

***ISO New England Inc. Transmission, Markets and Services Tariff***

***ISO New England***

***ISO New England Inc. Transmission, Markets and Services Tariff***

Document Generated On: 3/31/2011

**Contents**

**SCHEDULE 20A .....3**

**SCHEDULE 20A**  
**POINT-TO-POINT SERVICE OVER THE**  
**PHASE I/II HVDC TRANSMISSION FACILITIES**  
**(PHASE I/II HVDC-TF SERVICE)**

## ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

In order to ensure continuity of service to customers, all agreements for transmission service over the Phase I/II HVDC-TF in effect as of the effective date of this Schedule 20A will remain in full force and effect under this Schedule 20A. This Schedule 20A contains the general terms and conditions regarding the treatment of Phase I/II HVDC-TF Service under the Tariff. In the event of a conflict between the terms and conditions of Part I and Part II of this Schedule, the terms and conditions of Part II shall govern. Phase I/II HVDC-TF Service is a Point-to-Point Service offered by certain Interconnection Rights Holders (“IRH”) under this Schedule 20A. Such IRH are referred to herein as the “Schedule 20A Service Providers”, have Phase I/II HVDC-TF Service Schedules in Part II of this Schedule 20A, and are listed on the ISO OASIS. Phase I/II HVDC-TF Service shall be offered to Eligible Customers by Schedule 20A Service Providers through their Phase I/II HVDC-TF Transmission Provider Page in accordance with this Schedule 20A and the HVDC Transmission Operating Agreement and is subject to the rights and obligations of the IRHs under the Restated Use Agreement, the Support Agreements, and the Phase I/II HVDC-TF Transmission Service Administration Agreement. Phase I/II HVDC-TF Service under this Schedule 20A is offered by the Schedule 20A Service Providers based on their Use Rights and on any Use Rights that they offer on behalf of any other IRH that are not Schedule 20A Service Providers. Pursuant to Section 2 of Part 1 of this Schedule 20A and subject to mutually agreeable contractual arrangements, the Schedule 20A Service Providers will offer, through this Schedule 20A and their Phase I/II HVDC-TF Transmission Provider Page, the Use Rights of any IRHs that are not Schedule 20A Service Providers. This Schedule 20A also includes the specific rates, terms and conditions for Phase I/II HVDC-TF Service for individual Schedule 20A Service Providers. All Transmission Customers taking Phase I/II HVDC-TF Service shall be subject to and comply with the terms and conditions of this Schedule 20A and the Tariff. The specific terms and conditions for rates and charges of the individual Schedule 20A Service Providers’ offering of their Phase I/II HVDC-TF Use Rights are found in the Phase I/II HVDC-TF Service Schedules in Part II of this Schedule 20A.

### **I. PHASE I/II HVDC-TF POINT-TO-POINT SERVICE**

#### **1. Definitions**

Capitalized terms used and defined in this Schedule 20A shall have the meaning given them under this Schedule. Capitalized terms used and not defined in this Schedule 20A but defined in other sections of the Tariff shall have the meaning given them under those sections. Capitalized terms used in this Schedule 20A that are not defined in it or elsewhere in the Tariff shall have the meanings in the Restated Use Agreement or those customarily attributed to applicable criteria, rules, standards and operating procedures.

**1.1 Interconnection Rights Holders (“IRHs”):** means the entities that pay for and hold exclusive Use Rights to the transfer capability of the Phase I/II HVDC-TF, as granted under the Support Agreements and as further provided for under the Restated Use Agreement, either (i) directly, by virtue of being parties to the Support Agreements, or (ii) indirectly (“Indirect IRH(s)”), through a Transfer Agreement.

**1.2 Phase I/II HVDC-TF:** means the transmission facilities, identified in Schedule 2.01 (a) of the HVDC Transmission Operating Agreement or its successor schedule, constructed in two phases (“Phase I” and “Phase II”) that comprise the United States segment of the 2000 MW transmission interconnection which connects the Hydro-Quebec TransÉnergie control area and the New England Control Area. Phase I is the United States portion of the 450 kV high-voltage, direct-current (“Phase I/II HVDC”) transmission line from a terminal at the Des Cantons Substation on the Hydro-Quebec system near Sherbrooke, Quebec to a terminal with a nominal transfer capability of 690 MW at the Monroe Converter Station in New Hampshire. Phase II is the United States portion of the facilities required to increase to 2000 MW the nominal transfer capability of the Phase I/II HVDC-TF, including an extension of the Phase I/II HVDC transmission line from the terminus of Phase I at the Monroe Converter Station through New Hampshire to a terminal at the Sandy Pond Converter Station in Massachusetts. Phase I/II HVDC-TF is a form of OTF, as defined under Section II.1.85 of the Tariff.

**1.3 Phase I/II HVDC-TF Owners:** are: New England Hydro-Transmission Electric Company, Inc.; New England Hydro-Transmission Corporation; New England Electric Transmission Corporation; and Vermont Electric Transmission Company. The Phase I facilities in the United States are owned by New England Electric Transmission Corporation and Vermont Electric Transmission Company. The Phase II facilities in the United States are owned by New England Hydro-Transmission Electric Company, Inc. and New England Hydro-Transmission Corporation. The Phase I/II HVDC-TF Owners are parties to financial support agreements (the “Support Agreements”) with the IRHs.

**1.4 Phase I/II HVDC-TF Service:** means Firm and Non-Firm Point-To-Point Service over the Phase I/II HVDC-TF.

**1.5 Phase I/II HVDC-TF Service Agreement:** means an executed or unexecuted agreement for Phase I/II HVDC-TF Service, as reflected in Attachment A to Part I of this Schedule 20A.

**1.6 Phase I/II HVDC-TF Transmission Service Administration Agreement:** means the agreement among the ISO, the Schedule 20A Service Providers, and the IRH Management Committee specifying the rights and obligations of the parties regarding transmission service over the Phase I/II HVDC-TF, dated April 1, 2005, as may be amended and restated from time to time, and any successor agreement.

**1.7 Phase I/II HVDC-TF Service Charge:** is the charge for Phase I/II HVDC-TF Service, which shall be determined pursuant to arrangements between the applicable Schedule 20A Service Provider and Eligible Customers that take Phase I/II HVDC-TF Service under this Schedule 20A. The charge for Phase I/II HVDC-TF Service shall be determined by the applicable Phase I/II HVDC-TF Service Schedule in Part II of this Schedule 20A.

**1.8 Phase I/II HVDC-TF Service Schedule:** is an individual Schedule 20A Service Provider's schedule in Part II of this Schedule 20A that sets forth the terms and conditions for rates and charges, as applicable to Phase I/II HVDC-TF Service offered by that Schedule 20A Service Provider.

**1.9 Phase I/II HVDC-TF Transmission Provider Page:** means the respