such requirements from a third party shall, at its own expense, install and maintain telemetry equipment communicating between the generating resource and the Transmission Provider.

**ARTICLE XII
NETWORK OPERATING COMMITTEE**

- 12.1 **Establishment:** A Network Operating Committee shall be established pursuant to s.35.3 of the Tariff to coordinate operating criteria for the Parties' respective responsibilities under this Agreement. The Network Customer and Transmission Provider shall each be entitled to one representative on the Committee and each Party may appoint an alternate member. Prompt notice in writing of appointments, removals and replacements shall be given by the Parties to each other.
- 12.2 **Costs:** The Parties shall each pay the expenses of their respective members on the Network Operating Committee.
- 12.3 **Meetings and Decisions:** The Network Operating Committee shall meet at least semi-annually. Decisions of the Network Operating Committee shall be unanimous.

12.4 **Effect of Decisions:** All procedures, policies and decisions of the Network Operating Committee shall be in writing and signed by each Party's representative on the Network Operating Committee and shall form part of this Agreement, but shall not be inconsistent with and shall not serve to contradict any terms and conditions of this Agreement in force prior to such procedures, policies or decisions.

12.5 **Responsibilities:** The Network Operating Committee shall be responsible for:

- (a) developing procedures for the implementation of the operating and technical requirements of this Agreement, including the following: scheduling procedures; compliance with NERC and Restated MAPP Agreement operating guidelines and planning standards; issuance of operating procedures and operating instructions;
- (b) reviewing Network Resources, Network Loads and Ancillary Services performance on an annual basis to assess the operation of the transmission network and existing arrangements;
- (c) the identification of Critical Facilities as referred to herein;
- (d) rating of facilities;
- (e) any other matters necessary for implementation, administration or operation of this Agreement.

ARTICLE XIII INFORMATION REQUIREMENTS

13.1 **Network Operations:** The Network Customer shall, upon request, provide the Transmission Provider with such reports and information concerning its network operation as are reasonably necessary to enable the Transmission Provider to operate its transmission system adequately and meet all NERC and Restated MAPP Agreement

requirements imposed on the Transmission Provider. This information shall include but not be limited to: forecasts and actual schedules for generating unit operation, interchange, losses, load, real-time data and any information listed in Schedule B hereto.

- 13.2 **Load and Resource Forecasts:** Pursuant to section 13.6 of the Tariff, the Network Customer shall provide the Transmission Provider with annual updates, by April 1st of each year, of Network Load and Network Resource forecasts (current and ten-year projection) consistent with those included in its Application for Network Integration Transmission Service. Such forecasts shall be in a format as specified by the Transmission Provider. The Network Customer shall also provide the Transmission Provider with timely written notice of material changes in any other information provided in its Application relating to the Network Customer's Network Load, Network Resources, its transmission system or other aspects of its facilities or operations affecting the Transmission Provider's ability to provide reliable service.
- 13.3 **Forecast Updates:** Five days before the end of the month, the Network Customer shall update the forecast for the following month specifying purchase, generation, maximum demand, total monthly energy and reserves, as required by section 5.1 hereof, from the Transmission Provider or a third party.
- 13.4 **Resource Characteristics:** The Network Customer shall provide generating resource characteristics to the Transmission Provider as requested to implement redispatch and constraint and reserve management.
- 13.5 **Resource Availability:** By such dates of each year as specified by the Transmission Provider the Network Customer shall supply the Transmission Provider with a Network Resource availability forecast (including all planned resource outages with off-line and on-line dates) for the following year. The Network Customer shall inform the Transmission Provider of any changes to the Network Resource availability forecast in a timely manner.

- 13.6 **Audits:** The Network Customer shall have the right, during normal business hours and upon reasonable notice, to examine the accounting and other records of the Transmission Provider relating to the Network Customer's transactions under the Tariff for the previous five years and shall have the right to make reasonable audits and copies of such records. Such examinations shall be at the expense of the Network Customer and may be conducted no more than once per year.

ARTICLE XIV DEFAULT

- 14.1 **Termination of Service:** The Network Customer's failure to meet any of the terms and conditions of this Agreement shall be deemed to be a default. Except as provided in sections 8.4 and 9.1 hereof, upon 30 days notice of such default, the Transmission Provider shall be entitled to terminate Network Integration Transmission Service to the Network Customer unless such default is remedied to the satisfaction of the Transmission Provider.
- 14.2 **Indemnity:** The Network Customer shall indemnify, defend and save harmless the Transmission Provider from any and all damages, losses, claims, demands, suits, recoveries, costs (including court costs and legal fees) expenses and all other obligations by or to third parties arising directly or indirectly out of the Network Customer's failure to meet any of its obligations under this Agreement.

ARTICLE XV LEGAL

- 15.1 **Amendments:** This Agreement may be amended upon mutual agreement of the Parties. Such amendments shall be reduced to writing and executed by the signatories of both Parties, with the exception of amendments pursuant to Section 12.4 hereof which may be

signed by the representatives of the Network Operating Committee.

- 15.2 **Severability:** In the event any of the terms, covenants or conditions of this Agreement, or any amendment hereto, or the application of any such terms, covenants or conditions shall be held invalid as to any Party or circumstance by any court having jurisdiction thereof, all other terms, covenants and conditions of this Agreement or any amendment hereto and their application shall not be affected thereby and shall remain in full force and effect.
- 15.3 **No Partnership:** Notwithstanding any provisions of this Agreement to the contrary, the Parties do not intend to create hereby a joint venture, partnership, association, or other entity for the conduct of any business for profit.
- 15.4 **Waivers:** Any waiver at any time by either Party of its rights with respect to a default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not be deemed a waiver with respect to any other or subsequent default or matter.
- 15.5 **Tariff Governs:** In the event of any irreconcilable difference between the Network Integration Transmission Service provisions of the Tariff and this Agreement, the Tariff shall govern.
- 15.6 **Term:** The term of this Agreement shall be concurrent with the Network Integration Transmission Service Agreement between the parties.

IN WITNESS WHEREOF the duly authorized representatives of the Network Customer and the Transmission Provider have executed this Agreement as of the date first above written.

NETWORK CUSTOMER

TRANSMISSION PROVIDER

By: _____

Name:

Title:

By:

Name:

Title:

SCHEDULE A

METERING REQUIREMENTS

SCHEDULE B

INFORMATION REQUIREMENTS

The Network Customer shall provide the Transmission Provider with the following information if requested by the Transmission Provider.

1. real-time metering of non-Network Load service from the Network Customer's system;
2. the Network Customer's aggregated real-time load, updated every 4 seconds;
3. real-time voltage from a bus at or near the point(s) of interconnection;
4. real-time value of Critical Facility phase shifter tap positions and Critical Facility on-load tap positions;
5. real-time status and/or alarming of relay status, communication channels, or other similar schemes required for input into operating decisions regarding reliable operations;
6. real-time status of switching devices and real-time electrical flows (MW, MW, amps) on interconnection point(s) and Critical Facilities.

MH FACILITY CONNECTION REQUIREMENTS

The Transmission Customer shall install, operate, maintain and repair its Interconnection Equipment in accordance with Good Utility Practice and any further specifications of the Transmission Provider regarding the following or any other matters: Reactive Power Capabilities, Voltage Variations, Frequency Variations, Harmonic Distortion, Phase Unbalance, System Special Controls and Local Area Operating Aids, Black Start Capability, Excitation System, Automatic Voltage Regulator, Power Factor Regulator, Power System Stabilizer, Speed Governor, Grounding, Protective Equipment and Relaying System Requirements, Construction of Customer Transmission Lines, Revenue Metering, SCADA, Communication Facilities, and Technical Data for Power System Studies).

ATTACHMENT H

Reserved

ATTACHMENT I

Reserved

ATTACHMENT J

Scheduling/Response Times

1	2	3	4	5	6	7	8	9	10
TRANSMISSION		TRANSMISSION REQUESTS ¹						ENERGY SCHEDULING	
Service Type	Term	No Later Than	No Earlier Than	Transmission Provider Response to Application	Determine Capacity Available	System Impact Study	Customer Response (Conferment) ²	Day-ahead No Later Than	Real-time Changes No Later Than
Firm	Long-term, 1 year or more	60 days prior	N/A	24 hours	30 days	60 days	15 days ³	1500 hrs day prior	30 minutes prior to start of the operating hour
Firm	Monthly	14 days prior or less if practicable	17 months prior	1 hour	7 days	60 days	7 days	1500 hrs day prior	30 minutes prior to start of the operating hour
Firm	Weekly	7 days prior or less if practicable	60 days prior	1 hour	2 Business Days	N/A	48 hours	1500 hrs day prior	30 minutes prior to start of the operating hour
Firm	Daily	1300 hrs day prior	14 days prior	10 minutes	4 business hours/1400 hrs day prior	N/A	2 hours ⁴	1500 hrs day prior	30 minutes prior to start of the operating hour
Non-Firm	Monthly	2 days prior	60 days prior	1 hour	12 hours	N/A	24 hours	1500 hrs day prior	30 minutes prior to start of the operating hour
Non-Firm	Weekly	30 hrs prior	14 days prior	1 hour	4 hour	N/A	24 hours	1500 hrs day prior	30 minutes prior to start of the operating hour
Non-Firm	Daily	1300 hrs day prior	3 days prior	1 hour	30 minutes	N/A	2 hours	1500 hrs day prior	30 minutes prior to start of the operating hour
Non-Firm	Hourly	intra-hour	1300 hrs day prior	10 minutes	15 minutes	N/A	30 minutes	1500 hrs day prior	30 minutes prior to start of the operating hour

¹ The Transmission Provider, in its discretion exercised on a non-discriminatory basis, may waive any of these requirements.

² For transactions not covered by an umbrella service agreement, the customer response must be execution of a service agreement. For transactions under an umbrella service agreement, the above times are the deadlines by which time the customer must notify The Transmission Provider of its acceptance of the offer to provide transmission.

³ During Rollover Request competition, the Rollover Request customer shall have three (3) business days to confirm a matching request.

⁴ Firm Daily for a single day that is submitted more than 24 hours in advance of the start time has a 24 hour customer confirmation time.

Attachment K CONGESTION MANAGEMENT PROCEDURES

Introduction

The Transmission Provider will take actions to maintain the reliability of the transmission system and to relieve congestion. Actions taken to maintain reliability may include redispatch, curtailing of scheduled transmission or generation maintenance, operation of a must-run generator, or other actions as necessary.

Redispatch and other actions taken for reliability purposes will be used to prevent or manage abnormal system conditions that require automatic or immediate manual action to prevent or limit equipment damage or the loss of facilities or supply that could adversely affect the reliability of the electric system or to restore the system to a normal operating state. Such abnormal system conditions are characterized by one or more physical limits being violated. Other actions as described herein may be taken to relieve congestion to support Transmission Service that would otherwise not be available. Costs incurred in relieving congestion for reliability purposes will be distributed to Transmission Customers, including bundled native load, as described in Attachments K-1 and K-2 of this Tariff. Attachment K-3 of this Tariff describes distribution of costs for must-run units.

1. Congestion Management Applications

As a part of the Contractor's obligation to provide Congestion Management ("CM") services to the Transmission Provider, the Contractor will recommend actions to mitigate or eliminate the curtailment of already scheduled and committed firm transmission, and will facilitate bilateral transactions to make new firm Transmission Service available. The Contractor shall carry out its responsibilities in a manner that minimizes costs to the greatest extent practicable to effectively relieve the constraint.

The Contractor has developed several applications of CM to be implemented, each of which is triggered by a specific TLR Level. These Congestion Management applications are Flowgate Redispatch ("FRD"), System Redispatch ("SRD") and Emergency Redispatch ("ERD"). The Contractor will also make

available a Market Redispatch (“MRD”) Tool that works with the NERC MRD process.

2. Generator/LSE Bidding Process

Bids of available capacity and price from generators and load serving entities (“LSE”s) are necessary for the Contractor and market participants to use in resolving congestion. The Contractor will use these bids when recommending ERD and SRD transactions as a means of maintaining firm transmission service schedules and load in emergency and non-emergency conditions, respectively. Market participants may use bids to provide solutions to congestion that will permit firm service to be obtained. There are two types of bids that will be considered as they relate to congestion management:

Market-based Bids: Bids offered by the generators that reflect market-based pricing for their services. These bids will be used for SRD transactions, and for bilaterally arranged MRD/FRD transactions. If the generator is subject to FERC jurisdiction and does not have market-based rate authority, cost-based bids must be offered.

Emergency Condition-based Bids: Bids offered by the generators that reflect rates applicable to emergency conditions. These bids will be used for transactions, and under certain conditions, will be used for Midwest ISO SRD transactions. If a generator is subject to FERC jurisdiction and does not have a FERC-authorized emergency rate, cost-based bids must be offered.

The Contractor requires that both market-based and emergency bids always be entered for at least the upcoming hour, to be used for reliability purposes. Voluntary bids may be submitted for use in relieving congestion that would permit new firm service to be sold. The Contractor can view both the Market-based Bids and the Emergency-based Bids. Only voluntary bids can be viewed by non-Contractor personnel with access to the Contractor’s congestion management system.

All available capacity (reserves and regulation capacity excluded) from on-line units of greater than 10 MW net capacity must be bid.

Startup costs are assumed to be included in the bid price. Minimum run-time units are expected to bid prices which allow them to recover the cost associated with their minimum run-time in the first hour in the event that they are only called on to run for one hour by the Contractor.

3. Actions to Maintain Firm Service

The Transmission Provider will take actions in order to keep already scheduled Firm Transmission Service and firm load, including bundled native load, from being curtailed after non-firm transactions contributing to the constrained conditions have already been curtailed. Such actions may be in response to emergency or unexpected conditions. This category does not include congestion costs relating to a request for new Firm Transmission Service.

3.1 Emergency Redispatch

Emergency Redispatch (“ERD”) is a reliability redispatch implemented when the system is in an emergency condition that is characterized by the potential, either imminently or for the next contingency, for system instability or cascading, or for equipment loading or voltages significantly beyond applicable operating limits, such that stability of the system cannot be assured. In rare instances, an emergency condition may be called on a day-ahead basis, where forecast conditions for the next day indicate that an emergency condition will exist. Actions taken in such instances will be limited to those that require day-ahead setup time and are required to mitigate the condition.

3.2 System Redispatch

System Redispatch (“SRD”) is a reliability redispatch implemented when the system is in a

condition, or for the next contingency will be in a condition, that is characterized by equipment loading or voltages beyond applicable operating limits, and when SRD is the least cost means of mitigating or eliminating the curtailment of firm transmission service.

3.3 Other Actions to Relieve Congestion for Reliability Purposes

The Transmission Provider may take other actions, as it deems necessary to mitigate or eliminate the curtailment of firm transmission service or load. Such actions may include curtailment of transmission maintenance or scheduled generator maintenance.

3.4 Cost Recovery

The Contractor's costs associated with services for maintaining reliability on the Transmission Provider's system and the Midwest ISO System will be recovered on a system-wide basis in accordance with Attachments K-1 and K-2 of this Tariff. In the event that a Default occurs, the default amount shall be recovered from Transmission Customers on a pro rata load ratio basis.

4. Congestion Management to Facilitate New Firm Service

The Contractor will facilitate bilateral transactions between Transmission Customers and owners of generating units for the purpose of arranging for generation redispatch in advance to support firm Transmission Service not otherwise available. The Contractor will provide information on its electronic customer interface for this purpose. All financial arrangements for any such voluntary day-ahead redispatch will be made by the parties themselves and will not be settled by the Contractor.

FRD is the Congestion Management applications used to facilitate redispatch solutions to congestion that will permit new firm service to be obtained. The Contractor will identify constrained elements and potential solutions for market participants, as described below.

4.1 Relief from Generators and Load

4.1.1 Identification and Posting of Constrained Paths

On a day-ahead basis, the Contractor shall identify the transmission facilities which it expects to be constrained due to firm transactions. The Contractor shall identify the periods in which congestion is expected to occur and the extent of that congestion. The Contractor shall post this information on its OASIS and/or on some other electronic posting mechanism which is available to Transmission Customers, generators, and LSEs. The Contractor also shall provide this information on a longer-term basis consistent with the Commission's regulations.

4.1.2 Identification of Generators and Loads Which Can Have a Significant Impact on Relieving the Congestion

On a day-ahead basis, together with its identification of congestion, the Contractor shall identify generators and LSE which can have a substantial impact on the relief of congestion. The Contractor shall provide the generation shift factors for these generators.

The Contractor shall have the discretion to determine the number of solutions to provide the entity requesting service. The Contractor also shall provide contact information for each generator and load. The Contractor shall post this information on its OASIS and/or on some other electronic posting mechanism which is available to Transmission Customers, generators, and LSEs.

4.1.3 Request for Day Ahead Firm Transmission

An Eligible Customer seeking Firm Point-to-Point Transmission Service, for a single day of firm service, on a day-ahead basis shall submit its request in accordance with the daily

request time in Attachment J. The Contractor shall respond to the request in accordance with Attachment J. If there is insufficient transmission capacity to accommodate the firm transmission request, the Transmission Customer may provide generation redispatch or load solutions. In accordance with the customer response time in Attachment J, the Transmission Customer shall submit a new schedule to the Contractor reflecting generation redispatch or load solutions. The Contractor shall then evaluate the new schedule to determine if the transaction can go forward. Once the new schedule is accepted, the customer's transmission will be considered firm like all other firm transmission and any costs related to actions to prevent curtailments of that transmission shall be distributed in accordance with Section 3 of this Attachment K.

4.1.4 Request for Longer Term Firm Transmission

If an Eligible Customer seeking Firm Point-to-Point Transmission Service for a period beyond one day is informed that there is insufficient transmission capacity to accommodate the request, the Contractor shall provide the Transmission Customer with information regarding the expected transmission constraints and the capability to determine potential solutions if possible. If the Transmission Customer arranges for a potential solution, then it shall submit the information to the Contractor detailing that solution in accordance with the response times in Attachment J. The Contractor shall then evaluate the potential solution to see if it will sufficiently relieve expected constraints. If the Contractor accepts the request, then the Transmission Service will be considered firm like all other firm transmission and costs related to actions to prevent curtailments of that transmission shall be distributed in accordance with Section 3 of this Attachment K.

4.1.5 Transmission Rights

Any entity wishing to sell or assign transmission rights in accordance with this Attachment K may have its offer posted by the Contractor and/or on the exchange.

4.1.6 Day One Procedures

These are intended to be the Day One congestion relief procedures. The development of these procedures is not intended to limit or adversely affect the development of different methods of congestion management.

4.2 Reselling Transmission Rights

4.2.1 Rights of Transmission Customers

Firm Point-to-Point Transmission Customers may offer to resell their reservations/entitlement to capacity across constrained lines. The Contractor shall facilitate such efforts by providing for these "bids" of capacity to be made available electronically on a real-time basis. Firm Point-to-Point Transmission Customers shall be allowed to reassign amounts up to their firm reservations across the constrained interface(s).

4.2.2 Rate Caps

The rate caps in Section 23 of this Tariff shall apply to any reassignment.

4.2.3 Obligations of Customers and Assignees

If a reassignment occurs, the assignee shall pay a separate charge pursuant to Schedule 1 where applicable. The assignee shall not pay additional transmission service charges under Schedules 7, 8 or 9. The assignee shall pay the original Transmission Customer whatever rates were negotiated. The Transmission Customer remains obligated to pay the Transmission Provider for its reservation based upon the rates and conditions of this Tariff (i.e. for capacity from firm point-to-point service, the original customer must pay the Transmission Provider for the reserved amount).

5. Must-Run Unit Designation

The Contractor may designate certain generating units within the Midwest ISO as “Must Run” units for transmission reliability reasons using NERC and applicable reliability criteria. Must Run units shall not be designated for economic reasons. The Contractor will have the authority to require that a Must-Run generating unit start up, adjust the level of its output, go off-line, or alter its planned outages in order to make the units available for service if any of these actions are required to maintain reliability.

5.1 Compensation for Must-Run Units

Must-Run units will be compensated for the costs of start-ups, operation, and any charges to planned maintenance schedules in accordance with a separate agreement with the Contractor addressing specific must-run circumstances.

5.2 Cost Recovery

The costs associated with each Must-Run unit dispatch instruction will be recovered from load within the control area experiencing the local Must-Run system condition on a load-ratio basis in accordance with Attachment K-3 of this Tariff. In the event that a Default occurs, the default amount shall be recovered from load entities on a load ratio basis.

Attachment K-1
RELIABILITY REDISPATCH UPLIFT CHARGES

Pursuant to Section 3 of Attachment K, actions to maintain system reliability may include redispatch that will result in congestion relief costs. These redispatch costs shall be recovered on a monthly basis pursuant to the following methodology. This methodology applies the system Redispatch (“SRD”) or Emergency Redispatch (“ERD”) costs on an hourly basis. Costs occurred during a particular hour are distributed accordingly based on the loads, reservations, and schedules effective during that hour.

Charge to Firm Transmission Customers for each hour of SRD/ERD

Firm Point-to-Point Transmission Service customers are charged for transmission service to serve load outside the MISO Tariff Zone using their capacity reserved in the month. There is no charge under this Attachment for transmission service to serve load inside the MISO Tariff Zone; such charges will be applied under the MISO Tariff.

$$\text{Charge}_{\text{FTC}} = \text{Rate}_{\text{HSRD}} * \text{Capacity}_{\text{FTC}}$$

Equation (1)

Where:

Charge_{FTC} = Firm Transmission Customer’s System or Emergency Redispatch charge (\$)

Capacity_{FTC} = the reserved capacity of the firm reservation

Rate_{HSRD} = the hourly SRD/ERD rate in \$/MW

Rate_{HSRD}

The hourly SRD/ERD rate is calculated using the hourly SRD/ERD cost and the sum of all capacity that will be used in socializing the costs.

$$\text{Rate}_{\text{HSRD}} = \frac{C_{\text{HSRD}}}{\text{MISO Load}_{\text{HSRD}} - \sum \text{Schedules}_{\text{HSRD}} + \sum \text{Firm Reservations}_{\text{HSRD}}}$$

Equation (2)

Where:

Rate_{HSRD} = the hourly rate for System or Emergency Redispatch (\$/MW)

C_{HSRD} = Hourly System or Emergency Redispatch Cost (\$)

Schedules_{HSRD} = scheduled capacity of all Drive-In and Drive-Within Point-to-Point schedules active during the hour (MW)

Firm Reservations_{HSRD} = capacity of all firm Point-to-Point reservations active during the hour (MW)

MISO Load_{HSRD} = Midwest ISO Load (including Load of Coordinating Owners) during that hour (MW)

$$\text{MISO Load}_{\text{HSRD}} = \sum_{\text{CA}=1}^n \text{Hourly Load}_{\text{CA}}$$

Equation (3)

Where:

Hourly Load_{CA} = the hourly load value for the SRD hour (MW)

n = the number of Control Areas in Midwest ISO (including Coordinating Owners)

Each Transmission Customer is charged the appropriate rate multiplied by their reserved capacity for each firm reservation according to Equation 1.

Charge to Control Areas

Control Areas pay the balance of the hourly SRD on a load ratio share basis.

$$\text{Charge}_{\text{CA}} = \text{Balance}_{\text{HSRD}} * \frac{\text{Load}_{\text{CA}}}{\text{MISO Load}_{\text{HSRD}}}$$

Equation (4)

Where:

Issued by: E. Tymofichuk
Revised: June 1, 2007

Effective: June 1, 2007

Charge $_{CA}$ = Control Area's System or Emergency Redispatch charge for the hour (\$)

Balance $_{HSRD}$ = Total hourly SRD/ERD cost – the total collected from Transmission Customers for that hour (\$)

Load $_{CA}$ = Control Area Load for that hour – scheduled capacity of Control Area Drive-In and Drive-Within schedules for that hour (MW)

MISO Load $_{HSRD}$ = Sum of the Control Area Loads – the sum of the drive-in and within schedules for that hour (MW)

SUSPENDED

ATTACHMENT K-2
CONGESTION RELIEF FOR RELIABILITY
UPLIFT CHARGES

Pursuant to Section 3 of Attachment K, actions to maintain system reliability may result in non-redispach related congestion relief costs. Such costs shall be recovered on a monthly basis pursuant to the following methodology.

This methodology applies to the congestion relief costs on an hourly basis, over the on-peak hours, as defined in the NERC Operating Policies or successor documents, of the days when the congestion relief was required. The total costs incurred for a particular directed action are distributed based on the loads, reservations, and schedules effective during all on-peak hours for the days that the relief was required.

Charge to Firm Transmission Customers for each hour of required relief

Firm Point-to-Point Transmission Service customers are charged for transmission service to serve load outside the MISO Tariff Zone using their capacity reserved in the month. There is no charge under this Attachment for transmission service to serve load in the MISO Tariff Zone; such charges will be applied under the MISO Tariff.

$$\text{Charge}_{\text{FTC}} = \text{Rate}_{\text{HNR}} * \text{Capacity}_{\text{FTC}}$$

Equation (1)

Where:

Charge_{FTC} = Firm Transmission Customer's System or Emergency Redispach charge (\$)

Capacity_{FTC} = the reserved capacity on the firm reservation

Rate_{HNR} = the hourly non-redispach congestion relief rate in \$/MW

Rate_{HNR}

The hourly non-redispach congestion relief rate is calculated using the hourly non-redispach

congestion relief cost and the sum of all capacity that will be used in socializing the costs.

$$\text{Rate}_{\text{HNR}} = \frac{\text{C}_{\text{HNR}}}{\text{Load}_{\text{HNR}} - \sum \text{Schedules}_{\text{HNR}} + \sum \text{Firm Reservations}_{\text{HNR}}}$$

$$\text{Load}_{\text{HNR}} - \sum \text{Schedules}_{\text{HNR}} + \sum \text{Firm Reservations}_{\text{HNR}}$$

Equation (2)

Where:

Rate_{HNR} = hourly rate for non-redispach related congestion relief (\$/MW)

C_{HNR} = hourly non-redispach related congestion relief cost for each on-peak hour on days when congestion relief was required (\$).

$$\text{C}_{\text{HNR}} = \frac{\text{C}_{\text{TNR}}}{\text{OnPeakHours}_{\text{NR}}}$$

C_{TNR} = Total non-redispach related congestion relief cost for each month (\$)

OnPeakHours_{NR} = (Number of days non-redispach related congestion relief cost were incurred) x (number of on-peak hours per day)

Schedules_{HNR} = scheduled capacity of all drive-in and drive-within Point-to-Point Transmission Service schedules active during the hour for each on-peak hour on days when congestion relief was required (MW)

Firm Reservations_{HNR} = capacity of all Firm Point-to-Point Transmission Service reservations active during the hour for each On-Peak hour on days when congestion relief was required (MW)

Load_{HNR} = Load under this Tariff and the MISO Tariff during that hour (MW)

$$\text{MISO Load}_{\text{HNR}} = \sum_{\text{CA}=1}^n \text{HourlyLoad}_{\text{CA}}$$

Equation (3)

Where:

HourlyLoad_{CA} = the hourly load value for each on-peak hour on days when congestion relief was required (MW)

n = the number of Control Areas in Midwest ISO, including Control Areas of Coordinating Owners.

Each Firm Point-to-Point Transmission Customer is charged the appropriate rate times their reserved capacity for each firm reservation according to Equation 1.

Charge to Control Areas

Control Areas pay the balance of the hourly congestion relief cost on a load ration share basis.

$$\text{Charge}_{CA} = \frac{\text{Balance}_{HNR} * \text{Load}_{CA}}{\text{Load}_{HNR}}$$

Equation (4)

Where:

Charge_{CA} = Control Area's non-redispach related congestion relief charge for the hour (\$)

Balance_{HNR} = Total hourly non-redispach related congestion cost – the total collected from Transmission Customers for that hour (\$)

Load_{CA} = Control Area Load for that hour – scheduled capacity of Control Area Drive-In and Drive-Within schedules for that hour (MW)

Load_{HNR} = Sum of the Control Area loads in the Midwest ISO and the Transmission Provider's load – the sum of the Drive-In and Drive-Within schedules for that hour (MW)

**ATTACHMENT K-3
MUST-RUN UPLIFT CHARGES**

Pursuant to Section 5 of Attachment K, the designation of Must-Run units will result in costs (including start-up costs) to provide incremental energy from such units. The Contractor shall recover these costs on a monthly basis from Transmission Customers serving load, including entities serving bundled native load, in the control area experiencing the local Must-Run system condition. The monthly charge to a customer will be the customer's pro rata share of the Must-Run cost for each Must-Run occurrence during the month in the indicated control area.

The charge to an entity for a given occurrence is as follows:

$$A = B * (C/D)$$

Where:

- SUSPENDED**
- A: The entity's Must-Run unit uplift charge for all hours of the month that an entity in an indicated control area incurred costs due to the Contractor's Must-Run instructions.
 - B: Total Must-Run costs for system conditions occurring in the indicated control area during the month.
 - C: The entity's load in the indicated control area during the hours of the month for which the Contractor issued Must-Run instructions.
 - D: The sum of all network transmission service load (including load served by the Transmission Owners) and Point-to-Point Transmission Service schedule serving load in the indicated control area during the hours of the month for which the Contractor issued Must-Run instructions.

ATTACHMENT L
APPLICATION FOR ELIGIBLE CUSTOMER STATUS

In order to obtain eligible customer status under Manitoba Hydro's Transmission Tariff, the Applicant must please complete this form and mail to the address below:

TO: Blaine Poff
Transmission Services Department
Transmission System Operations Division
Manitoba Hydro
P.O. Box 815
820 Taylor Avenue
Winnipeg, Manitoba
Canada
R3C 2P4

SECTION I:

a) **APPLICANT:**

Customer Name:

Address:

City, State/Province, Zip/Postal Code:

Voice Number:

Facsimile Number:

b) CONTACT PERSON:

Customer Name:

Address:

City, State/Province, Zip/Postal Code:

Voice Number:

Facsimile Number:

By submitting this Application the Applicant represents that it is, or will be upon commencement of the service, an Eligible Customer under Manitoba Hydro's Transmission Tariff. Applicant also represents that the purpose of this Application is not to assist an Eligible Customer to avoid the reciprocity and comparable service provision as set forth in Section 6 of Manitoba Hydro's Tariff.

In order to complete the Transmission Provider's evaluation of the Applicant's creditworthiness as permitted by Section 11 of the Transmission Tariff, please provide concurrently with the submission of this Application the following information:

1. A list of all corporate affiliates, parent companies, and subsidiaries;
2. Current financial statements, the most recent annual reports of shareholders or members, most recent 10-K report, or other filings with regulatory agencies which discuss Applicant's financial status;
3. A bank reference and two trade references; and

By this Application, Applicant confirms that it is not operating under any bankruptcy or insolvency laws, is not subject to debt reduction or reorganization procedures under state or provincial or Canadian federal laws, or that Applicant has no collection lawsuits or judgements outstanding which could affect its ability to remain solvent. This Application is not considered complete until the foregoing information is received by the Transmission Provider.

SECTION II: TO BE COMPLETED BY TRANSMISSION PROVIDER

RECEIVED AT MANITOBA HYDRO

Date: _____

By: _____

Name: _____

Title: _____

By: _____

Name: Blaine Poff

Title: Manager, Transmission Services Department

SECTION III: TO BE COMPLETED BY APPLICANT

Applicant Declaration:

I declare that I have read the Manitoba Hydro-Electric Board's Tariff Document (Tariff) and that I accept all its terms and conditions. I also declare that I am or shall be upon commencement of service an Eligible Customer under the Tariff.

Applicant's Representative's Signature

Date

ATTACHMENT M LOSSES

As stated in Sections 15.7 and 28.5, the Transmission Provider is not obligated to replace Real Power Losses. The Transmission Customer shall be responsible for paying for losses as described herein or replacing the losses on a real time basis. Losses over the Manitoba Hydro Transmission System are administered using a system average pricing method in which the Transmission Customer is charged the average cost of losses for the Transmission Provider's Transmission System. This method takes the total cost of the Transmission Provider's Transmission System losses divided by the Transmission Provider's Transmission System load and does not discriminate between generators or load based on their locations or their contribution to the Transmission Provider's system losses. The Transmission Provider will calculate the average losses for the Transmission Provider's Transmission System on a yearly basis.

For the purpose of calculating the losses described herein, the Transmission Owner shall develop power flow base cases with sufficient detail to represent the transmission systems of the Transmission Provider and the Midwest ISO and surrounding networks. Power flow base cases shall be developed annually for load levels of 50%, 75% and 100% for the winter and summer seasons to recognize changes in the transmission system configuration, load level and Firm Point-to-Point Transmission Service on the Transmission Provider's Transmission System. Transformer taps and switched shunts should be held fixed and the phase angle regulators should be modeled as they would be in transmission reliability studies. Other modeling adjustments should be incorporated as appropriate. The calculated losses of the six base cases shall be averaged to determine the system average losses.

ATTACHMENT N

Reserved

ATTACHMENT O
REVENUE REQUIREMENT AND RATE FORMULAE

All in Canadian Dollars, Fiscal Year 2006 data:

Zonal Facilities Charge for Drive-In and Drive-Within Transmission Service

Gross Transmission Investment:	\$1,548,370,415
Net Transmission Investment, Rate Base:	\$ 996,086,305
Net Transmission Revenue Requirement:	\$ 176,202,891
Billing Determinant:	3,378 MW

Calculated Tariff Rate:

Annual Cost:	\$ 52,164/MW/yr
Network and Point to Point Rate:	\$ 4,347/MW of Reserved Capacity per month

	<u>Peak Rate</u>	<u>Off-Peak Rate</u>
Weekly Point to Point Rate:	\$ 1,003.16 /MW	\$ 1,003.16 /MW
Daily Point to Point Rate:	\$ 200.63/MW	\$ 142.92/MW
Hourly Point to Point Rate:	\$ 12.52/MWh	\$ 5.95/MWh

Details of Revenue Requirement Calculation:

Operating Expenses	\$ 51,886,212
Depreciation Expenses	46,422,352
Allocated Capital Tax	5,280,372
Return on Investment (Interest Expense + Reserve)	84,997,793
Less:	
Miscellaneous Transmission Revenue	12,383,837
Net Transmission Revenue Requirement:	\$176,202,891

Rates for Drive-Out and Drive-Through Transmission Services

An average annual rate will be calculated by the Contractor according to the following formula: $(1-2) \div 3$, where: 1 is the sum of the Gross Revenue Requirements of the MISO Transmission Owners (as detailed in the MISO Tariff Attachment O) and the Transmission Provider (as stated above); 2 is the sum of the

Revenue Credits for the MISO Transmission Owners (as detailed in Attachment O of the MISO Tariff) and for the Transmission Provider (as stated above); 3 is the sum of the Divisors for the MISO Transmission Owners (as detailed in Attachment O of the MISO Tariff) and for the Transmission Provider (as stated above).

On Peak:	Annual Rate	Average Annual Rate
	Monthly Rate	Average Annual Rate divided by 12
	Weekly Rate	Average Annual Rate divided by 52
	Daily Rate	Average Annual Rate divided by 260
	Hourly Rate	Average Annual Rate divided by 4160
Off Peak:	Daily Rate	Average Annual Rate divided by 365
	Hourly Rate	Average Annual Rate divided by 8760

ATTACHMENT P

Reserved

ATTACHMENT Q

Curtailment Procedures

North American Electric Reliability Council Transmission Loading Relief (“TLR”) Procedure (NERC – March 18, 1998) and any amendments thereto are hereby incorporated and made a part of this Tariff. See www.nerc.com for the current version of NERC TLR Procedures.

Appendix 9C1 Transmission Loading Relief Procedure – Eastern Interconnection

Version 2b, Draft 1 (markup)

Appendix Subsections

- A. General Requirements
- B. Transmission Loading Relief (TLR) Levels
- C. Interchange Transaction Curtailment Order
- D. Transaction Management and Curtailment Process
- E. Principles for Mitigating Constraints On and Off the Contract Path
- F. Transaction Contribution Factor Calculation
- G. Transaction Curtailment Formula
- H. NERC Transmission Loading Relief Procedure Event Log

Terms

Transaction Reallocation (or Reallocation). The total or partial curtailment of TRANSACTIONS during TLR Level 3a or 5a to allow TRANSACTIONS using higher priority TRANSMISSION SERVICE to be implemented.

Curtailment Threshold. The minimum TRANSFER DISTRIBUTION FACTOR which, if exceeded, will subject an INTERCHANGE TRANSACTION to curtailment to relieve a transmission facility CONSTRAINT.

Introduction

The NERC Transmission Loading Relief (TLR) Procedure is an EASTERN INTERCONNECTION-wide procedure to allow the SECURITY COORDINATORS to:

1. Respect TRANSMISSION SERVICE reservation priorities, and
2. Mitigate potential or actual OPERATING SECURITY LIMIT violations.

Transmission Provider Obligations

NERC recognizes that TRANSMISSION PROVIDERS are subject to obligations under FERC-approved tariffs or other agreements, and nothing in these procedures shall be interpreted as changing those obligations. This Appendix uses the term “transmission reservation” to mean transmission arranged under the FERC pro forma tariff as well as under other transmission agreements.

Relationship between TLR Procedure and FERC pro forma Tariff

The TLR Procedure has been incorporated into the transmission tariff of many TRANSMISSION PROVIDERS, and is on file with the Federal Energy Regulatory Commission. The TLR Procedure follows the curtailment provisions of the pro forma tariff with regards to Non-firm and Firm

For Operating Committee
Approval on Interim Basis

March 28–29, 2001.

Major changes:

1. Added references for Reallocation.
2. Considerations for handling Transactions using Firm Point-to-Point Transmission Service

We have left several markups and text boxes in place to show the major revisions.

Notes in mauve boxes refer to changes in handling Firm Transactions.

The Curtailment Threshold is currently set at 5%. The Security Subcommittee is developing a variable threshold criteria.

Introduction

Point-to-Point Transmission Service, and Network Integration Transmission Service.

TLR Procedure curtails Transactions. The pro forma tariff’s curtailment provision addresses the curtailment of the *transmission service* over the CONSTRAINED FACILITIES, not curtailment of the generation product being sold via that service. The tariff does not consider the effect of the curtailment on the load-serving entity; instead, it considers the obligations of the TRANSMISSION PROVIDER(S) in providing or curtailing the Transmission Service. The NERC TLR Procedure translates the curtailment of the Transmission Service into a curtailment of the actual MW flow over the constraint.

Considerations for Firm Point-to-Point Transmission Service.

Transactions using Firm Point-to-Point Transmission Service are afforded the highest priority. Therefore, in many situations, the TLR Procedure will allow these Transactions to start during the implementation of a TLR 2, 3a, 3b, and 4. Please refer to **Sections B.2. through B.5.** and the “**Interchange Transaction Curtailments During TLR Level 3b Reference Document**” for details.

Need some explanation here, and add subhead for discussion of Firm Transactions.

Redispatch considerations. Regarding the curtailment of transmission use by Firm Point-to-Point Transmission Service, the TLR Procedure follows the Federal Energy Regulatory Commission’s pro forma tariff that TRANSMISSION PROVIDERS are not obligated to redispatch their own resources to maintain TRANSACTIONS using Firm Point-to-Point Transmission Service before they are curtailed on a pro-rata basis with transmission use for Network Integration Transmission Service and Native Load.

Curtailment of Service to Network and Native Load customers. The TLR Procedure includes the Transaction Contribution Factor (TCF), which calculates the portion of the CONSTRAINED FACILITY’S loading due to Firm Point-to-Point Transmission Service. This is one part of the calculation that the Transmission Provider must perform to ensure that this curtailment is comparable and non-discriminatory with the Transmission Provider’s curtailment of Network Integration Transmission Service and Transmission Service for Native Load. (See **Section F, “Transaction Contribution Factor Calculation”**)

Appendix 9C1 – Transmission Loading Relief Procedure

Introduction

Changes in this column for clarification.

Changes in this column for considerations for Firm Point-to-Point Transmission Service.

Summary of TLR Levels

TLR Level	Security Coordinator Action	Comments	
1	Notify SECURITY COORDINATORS of potential OPERATING SECURITY LIMIT violations		System Secure
2	Hold INTERCHANGE TRANSACTIONS at current levels to prevent OPERATING SECURITY LIMIT violations	Of those transactions at or above the CURTAILMENT THRESHOLD, only those under existing Transmission Service reservations will be allowed to continue, and only to the level existing at the time of the hold. Transactions using Firm Point-to-Point Transmission Service are not held. See Section B.1.	
3a	Reallocation Transactions using Non-firm Point-to-Point Transmission Service are curtailed to allow Transactions using higher priority Point-to-Point Transmission Service	Curtailed follows Transmission Service priorities. Higher priority transactions are enabled to start by the REALLOCATION process. See Section B.3.	
3b	Curtail Transactions using Non-firm Point-to-Point Transmission Service to mitigate Operating Security Limit Violation	Curtailed follows Transmission Service priorities. There are special considerations for handling Transactions using Firm Point-to-Point Transmission Service. See Section B.4.	Security Limit Violation
4	Reconfigure transmission system to allow Transactions using Firm Point-to-Point Transmission Service to continue	There may or may not be an OPERATING SECURITY LIMIT violation. There are special considerations for handling Transactions using Firm Point-to-Point Transmission Service. See Section B.5.	System Secure
5a	Reallocation Transactions using Firm Point-to-Point Transmission Service are curtailed (pro rata) to allow new Transactions using Firm Point-to-Point Transmission Service to begin (pro rata).	Attempts to accommodate all Transactions using Firm Point-to-Point Transmission Service, though at a reduced ("pro rata") level. Pro forma tariff also requires curtailment / REALLOCATION on pro rata basis with Network Integration Transmission Service and Native Load. See Section B.6.	
5b	Curtail Transactions using Firm Point-to-Point Transmission Service to mitigate Operating Security Limit Violation	Pro forma tariff requires curtailment on pro rata basis with Network Integration Transmission Service and Native Load. See Section B.7.	
6	Emergency Action	Could include demand-side management, redispatch, voltage reductions, interruptible and firm load shedding. See Section B.8.	Security Limit Violation
0	TLR Concluded	Restore transactions. See Section B.9.	System Secure

Unless explained otherwise, "curtailment" refers to those INTERCHANGE TRANSACTIONS whose DISTRIBUTION FACTOR on the CONSTRAINED FACILITY exceeds the CURTAILMENT THRESHOLD.

Introduction

Posting TLR Events

When the Security Coordinator initiates the TLR Procedure, he will notify all other Security Coordinators via the SCIS. Furthermore, the Interchange Distribution Calculator will automatically post the TLR Level on the NERC TLR Status web page.

Notification – TLR Level 1

This Level is an alert to inform the marketplace and other Security Coordinators that curtailments are likely to occur. The Security Coordinator should announce a TLR 0 once the Notification level is no longer necessary.

Hold – TLR Level 2

If an OPERATING SECURITY LIMIT violation is imminent, the SECURITY COORDINATOR shall direct his CONTROL AREAS to maintain INTERCHANGE TRANSACTIONS such that, of those transactions that are at or above the CURTAILMENT THRESHOLD, only those under existing Transmission Service reservations will be allowed to continue, and only to the level existing at the time of the hold. During TLR Level 2, the SECURITY COORDINATOR will allow existing INTERCHANGE TRANSACTIONS to increase, or new INTERCHANGE TRANSACTIONS to begin, if they help mitigate the CONSTRAINT. TRANSACTIONS using Firm Point-to-Point Transmission Service will be allowed to start.

Treatment of Firm Transactions

TLR Level 2 is a transient state, which requires a quick decision to proceed to higher TLR Levels (3 and above) to allow INTERCHANGE TRANSACTIONS to be implemented according to their transmission reservation priority. The time for being in TLR Level 2 should be no more than 30 minutes, with the understanding that there may be circumstances where this time may be exceeded. If the time in TLR Level 2 exceeds 30 minutes, the Security Coordinator must document this action on the TLR Log. When faced with a new INTERCHANGE TRANSACTION using higher priority Point-to-Point Transmission Service, the SECURITY COORDINATOR **must immediately proceed to TLR Level 3a** to curtail those INTERCHANGE TRANSACTIONS using lower priority Point-to-Point Transmission Service. He must give preference to those INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service, followed by those using higher priority Nonfirm Point-to-Point Transmission Service. The SECURITY COORDINATORS shall monitor and coordinate the timing of the curtailment and reallocation process.

Curtailing – TLR Levels 3a, 3b, 5a, 5b

Curtailments are required for two reasons:

1. To allow an INTERCHANGE TRANSACTION using a higher priority Transmission Service to begin when it would otherwise cause an OPERATING SECURITY LIMIT Violation (called “Reallocation” – TLR Level 3a, and 5a), and
2. To mitigate an imminent or existing OPERATING SECURITY LIMIT Violation (TLR Level 3b and 5b).¹

Should curtailment become necessary by using TLR 3b or 5b to mitigate a potential or actual OPERATING SECURITY LIMIT violation, INTERCHANGE TRANSACTIONS whose Transfer Distribution Factors (TDF) across the specific

Removed “all.” Some Firm Transactions will be allowed to start.

¹ This includes mitigation of contingency overloads.

Introduction

CONSTRAINED FACILITY are at or above the CURTAILMENT THRESHOLD shall be curtailed whenever practicable on a proportional basis and according to these Procedures as explained in **Section G, “Transaction Curtailment Formula.”** The order of INTERCHANGE TRANSACTION curtailment is explained in **Section C., “Interchange Transaction Curtailment Order.”** Some TRANSACTIONS using Firm Point-to-Point Transmission Service will be allowed to start during TLR 3b. See **Section B, “Transmission Loading Relief (TLR) Levels,”** and **“Interchange Transaction Curtailments During TLR Level 3b Reference Document,”** for details.

These curtailments will remain in effect until such time as the CONSTRAINT has been mitigated, allowing the INTERCHANGE TRANSACTIONS to be restored.

Reconfiguration – TLR Level 4

Before the SECURITY COORDINATOR orders curtailment of INTERCHANGE TRANSACTIONS using Firm Point-to-Point TRANSMISSION SERVICE (TLR Level 5a or 5b), he will request the TRANSMISSION PROVIDERS in his SECURITY AREA to attempt to reconfigure their transmission systems to allow the INTERCHANGE TRANSACTIONS to continue. Transmission reconfiguration may be implemented as long as it does not jeopardize the operating security of the INTERCONNECTION. Transactions using Non-firm Point-to-Point Transmission Service will be curtailed or held from starting. Some Transactions using Firm Point-to-Point Transmission Service will be allowed to start. See **Section B, “Transmission Loading Relief (TLR) Levels,”** and **Section F, “Transaction Contribution Factor Calculation”** for details.

Treatment of Firm Transactions

Emergency Procedures – TLR Level 6

If the SECURITY COORDINATOR is unable to mitigate the CONSTRAINT through the use of TLR Levels 3, 4, or 5, then he has the authority to immediately direct the CONTROL AREAS to take actions such as redispatch generation, reconfigure transmission, or reduce load to mitigate the critical condition until INTERCHANGE TRANSACTIONS can be reduced utilizing the TLR **Interchange Transaction Curtailment Order**, or other methods, to return the system to a reliable state. All CONTROL AREAS shall comply with all requests from their SECURITY COORDINATOR. However, the CONTROL AREA operator should immediately notify his SECURITY COORDINATOR if the SECURITY COORDINATOR’S request is unclear or would seem to cause an operating problem.

Return to Normal Operations – TLR Level 0

The SECURITY COORDINATOR that is experiencing the CONSTRAINT within its SECURITY AREA shall notify all SECURITY COORDINATORS via the SCIS when the adverse conditions are mitigated and the system is in a “normal” state.

Considerations for Constraints On and Off the Contract Path

Interchange Transaction Priority **ON** the Contract Path

If the CONSTRAINED FACILITY is on the contract path, the curtailment priority will be equal to the TRANSMISSION SERVICE priority of the link on which the CONSTRAINED FACILITY is located. [Section E., “Principles for Mitigating Constraints On and Off the Contract Path”]

Introduction

Interchange Transaction Priority OFF the Contract Path

If the CONSTRAINED FACILITY is not on the contract path of the INTERCHANGE TRANSACTION, the curtailment priority will be equal to the *lowest* Transmission Service priority of the links on the contract path. (This means that an INTERCHANGE TRANSACTION using Firm Point-to-Point Transmission Service on all contract path links is considered a “firm” INTERCHANGE TRANSACTION even if the CONSTRAINED FACILITY is off the contract path.)

Redispatch and Other Congestion Management Options

Some TRANSMISSION PROVIDERS offer redispatch or other congestion management options that allow a Transmission Customer to mitigate the effect of its INTERCHANGE TRANSACTION on the CONSTRAINED FACILITY. If the Transmission Customer elects to use such an option, the SECURITY COORDINATOR must treat the INTERCHANGE TRANSACTION accordingly in the curtailment scheme. (Note: “Local” congestion management procedures require approval by NERC if they are to be used in lieu of the TLR Procedure prescription. See Policy 9.C. Requirement 3.2.1.1.)

A. General Requirements

1. **Initiation only by Security Coordinator.** The NERC Transmission Loading Relief Procedure may be initiated only by a SECURITY COORDINATOR at 1) the SECURITY COORDINATOR’S own request, or 2) upon the request of a Transmission Provider or CONTROL AREA.
2. **Mitigating transmission constraints.** The TLR Procedure may be used to mitigate potential or actual OPERATING SECURITY LIMIT violations on any transmission facility modeled in the INTERCHANGE DISTRIBUTION CALCULATOR. [See also Section 6.1, “Interchange Transactions not in the IDC.”]
 - 2.1. **Requesting relief on tie facilities.** Any TRANSMISSION PROVIDER or CONTROL AREA who operates the tie facility may request relief from his SECURITY COORDINATOR.
 - 2.1.1. **INTERCHANGE TRANSACTION priority on tie facilities.** The priority of the INTERCHANGE TRANSACTION(S) to be curtailed is determined by the Transmission Service reserved on the limiting Transmission Provider’s system who requested the relief.
3. **Order of TLR Levels and taking emergency action.** The SECURITY COORDINATOR may not necessarily follow the TLR Levels in their numerical order (See Section B, “TLR Levels”). Furthermore, if a SECURITY COORDINATOR deems that a transmission loading condition could jeopardize bulk system reliability, the SECURITY COORDINATOR has the authority to enter TLR Level 6 directly, and immediately direct the CONTROL AREAS to take such actions as redispatch generation, or reconfigure transmission, or reduce load to mitigate the critical condition until INTERCHANGE TRANSACTIONS can be reduced utilizing the TLR Transaction Curtailment Procedures, or other methods, to return the system to a secure state.
4. **Notification of TLR Procedure implementation.** The SECURITY COORDINATOR initiating the use of the TLR Procedure must notify other SECURITY COORDINATORS and TRANSMISSION PROVIDERS, and must post the initiation and progress of the TLR event on the NERC TLR Status web page.
 - 4.1. **Notifying other Security Coordinators.** The SECURITY COORDINATOR initiating the TLR Procedure shall inform all other SECURITY COORDINATORS via the Security Coordinator Information System (SCIS) that the TLR Procedure has been implemented.
 - 4.1.1. **Actions expected.** The SECURITY COORDINATOR initiating the TLR Procedure shall indicate the actions expected to be taken by other SECURITY COORDINATORS. [See also: Policy 3B and 3D for CONTROL AREA Requirements during curtailments.]

A. General Requirements

- 4.2. Notifying TRANSMISSION PROVIDERS and CONTROL AREAS.** SECURITY COORDINATORS must keep the TRANSMISSION PROVIDERS and CONTROL AREAS in his SECURITY AREA informed when entering and leaving any TLR level.
- 4.3. Notifying Control Areas.** The SECURITY COORDINATOR for the SINK CONTROL AREA is responsible for directing that CONTROL AREA to curtail the INTERCHANGE TRANSACTIONS as specified by the SECURITY COORDINATOR implementing the TLR Procedure. [See **Policy 3.D. for Control Area curtailment notification details.**]

 - 4.3.1. Notification order.** Within a Transmission Service priority level, the SINK CONTROL AREAS whose INTERCHANGE TRANSACTIONS have the largest impact on the CONSTRAINED FACILITIES shall be notified first if practicable.
- 4.4. Updates.** At least once each hour, or when conditions change, the SECURITY COORDINATOR implementing the TLR Procedure shall update all other SECURITY COORDINATORS (via the SCIS), as well as the affected TRANSMISSION PROVIDERS and CONTROL AREAS.
- 5. Obligations.** All SECURITY COORDINATORS must comply with the request of the SECURITY COORDINATOR who initiated the TLR Procedure, unless the initiating SECURITY COORDINATOR agrees otherwise.

 - 5.1. Use of TLR Procedure with “local” procedures.** A SECURITY COORDINATOR may implement a local transmission loading relief or congestion management procedure simultaneously with an INTERCONNECTION-wide procedure. However, he is obligated to follow the curtailments as directed by the INTERCONNECTION-wide procedure. If the SECURITY COORDINATOR desires to use a local procedure as a substitute for curtailments as directed by the INTERCONNECTION-wide procedure, he may do so only if such use is approved by the NERC Security Coordinator Subcommittee and Operating Committee.²
- 6. Consideration of Interchange Transactions.** The administration of the TLR Procedure is guided by information obtained from the Interchange Distribution Calculator (IDC).

 - 6.1. Interchange Transactions not in the IDC.** SECURITY COORDINATORS shall also treat known INTERCHANGE

² Examples would be 1) a local procedure that curtails INTERCHANGE TRANSACTIONS in a different order or ratio than the INTERCONNECTION-wide procedure, or 2) a local redispatch procedure.

A. General Requirements

TRANSACTIONS that may not appear in the IDC in accordance with the procedures in this document.

- 6.2. **Transmission elements not in IDC.** When a SECURITY COORDINATOR is faced with an overload on a transmission element that is not modeled in the IDC, the SECURITY COORDINATOR shall use the best information available to curtail INTERCHANGE TRANSACTIONS in order to operate the system in a reliable manner. The SECURITY COORDINATOR shall use his best efforts to ensure that INTERCHANGE TRANSACTIONS with a TRANSFER DISTRIBUTION FACTOR of less than the CURTAILMENT THRESHOLD on the transmission element not modeled in the IDC are not curtailed.
- 6.3. **Questionable IDC results.** Any SECURITY COORDINATOR (or TRANSMISSION PROVIDER through his SECURITY COORDINATOR) who believes the curtailment list from the IDC for a particular TLR event is incorrect shall use his best efforts to perform those adjustments necessary to bring the curtailment list into conformance with the principles of this Procedure. Causes of questionable IDC results may include:
- Missing INTERCHANGE TRANSACTIONS that are known to contribute to the CONSTRAINT.
 - Significant change in transmission system topology
 - TDF matrix error.
- Impacts of questionable IDC results *may* include:
- Curtailment that would have no effect on, or aggravate the constraint.
 - Curtailment that would initiate a constraint elsewhere. If other SECURITY COORDINATORS are involved in the TLR event, there must be an agreement among those SECURITY COORDINATORS on the adjustments to the curtailment list.
- 6.4. **Curtailment that would cause a constraint elsewhere.** If the SECURITY COORDINATOR is aware that an INTERCHANGE TRANSACTION curtailment directed by the IDC would cause a constraint to occur elsewhere, after consulting with other SECURITY COORDINATORS, he may exempt that INTERCHANGE TRANSACTION from curtailment.
- 6.5. **Redispatch options.** The SECURITY COORDINATOR shall ensure that INTERCHANGE TRANSACTIONS that are linked to redispatch options are protected from curtailment in accordance with the redispatch provisions. [See also: **Policy 9C. Req. 3.2.1.1 on use of local procedures.**]

A. General Requirements

- 6.6. **Reallocation.** During a TLR Level 3A, TRANSACTIONS of higher priority that meet the Approved-tag Submission Deadline for Reallocation will be considered for REALLOCATION (see “**Interchange Transaction Reallocation Reference Document.**”) During a TLR Level 5A, TRANSACTIONS using Firm Transmission Service will considered for REALLOCATION be if they have met the same tag submission deadlines.
7. **IDC updates.** Any INTERCHANGE TRANSACTION adjustments or curtailments that result from using this Procedure must be entered into the IDC as explained in Policy 9.C. Requirement 1.1.
8. **Logging.** The SECURITY COORDINATOR shall complete the NERC Transmission Loading Relief Procedure Log (**Section I**) whenever he invokes TLR Level 2 or above, and send a copy of the log via e-mail to the NERC staff within two business days of the TLR event. The staff will post these logs on the NERC web site upon receipt.
9. **TLR Event Review.** The SECURITY COORDINATOR shall provide information regarding the TLR event to the NERC Market Interface Committee and Security Subcommittee in accordance with TLR review processes established by NERC as required. The Market Interface Committee may conduct reviews of certain TLR events based on the size and number of INTERCHANGE TRANSACTIONS that are affected, the frequency that the TLR Procedure is called for a particular CONSTRAINED FACILITY, or other factors. The Security Subcommittee will conduct reviews to ensure proper implementation and for “lessons learned.”

This report log is being automated and this section will be revised.

B. Transmission Loading Relief (TLR) Levels

Introduction

This section describes the various levels of the TLR Procedure. The description of each level begins with the circumstances that define the TLR Level, followed by the procedures to be followed.

The decision that a SECURITY COORDINATOR makes in selecting a particular TLR Level often depends on the transmission loading condition and whether the INTERCHANGE TRANSACTION is using Non-firm Point-to-Point Transmission Service or Firm Point-to-Point Transmission Service. There are further considerations that depend on whether the Constrained Facility is on or off the contract path. (**Section E., “Principles for Mitigating Constraints On and Off the Contract Path”**) It is important to note, as explained in the Introduction, that an INTERCHANGE TRANSACTION using Firm Point-to-Point Transmission Service on all contract path links is considered a “firm” INTERCHANGE TRANSACTION even if the CONSTRAINED FACILITY is off the contract path.

TLR Levels

1. Level 1 – Notify Security Coordinators of potential Operating Security Limit Violations.

1.1. Circumstances:

- The transmission system is secure.
- The SECURITY COORDINATOR foresees a transmission or generation contingency or other operating problem within his SECURITY AREA that could cause one or more transmission facilities to approach or exceed their OPERATING SECURITY LIMIT.

1.2. Notification procedures. The SECURITY COORDINATOR shall notify all SECURITY COORDINATORS via the Security Coordinator Information System as soon as the condition is foreseen. All affected SECURITY COORDINATORS shall check to ensure that INTERCHANGE TRANSACTIONS are posted in the INTERCHANGE DISTRIBUTION CALCULATOR.

2. Level 2 – Hold transfers at present level to prevent Operating Security Limit Violations

2.1. Circumstances for entering this level:

- The transmission system is secure,
- One or more transmission facilities are expected to approach, or are approaching, or are at their OPERATING SECURITY LIMIT.

2.2. Holding procedures. The SECURITY COORDINATOR may hold the implementation of any additional INTERCHANGE TRANSACTIONS that are at or above the CURTAILMENT THRESHOLD. However, the SECURITY COORDINATOR should allow additional INTERCHANGE TRANSACTIONS that flow across the CONSTRAINED FACILITY if their flow reduces the loading on the

Treatment of
Firm
Transactions.

B. Transmission Loading Relief (TLR) Levels

Constrained Facility or has a Transfer Distribution Factor less than the CURTAILMENT THRESHOLD. All INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service will be allowed to start.

2.2.1. TLR Level 2 is a transient state, which requires a quick decision to proceed to higher TLR Levels (3 and above) to allow INTERCHANGE TRANSACTIONS to be implemented according to their transmission reservation priority. The time for being in TLR Level 2 should be no more than 30 minutes, with the understanding that there may be circumstances where this time may be exceeded. If the time in TLR Level 2 exceeds 30 minutes, the Security Coordinator must document this action on the TLR Log.

3. Level 3a – Reallocation of Transmission Service by curtailing INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service to allow INTERCHANGE TRANSACTIONS using higher priority Transmission Service.

3.1. Circumstances for entering this level:

- The transmission system is secure
- One or more transmission facilities are expected to approach, or are approaching, or are at their OPERATING SECURITY LIMIT
- TRANSACTIONS using Non-firm Point-to-Point Transmission Service are flowing that are at or above the CURTAILMENT THRESHOLD on those facilities.
- The Transmission Provider has previously approved a higher priority Point-to-Point Transmission Service reservation over which a Transmission Customer wishes to begin an INTERCHANGE TRANSACTION. (See **Section 3.2** below)

3.2. Reallocation procedures to allow INTERCHANGE TRANSACTIONS using higher priority Point-to-Point Transmission Service to start. The SECURITY COORDINATOR with the constraint shall give preference to those INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service, followed by those using higher priority Nonfirm Point-to-Point Transmission Service as specified in **Section C. “Interchange Transaction Curtailment Order.”** INTERCHANGE TRANSACTIONS that have been held or curtailed as prescribed in this Section shall be reallocated (reloaded) according to their Transmission Service priorities when operating conditions permit. The specifications for performing this Reallocation,

B. Transmission Loading Relief (TLR) Levels

as well as the Tagging requirements, are found in the **“Interchange Transaction Reallocation During TLR Level 3a and 5a Reference Document.”**

- 3.2.1. INTERCHANGE TRANSACTIONS using higher priority Non-firm or Firm Transmission Service will displace INTERCHANGE TRANSACTIONS with lower priority Transmission Service.
- 3.2.2. INTERCHANGE TRANSACTIONS using Non-firm Transmission Service will not be curtailed to allow the start or increase of another INTERCHANGE TRANSACTION having the same priority Non-firm Transmission Service.
- 3.2.3. If there are insufficient INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that can be curtailed to allow for INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service to begin, the Security Coordinator will proceed to TLR Level 5a. (See **Section 6, “TLR Level 5a,”** and **“Interchange Transaction Curtailments During TLR Level 3b Reference Document”** for Reallocation of Interchange Transactions using Firm Point-to-Point Transmission Service)
- 3.2.4. Reloading of curtailed INTERCHANGE TRANSACTIONS will precede starting of new or increased INTERCHANGE TRANSACTIONS.
 - 3.2.4.1. Interchange Transactions whose tags were submitted to the Tag Authority prior to the TLR Level 2 or Level 3a being called, but were subsequently held from starting, are considered to have been curtailed and thus would be reloaded the same time as the curtailed INTERCHANGE TRANSACTIONS.
- 3.2.5. Transmission capability available for reloading or starting will be filled by eligible TRANSACTIONS on a pro-rata basis.
- 3.2.6. Transactions whose tags meet the Approved-tag Submission Deadline for Reallocation (see **“Interchange Transaction Reallocation During TLR Level 3a and 5a Reference Document”**) will be considered for reallocation for the upcoming hour. Tags submitted after this deadline will be considered for reallocation the following hour.

4. Level 3b – Curtail INTERCHANGE TRANSACTIONS using Non-Firm Transmission Service Arrangements to mitigate an

New Section.

B. Transmission Loading Relief (TLR) Levels

OPERATING SECURITY LIMIT Violation

4.1. Circumstances for entering this level:

- One or more transmission facilities are operating above their OPERATING SECURITY LIMIT, or
- Such operation is imminent and it is expected that facilities will exceed their security limit unless corrective action is taken, or
- One or more Transmission Facilities *will* exceed their OPERATING SECURITY LIMIT upon the removal from service of a generating unit or another transmission facility
- TRANSACTIONS using Non-firm Point-to-Point Transmission Service are flowing that are at or above the Curtailment Threshold on those facilities.

4.2. Holding new INTERCHANGE TRANSACTIONS. The Security Coordinator shall hold all new INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that are at or above the CURTAILMENT THRESHOLD during the period of the OPERATING SECURITY LIMIT Violation. INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service will be allowed to start if they are submitted to the IDC within specific time limits as explained in **“Interchange Transaction Curtailments During TLR Level 3b Reference Document.”**

4.3. Curtailment procedures to mitigate an OPERATING SECURITY LIMIT. The SECURITY COORDINATOR shall curtail INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that are at or above the CURTAILMENT THRESHOLD as specified in **Section C. “Interchange Transaction Curtailment Order.”**

5. Level 4 – Reconfigure Transmission

5.1. Circumstances for entering this level:

- One or more Transmission Facilities are above their OPERATING SECURITY LIMIT, or
- Such operation is imminent and it is expected that facilities will exceed their security limit unless corrective action is taken

5.2. Holding new INTERCHANGE TRANSACTIONS. The SECURITY COORDINATOR shall hold all new INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that are at or above the Curtailment Threshold during the period of the OPERATING SECURITY LIMIT Violation. INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service will be allowed to start if they are submitted to the IDC by 00:25 or the time at

Treatment of Firm Transactions.

Not necessarily true. The SC may go right to TLR 4. The IDC will order all NF to be curtailed.

B. Transmission Loading Relief (TLR) Levels

which the TLR Level 4 is called, whichever is later.

5.3. Reconfiguration procedures. Following the curtailment of all INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that are at or above the CURTAILMENT THRESHOLD in Level 3b that impact the CONSTRAINED FACILITIES, if an OPERATING SECURITY LIMIT violation is imminent or occurring, the SECURITY COORDINATOR(S) shall request that the affected TRANSMISSION PROVIDERS reconfigure transmission on their system, or arrange for reconfiguration on other transmission systems, to mitigate the constraint. Specific details are explained in **Section E., “Principles for Mitigating Constraints On and Off the Contract Path”**

6. Level 5a – Reallocation of Transmission Service by curtailing INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service on a pro rata basis to allow additional INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service.

6.1. Circumstances:

- The transmission system is secure
- One or more transmission facilities are at their OPERATING SECURITY LIMIT
- All INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that are at or above the CURTAILMENT THRESHOLD have been curtailed.
- The TRANSMISSION PROVIDER has been requested to begin an INTERCHANGE TRANSACTION using previously arranged Firm Transmission Service that would result in an OPERATING SECURITY LIMIT Violation.
- No further transmission reconfiguration is possible or effective.

6.2. Reallocation procedures to allow new INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service to start. Reallocation of INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service is a three-step process as follows:

6.2.1. Step 1 – Identify available redispatch options.

The SECURITY COORDINATOR shall assist the Transmission Provider(s) in identifying those known redispatch options that are available to the Transmission Customer that will mitigate the loading on the CONSTRAINED FACILITIES. If such redispatch options are deemed insufficient to mitigate loading on the CONSTRAINED FACILITIES, the SECURITY COORDINATOR shall proceed to

B. Transmission Loading Relief (TLR) Levels

implement these options while proceeding to Steps 2 and 3 below.

6.2.2. Step 2 – Calculate percent of the overload on the CONSTRAINED FACILITY due to Interchange Transactions using Firm Point-to-Point Transmission Service that are at or above the CURTAILMENT THRESHOLD. This is the MW that can be curtailed using the TLR Procedure, and this value shall be communicated to the Transmission Provider with the constraint. This is described in **Section F, “Transaction Contribution Factor Calculation.”** The Security Coordinator shall assist the Transmission Provider to calculate the percent of the overload on the CONSTRAINED FACILITIES caused by the TRANSMISSION PROVIDER’S Network Integration Transmission Service and Native Load as required by the TRANSMISSION PROVIDER’S filed tariff.

6.2.3. Step 3 – Curtail Interchange Transactions using Firm Transmission Service. The SECURITY COORDINATOR shall curtail or reallocate on a pro-rata basis (based on the MW level of the MW total to all such INTERCHANGE TRANSACTIONS), those INTERCHANGE TRANSACTIONS as calculated in **Section 7.2.2** over the CONSTRAINED FACILITIES. (See also **“Interchange Transaction Reallocation During TLR 3a and 5a Reference Document.”**) The SECURITY COORDINATOR shall assist the Transmission Provider in curtailing Transmission Service to Network Integration Transmission Service customers and Native Load if such curtailments are required by the Transmission Provider’s tariff. Available redispatch options will continue to be implemented.

7. Level 5b – Curtail INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service to mitigate an OPERATING SECURITY LIMIT Violation.

7.1. Circumstances:

- One or more Transmission Facilities are operating above their OPERATING SECURITY LIMIT, or
- Such operation is imminent, or
- One or more Transmission Facilities *will* exceed their OPERATING SECURITY LIMIT upon the removal from service of a generating unit or another transmission facility.
- All INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point

B. Transmission Loading Relief (TLR) Levels

Transmission Service that are at or above the CURTAILMENT THRESHOLD have been curtailed.

- No further transmission reconfiguration is possible or effective.
 - 7.2. Curtailment of INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service is a three-step process as follows:
 - 7.2.1. **Step 1 – Identify available redispatch options.**
The SECURITY COORDINATOR shall assist the Transmission Provider(s) in identifying those known redispatch options that are available to the Transmission Customer that will mitigate the loading on the CONSTRAINED FACILITIES. If such redispatch options are deemed insufficient to mitigate loading on the CONSTRAINED FACILITIES, the SECURITY COORDINATOR shall proceed to implement these options while proceeding to Steps 2 and 3 below.
 - 7.2.2. **Step 2 – Calculate** of the overload on the CONSTRAINED FACILITY due to Interchange Transactions using Firm Point-to-Point Transmission Service that are at or above the CURTAILMENT THRESHOLD. This is the MW that can be curtailed using the TLR Procedure, and this value shall be communicated to the Transmission Provider with the constraint. This is described in **Section G, “Transaction Contribution Factor Calculation.”** If required by the TRANSMISSION PROVIDERS’ tariffs, the Security Coordinator shall assist the Transmission Provider calculate the percentage of the overload on the CONSTRAINED FACILITIES caused by the Transmission Provider’s Network Integration Transmission Service and Native Load.
 - 7.2.3. **Step 3 – Curtailment of Interchange Transactions using Firm Transmission Service.**
At this point, the SECURITY COORDINATOR shall begin the process of curtailing INTERCHANGE TRANSACTIONS as calculated in **Section 7.2.2** over the CONSTRAINED FACILITIES using Firm Point-to-Point Transmission Service until the OPERATING SECURITY LIMIT violation has been mitigated. The SECURITY COORDINATOR shall assist the Transmission Provider in curtailing Transmission Service to Network Integration Transmission Service customers and Native Load if such curtailments are required by the TRANSMISSION

B. Transmission Loading Relief (TLR) Levels

PROVIDERS' tariff. Available redispatch options will continue to be implemented.

8. Level 6 – Emergency Procedures

8.1. Circumstances:

- One or more Transmission Facilities are above their OPERATING SECURITY LIMIT.
- One or more Transmission Facilities *will* exceed their OPERATING SECURITY LIMIT upon the removal from service of a generating unit or another transmission facility.

8.2. Implementing emergency procedures. If the transmission loading condition is deemed critical to bulk system reliability by a SECURITY COORDINATOR, the SECURITY COORDINATOR has the authority to immediately direct the CONTROL AREAS in his SECURITY AREA to redispatch generation, or reconfigure transmission, or reduce load to mitigate the critical condition until INTERCHANGE TRANSACTIONS can be reduced utilizing the TLR Procedures or other procedures to return the system to a secure state. All CONTROL AREAS shall comply with all requests from their SECURITY COORDINATOR.

9. Level 0 – TLR concluded

9.1. Interchange TRANSACTION restoration and notification procedures. The SECURITY COORDINATOR initiating the TLR Procedure shall notify all SECURITY COORDINATORS within the INTERCONNECTION via the SCIS when the OPERATING SECURITY LIMIT violations are mitigated and the system is in a “normal” state, allowing INTERCHANGE TRANSACTIONS to be reestablished at his discretion. Those with the highest transmission priorities shall be reestablished first if possible.

C. Interchange Transaction Curtailment Order

Curtailment of Interchange Transactions Using Non-firm Transmission Service

The SECURITY COORDINATOR will direct the curtailment of INTERCHANGE TRANSACTIONS using Non-firm TRANSMISSION SERVICE that are at or above the CURTAILMENT THRESHOLD for the following TLR Levels:

1. **TLR Level 3a.** Enable INTERCHANGE TRANSACTIONS using a higher Transmission reservation priority to be implemented, or
2. **TLR Level 3b.** Mitigate an OPERATING SECURITY LIMIT violation.

The INTERCHANGE TRANSACTION curtailment priority is determined by its TRANSMISSION SERVICE reservation over the constrained facility(ies) as shown in the box on the right:

The curtailment priority for INTERCHANGE TRANSACTIONS that do not have a Transmission Service reservation over the constrained facility(ies) is the lowest priority of the individual reserved transmission segments.

Curtailment of Interchange Transactions Using Firm Transmission Service

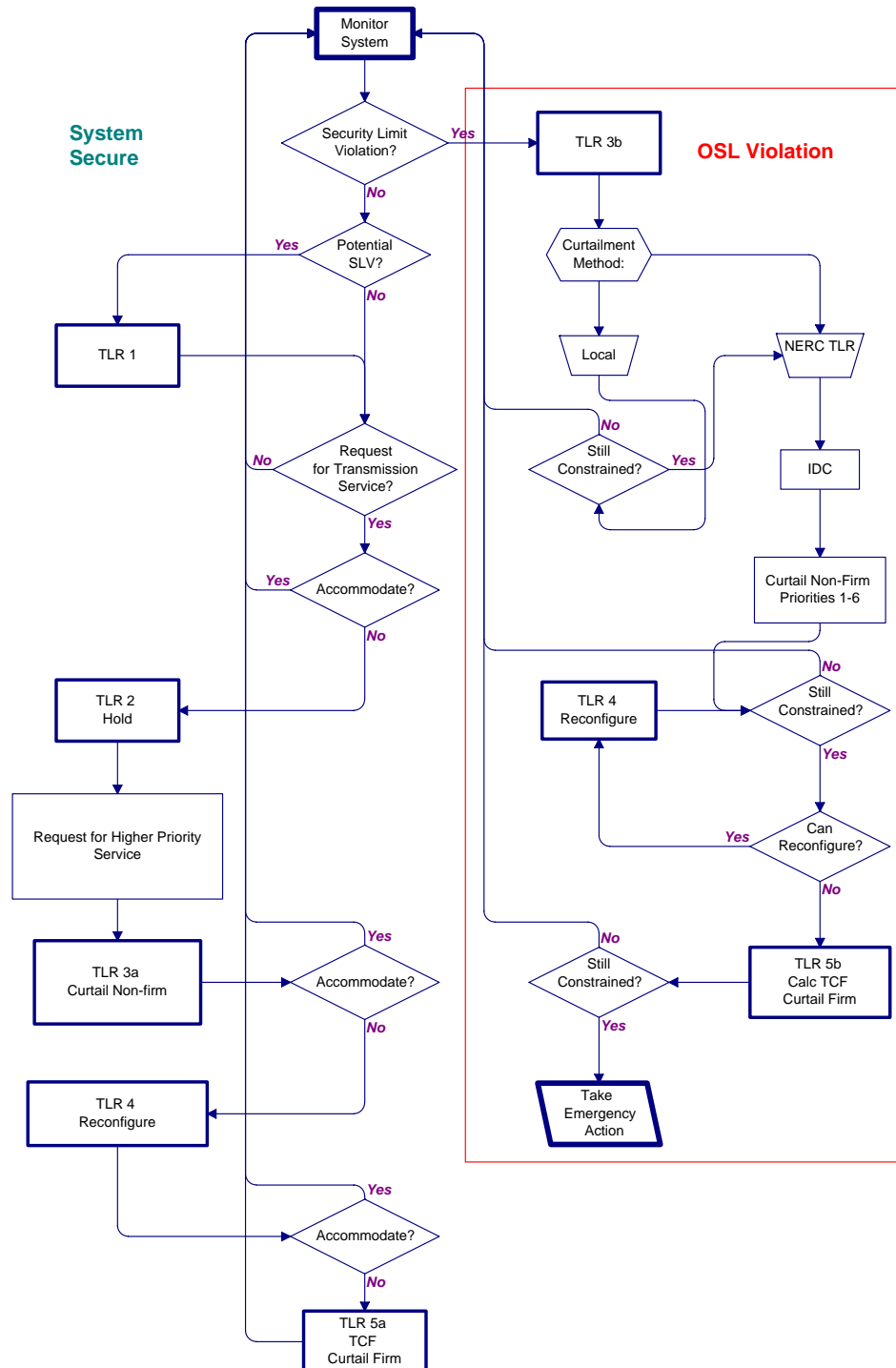
The SECURITY COORDINATOR will direct the curtailment of INTERCHANGE TRANSACTIONS using Firm TRANSMISSION SERVICE that are at or above the CURTAILMENT THRESHOLD for the following TLR Levels:

1. **TLR Level 5a.** Enable additional INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service to be implemented after all INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Service have been curtailed, or
2. **TLR Level 5b.** Mitigate an OPERATING SECURITY LIMIT violation that remains after all INTERCHANGE TRANSACTIONS using Non-firm Transmission Service has been curtailed under TLR Level 3b, and following attempts to reconfigure transmission under TLR Level 4.

Transmission Service Priorities	
Priority 0.	Next-hour Market Service – NX*
Priority 1.	Service over secondary receipt and delivery points – NS
Priority 2.	Hourly Service – NH
Priority 3.	Daily Service – ND
Priority 4.	Weekly Service – NW
Priority 5.	Monthly Service – NM
Priority 6.	Network Integration Transmission Service from sources not designated as network resources – NN
Priority 7.	Firm Point-to-Point Transmission Service and Network Integration Transmission Service from Designated Resources – F
*NX is Pending FERC Approval	

D. Transaction Management and Curtailment Process

This flowchart depicts an overview of the Transaction Management and Curtailment process. Detailed decisions are not shown.



E. Principles for Mitigating Constraints On and Off the Contract Path

Introduction

Reserving transmission service for an INTERCHANGE TRANSACTION along a “contract path” may not reflect the actual distribution of the power flows over the transmission network from generation source to load sink.

INTERCHANGE TRANSACTIONS arranged over a contract path may, therefore, overload transmission elements on other electrically parallel paths. The SECURITY COORDINATORS must agree on how the NERC Transmission Loading Relief Procedure will handle these INTERCHANGE TRANSACTIONS to, first, ensure the operational security of the INTERCONNECTION and, second, respect the obligations of the TRANSMISSION PROVIDERS’ tariffs.

The curtailment priority of an INTERCHANGE TRANSACTION depends on whether the CONSTRAINED FACILITY is on or off the contract path, and, if on the contract path, the Transmission Service of the link with the CONSTRAINED FACILITY.

The SECURITY COORDINATOR must also consider 1) the tariff obligations of the Transmission Provider with the CONSTRAINED FACILITY, 2) the Transmission Customer’s redispatch or other congestion management arrangements, and 3) arrangements among the TRANSMISSION PROVIDERS for handling certain CONSTRAINTS. Refer to examples beginning on page A9C1-240.

Principles for Constraints ON the Contract Path

Principle 1. If the transmission link with the CONSTRAINED FACILITY is Non-firm Point-to-Point Transmission Service, the entire INTERCHANGE TRANSACTION is considered non-firm, even if other links in the contract path are firm. When the CONSTRAINED FACILITY is on the contract path, the INTERCHANGE TRANSACTION takes on the transmission service priority of the Transmission Service link with the CONSTRAINED FACILITY regardless of the Transmission Service priority on the other links along the contract path.

Discussion. The TRANSMISSION PROVIDER simply has to call its SECURITY COORDINATOR, request the TLR Procedure be initiated, and allow the curtailments of all INTERCHANGE TRANSACTIONS that are at or above the CURTAILMENT THRESHOLD to progress until the relief is realized. Firm Point-to-Point Transmission Service links elsewhere in the contract path do not obligate TRANSMISSION PROVIDERS providing Non-firm Point-to-Point Transmission Service to treat the transaction as firm. For curtailment purposes, the INTERCHANGE TRANSACTION’S priority will be the priority of the TRANSMISSION SERVICE link with the CONSTRAINED

E. Principles for Mitigating Constraints On and Off the Contract Path

FACILITY. (See Principle #2 below.)

Principle 2. If the transmission link with the CONSTRAINED FACILITY is Firm Point-to-Point Transmission Service, the entire INTERCHANGE TRANSACTION is considered firm, even if other links in the contract path are non-firm.

Discussion. The curtailment priority of an INTERCHANGE TRANSACTION on a contract path link is not affected by the transmission service priorities arranged with other links on the contract path. If the CONSTRAINED FACILITY is on a Firm Point-to-Point Transmission Service contract path link, then the curtailment priority of the INTERCHANGE TRANSACTION is considered firm regardless of the transmission service arrangements elsewhere on the contract path. If the TRANSMISSION PROVIDER provides its services under the FERC pro forma tariff, it may also be obligated to offer its Transmission Customer alternate receipt and delivery points, thus allowing the Customer to curtail its Transmission Service over the CONSTRAINED FACILITIES.

For Constraints OFF the Contract Path

Principle 3. If *any* of the transmission links on the contract path are Non-firm Point-to-Point Transmission Service, the INTERCHANGE TRANSACTION is considered non-firm by the system with the CONSTRAINED FACILITY that is not on the contract path, and takes on the *lowest* transmission service priority of all TRANSMISSION SERVICE links along the contract path.

Discussion. An INTERCHANGE TRANSACTION arranged over a contract path where one or more individual links consist of Non-firm Point-to-Point Transmission Service is considered to be a non-firm INTERCHANGE TRANSACTION for CONSTRAINED FACILITIES off the contract path. Sufficient INTERCHANGE TRANSACTIONS that are at or above the CURTAILMENT THRESHOLD will be curtailed before any INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service are curtailed. The priority level for curtailment purposes will be the *lowest* level of transmission service arranged for on the contract path.

Principle 4. If *all* of the transmission links on the contract path with the CONSTRAINED FACILITY are Firm Point-to-Point Transmission Service, then the INTERCHANGE TRANSACTION is considered firm and will *not* be curtailed to relieve a CONSTRAINT off the contract path until all non-firm INTERCHANGE TRANSACTIONS that are at or above the CURTAILMENT THRESHOLD have been curtailed.

E. Principles for Mitigating Constraints On and Off the Contract Path

Discussion. If the entire contract path is Firm Point-to-Point Transmission Service, then the TLR procedure will treat the INTERCHANGE TRANSACTION as firm even for CONSTRAINTS off the contract path and will not curtail that INTERCHANGE TRANSACTION until all non-firm INTERCHANGE TRANSACTIONS that are at or above the CURTAILMENT THRESHOLD have been curtailed. However, TRANSMISSION PROVIDERS off the contract path are not obligated to reconfigure their transmission system or provide other congestion management procedures unless special arrangements are in place. Because the INTERCHANGE TRANSACTION is considered firm “everywhere,” the SECURITY COORDINATOR may attempt to arrange for TRANSMISSION PROVIDERS or CONTROL AREAS to reconfigure transmission or provide other congestion management options, even if they are off the contract path, to try to avoid curtailing the INTERCHANGE TRANSACTION that is using the Firm Point-to-Point Transmission Service.

Examples

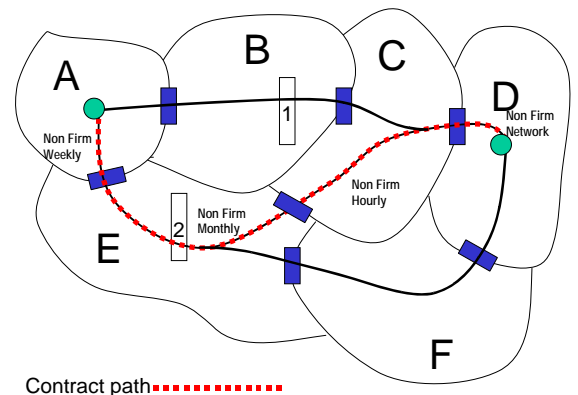
This section explains, by example, the obligations of the TRANSMISSION PROVIDERS on and off the contract path when calling for Transmission Loading Relief. (References to Principles refer to **Section E, “Principles for Mitigating Constraints On and Off the Contract Path,”** on the preceding pages.) When Reallocating or curtailing INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service under TLR Level 5a or 5b, the TRANSMISSION PROVIDER may be obligated to perform comparable curtailments of its TRANSMISSION SERVICE to Network Integration and Native Load customers. See **Section F, “Transaction Contribution Factor Calculation”**.

Scenario:

- INTERCHANGE TRANSACTION arranged from system A to system D, and assumed to be at or above the CURTAILMENT THRESHOLD
- Contract path is A-E-C-D (except as noted)
- Locations 1 and 2 denote CONSTRAINTS

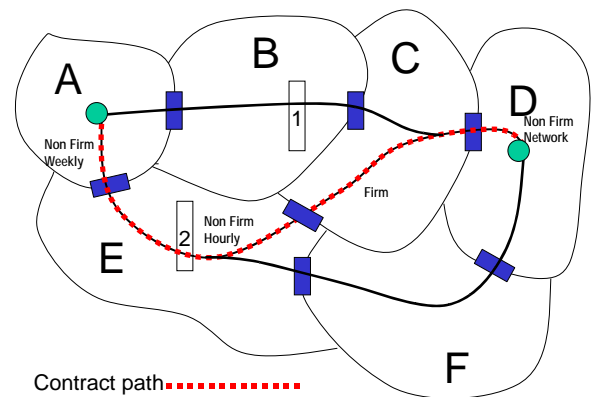
Case 1: E is a non-firm Monthly path, C is non-firm Hourly; E has CONSTRAINT at #2.

- E may call SECURITY COORDINATOR for TLR Procedure to relieve overload at CONSTRAINT #2.
- INTERCHANGE TRANSACTION A-D may be curtailed by TLR action **as though it was being served by Non-firm Monthly Point-to-Point Transmission Service**, even though it was using Non-firm Hourly Point-to-Point TRANSMISSION SERVICE from C. That is, it takes on the priority of the link with the CONSTRAINED FACILITY along the contract path. (Principle 1)



Case 2: E is a non-firm hourly path, C is firm; E has CONSTRAINT at #2.

- Although C is providing Firm Service, the CONSTRAINT is not on C’s system, therefore E is not obligated to treat the Interchange Transaction as though it was being served by Firm Point-to-Point Transmission Service.
- E may call SECURITY COORDINATOR for TLR Procedure to relieve overload at CONSTRAINT #2.
- INTERCHANGE TRANSACTION A-D may be curtailed by TLR action as though it was being served by Non-firm Hourly Point-to-Point Transmission Service, even though it was using firm service from C. That is, when the constraint is on the contract path, the Interchange Transaction takes on the priority of the

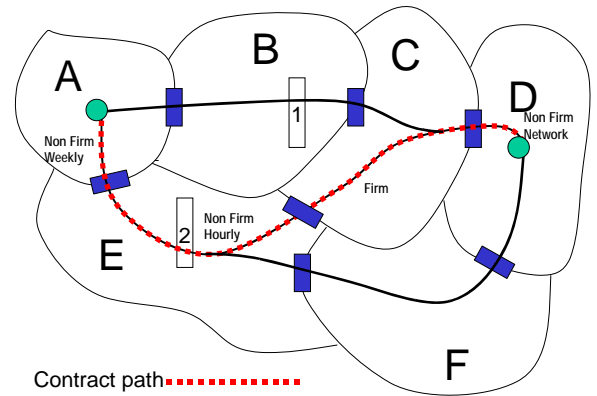


E. Principles for Mitigating Constraints On and Off the Contract Path

link with the CONSTRAINED FACILITY. (Principle 1)

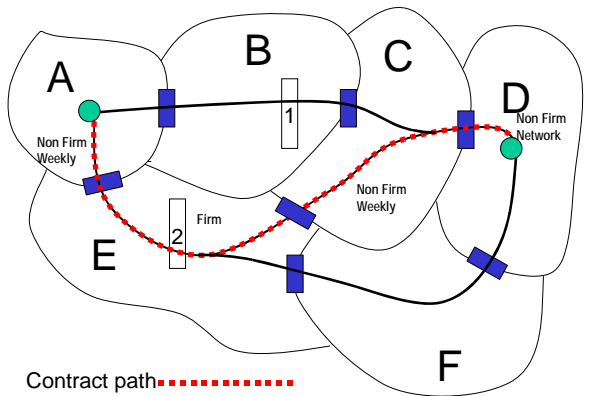
Case 3: E is a non-firm hourly path, C is firm, B has CONSTRAINT at #1.

- B may call SECURITY COORDINATOR for TLR Procedure to relieve overload at CONSTRAINT #1.
- INTERCHANGE TRANSACTION A-D may be curtailed by TLR action as though it was being served by Non-firm Hourly Transmission Service, even if it was using firm Transmission Service elsewhere on the path. When the constraint is off the contract path, the Interchange Transaction takes on the lowest priority reserved on the contract path. (Principle 3)



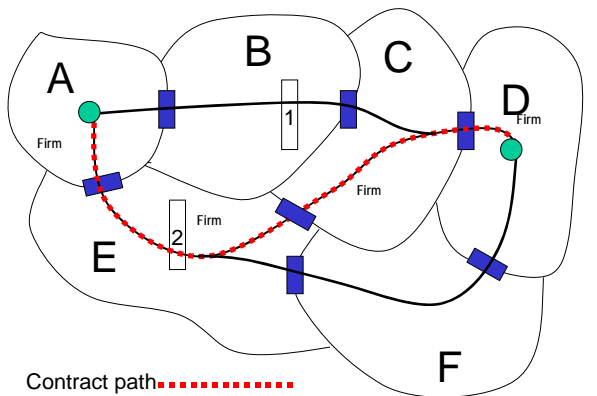
Case 4: E is a firm path; A, D, and C are Non-firm; E has CONSTRAINT at #2.

- Interchange Transaction A – D is considered Firm priority for curtailment purposes.
- E may then call SECURITY COORDINATOR for TLR, which would curtail all INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service first.
- E is obligated to try to reconfigure transmission to mitigate CONSTRAINT #2 in E before E may curtail the INTERCHANGE TRANSACTION as ordered by the TLR. (Principle 2)



Case 5: The entire path (A-E-C-D) is firm; E has CONSTRAINT at #2.

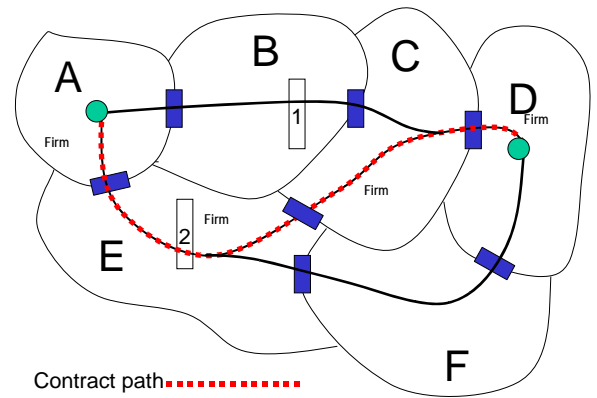
- INTERCHANGE TRANSACTION A – D is considered Firm priority for curtailment purposes.
- E may call SECURITY COORDINATOR for TLR, which would curtail all INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service first.
- E is obligated to curtail INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service, and then reconfigure transmission on its system, or, if there is an agreement in place, arrange for reconfiguration or other congestion management options on another system, to mitigate CONSTRAINT #2 in E before the firm A-D transaction is curtailed. (Principle 2)
- A, C, D, may be requested by E to try to reconfigure transmission to mitigate CONSTRAINT #2 in E at E's expense. (Principle 2)



E. Principles for Mitigating Constraints On and Off the Contract Path

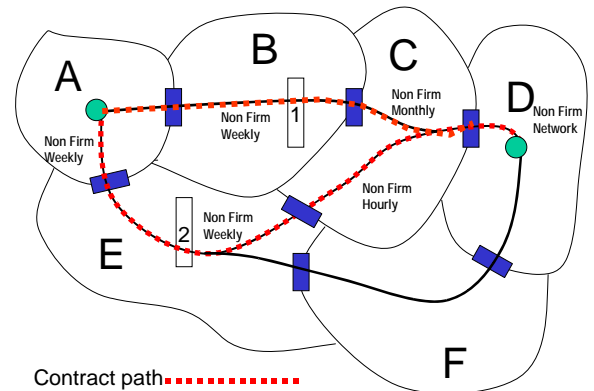
Case 6: The entire path (A-E-C-D) is firm; B has CONSTRAINT at #1.

- INTERCHANGE TRANSACTION A – D is considered Firm priority for curtailment purposes.
- B may call SECURITY COORDINATOR for TLR Procedure for all *non-firm* INTERCHANGE TRANSACTIONS that contribute to the overload at CONSTRAINT #1.
- Following the curtailment of all non-firm INTERCHANGE TRANSACTIONS, the SECURITY COORDINATOR(s) will determine which CONTROL AREA(S) will reconfigure their transmission, if possible, to mitigate constraint #1. (Principle 4)
- A-D transaction may be curtailed as a result. However, the A-D transaction is treated as a firm INTERCHANGE TRANSACTION and will be curtailed only after non-firm INTERCHANGE TRANSACTIONS. (Note: This means that the firm contract path is respected by all parties, including those not on the contract path.) (Principle 4)



Case 7: Two A-to-D transactions using A-B-C-D and A-E-C-D; A and B are non-firm; B has CONSTRAINT at #1

- B is not obligated to reconfigure transmission to mitigate CONSTRAINT at #1. (Principle 1)
- B may call for TLR Procedure to relieve overload at CONSTRAINT #1.
- If both A – D Interchange Transactions have the same TDF across Constraint #1, then they both are subject to curtailment. However, INTERCHANGE TRANSACTION A – D using the A-B-C-D path is assigned a higher priority (priority NW on B), and would not be curtailed until after the Interchange Transaction using the path A-E-C-D (priority NH on the contract path as observed by B who is off the contract path).



F. Transaction Contribution Factor Calculation

[See also “Parallel Flow Calculation Procedure Reference Document”]

Introduction

This section is intended to explain how to calculate the flows over the CONSTRAINED FACILITY due to TRANSACTIONS using Firm Point-to-Point Transmission Service. The “Parallel Flow Calculation Procedure Reference Document” explains how to calculate the effects of Network Integration Transmission Service and Native Load on CONSTRAINED FACILITIES.

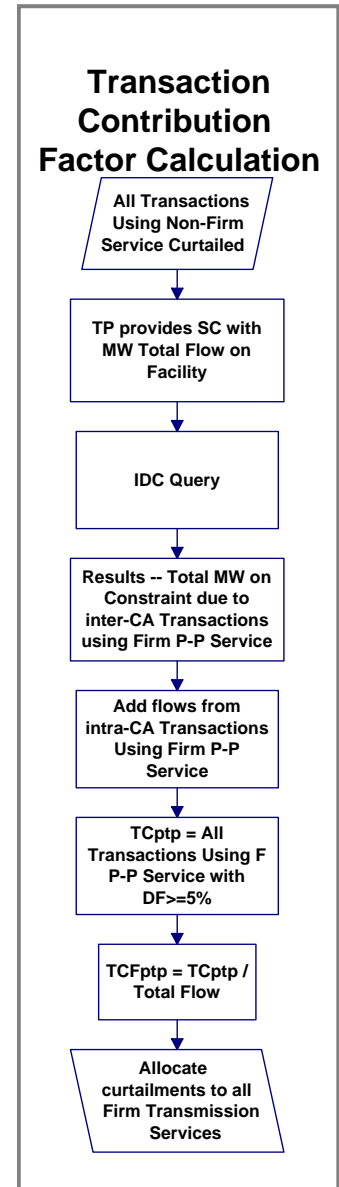
There are two situations that may require the curtailment of INTERCHANGE TRANSACTIONS using Firm Point-to-Point Transmission Service. In both situations, all INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that are at or above the CURTAILMENT THRESHOLD have been curtailed:

1. An INTERCHANGE TRANSACTION with Firm Point-to-Point Transmission Service is scheduled to start, but doing so would cause an OPERATING SECURITY LIMIT Violation, and there are no INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service that can be curtailed to mitigate this potential overload. TLR Level 5a is declared to allow additional Interchange Transactions using Firm Point-to-Point Transmission Service to begin on a pro rata basis, with corresponding pro rata curtailments of other Interchange Transactions using Firm Point-to-Point Transmission Service.
2. In the second case, an OPERATING SECURITY LIMIT Violation already exists, and all INTERCHANGE TRANSACTIONS using Non-firm Point-to-Point Transmission Service have been curtailed. TLR Level 5b is declared to curtail the necessary Interchange Transactions using Firm Point-to-Point Transmission Service to mitigate the Operating Security Limit.

In both cases, the Transmission Provider may be obligated to perform comparable curtailments of its TRANSMISSION SERVICE to Network Integration and Native Load customers. Therefore, the Transmission Provider needs to consider what percent of the overload on the CONSTRAINED FACILITY is due to each of these types of Transmission Services.

Calculating Flows Due to Firm Point-to-Point Transmission Service

When entering TLR Level 5a or 5b, the Transmission Provider first provides the SECURITY COORDINATOR with the total MW flow on the CONSTRAINED FACILITY. The SECURITY COORDINATOR then interrogates the Interchange Distribution Calculator to determine the total MW flow over the CONSTRAINED FACILITY from INTERCHANGE TRANSACTIONS (*inter-CONTROL AREA*) using Firm Point-to-Point Transmission Service. Next, the Transmission Provider adds the MW flow over the



F. Transaction Contribution Factor Calculation

CONSTRAINED FACILITY from *intra*-CONTROL AREA TRANSACTIONS on its system using Firm Point-to-Point Transmission Service. The sum of these two values is the Transaction Contribution due to Firm Point-to-Point Transmission Service, or TC_{ptp} , that have a Distribution Factor greater than the CURTAILMENT THRESHOLD.

Calculating the Transaction Contribution Factor for Firm Point-to-Point Transmission Service

Dividing the Transaction Contribution due to Firm Point-to-Point Transmission Service by the total flow over the CONSTRAINED FACILITY yields the Transaction Contribution Factor for Firm Point-to-Point Transmission Service, or TCF_{ptp} .

Calculating the Curtailment Ratios for all Firm Transmission Services

After considering the TC_{ptp} , the remaining flows over the CONSTRAINED FACILITY must therefore be due to inter- and intra-CONTROL AREA generation-to-load flows using Firm Network Integration Transmission Service and Native Load Service, including parallel flows from other CONTROL AREAS, parallel flows due to intra-CONTROL AREA TRANSACTIONS using Firm Point-to-Point Transmission service on adjacent systems, as well as those INTERCHANGE TRANSACTIONS below the CURTAILMENT THRESHOLD Distribution Factor threshold that were not curtailed, plus other flows from unknown sources. The example that follows illustrates these various component flows over the CONSTRAINED FACILITY.

It is up to the Transmission Provider to allocate the curtailment of these remaining flows among its Transmission Customers, which will include adjustments to its TCF_{ptp} factor, according to its transmission tariff or Regional procedures. Refer to the example on page 245 and to the “**Parallel Flow Calculation Procedure Reference Document.**”

F. Transaction Contribution Factor Calculation

Example

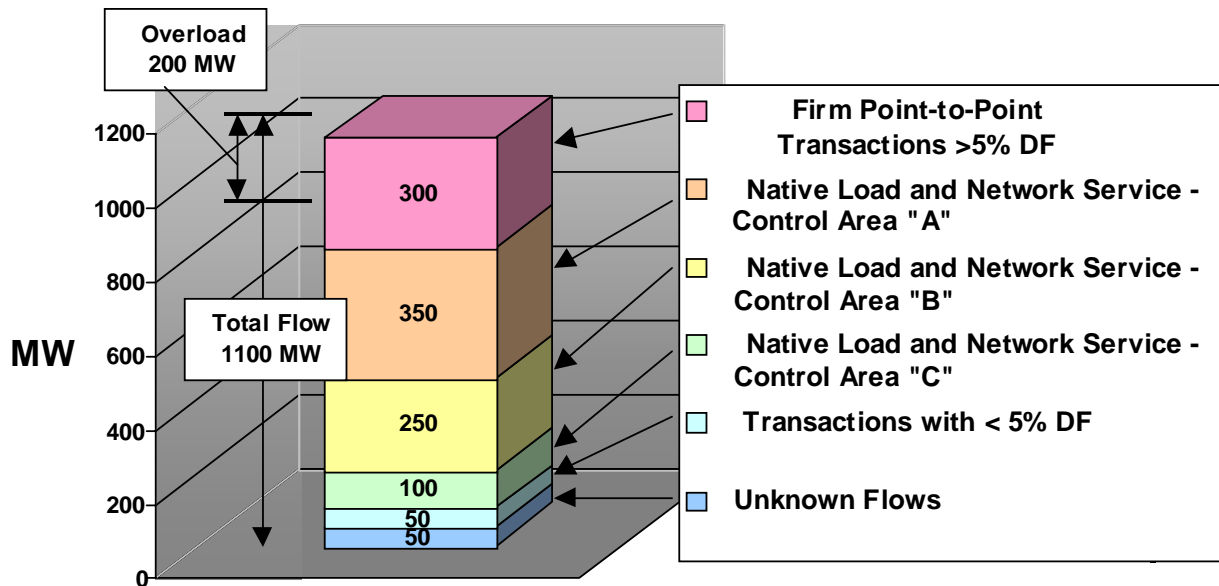
- Facility XYZ has an OPERATING SECURITY LIMIT of 900 MW.
- Its current metered flow is 1,100 MW, or 200 MW over the OPERATING SECURITY LIMIT.
- All non-firm transactions eligible for curtailment have been curtailed.

Remaining flows over the CONSTRAINED FACILITY are:

- 700 MW due to parallel flows from Firm Network Integration Transmission and Native Load Service in Control Areas A, B, and C.
- 50 MW due to Interchange Transactions using non-Firm Transmission Service with a distribution factor below the CURTAILMENT THRESHOLD.
- 50 MW due to unknown reasons.

The IDC shows that the contribution from the Firm and remaining Non-Firm Transactions contributing to the loading on this CONSTRAINED FACILITY for hour ending 1600 (starting at 1500 hours) is 300 MW.

Illustrative Loading on Facility



G. Transaction Curtailment Formula

Example

This example is based on the premise that a transaction should be curtailed in proportion to its TDF on the CONSTRAINTS. Its effect on the interface is a combination of its size in MW and its effect based on its distribution factor.

Column	Description
1. Initial Transaction	INTERCHANGE TRANSACTION before the TLR Procedure is implemented.
2. Distribution Factor	Proportional effect of the Transaction over the constrained interface due to the physical arrangement and impedance of the transmission system.
3. Impact on the Interface	Result of multiplying the Transaction MW by the distribution factor. This yields the MW that flow through the constrained interface from the Transaction. Performing this calculation for each Transaction yields the total flow through the constrained interface from all the INTERCHANGE TRANSACTIONS. In this case, 760 MW.
4. Impact Weighting Factor	“Normalization” of the total of the Distribution Factors in Column 2. Calculated by dividing the Distribution Factor for each Transaction by the total of the Distribution Factors.
5. Weighted Maximum Interface Reduction	Multiplying the Impact on the Interface from each Transaction by its Impact Weighting Factor yields a new proportion that is a combination of the MW Impact on the Interface and the Distribution Factor.
6. Interface Reduction	Multiplying the amount we need to reduce the flow over the constrained interface (280 MW) by the normalization of the Weighted Maximum Interface Reduction yields the actual MW reduction that each Transaction must <i>contribute</i> to achieve the total reduction.
7. Transaction Reduction	Now we have to divide by the Distribution Factor to see how much the Transaction must be reduced to yield the result we calculated in Column 7. Note that the reductions for the first two INTERCHANGE TRANSACTIONS (A-D (1) and A-D (2) are in proportion to their size since their distribution factors are equal.
8. New Transaction Amount	Subtracting the Transaction Reduction from the Initial Transaction yields the New Transaction Amount.
9. Adjusted Impact on Interface	A check to ensure the new constrained interface MW flow has been reduced to the target amount.

Appendix 9C Transmission Loading Relief Procedure

D. Transaction Contribution Factor Calculation

Allocation based on Weighted Impact									
	1	2	3	4	5	6	7	8	9
Transaction ID	Initial Transaction	Distribution Factor	(1)*(2) Impact On Interface	(2)/(2TOT) Impact weighting factor	(3)*(4) Weighted Max Interface Reduction	(5)*(Relief Requested) / (5 Tot) Interface Reduction	(6)/(2) Transaction Reduction	(1)-(7) New Transaction Amount	(8)*(2) Adjusted Impact On Interface
Example 1									
A-D(1)	800	0.6	480	0.34	164.57	209.73	349.54	450.46	270.27
A-D(2)	200	0.6	120	0.34	41.14	52.43	87.39	112.61	67.57
B-D	800	0.15	120	0.09	10.29	13.11	87.39	712.61	106.89
C-D	100	0.2	20	0.11	2.29	2.91	14.56	85.44	17.09
E-B	100	0.05	5	0.03	0.14	0.18	3.64	96.36	4.82
F-B	100	0.15	15	0.09	1.29	1.64	10.92	89.08	13.36
	2100	1.75	760		219.71	280.00	553.45	1546.55	480.00
Example 2									
A-D(1)	1000	0.6	600	0.52	313.04	262.16	436.93	563.07	337.84
B-D	800	0.15	120	0.13	15.65	13.11	87.39	712.61	106.89
C-D	100	0.2	20	0.17	3.48	2.91	14.56	85.44	17.09
E-B	100	0.05	5	0.04	0.22	0.18	3.64	96.36	4.82
F-B	100	0.15	15	0.13	1.96	1.64	10.92	89.08	13.36
	2100	1.15	760		334.35	280.00	553.45	1546.55	480.00
Example 3									
A-D(1A)	200	0.6	120	0.17	20.28	52.43	87.39	112.61	67.57
A-D(1B)	200	0.6	120	0.17	20.28	52.43	87.39	112.61	67.57
A-D(1C)	200	0.6	120	0.17	20.28	52.43	87.39	112.61	67.57
A-D(1D)	200	0.6	120	0.17	20.28	52.43	87.39	112.61	67.57
A-D(2)	200	0.6	120	0.17	20.28	52.43	87.39	112.61	67.57
B-D	800	0.15	120	0.04	5.07	13.11	87.39	712.61	106.89
C-D	100	0.2	20	0.06	1.13	2.91	14.56	85.44	17.09
E-B	100	0.05	5	0.01	0.07	0.18	3.64	96.36	4.82
F-B	100	0.15	15	0.04	0.63	1.64	10.92	89.08	13.36
	2100	3.55	760		108.31	280.00	553.45	1546.55	480.00

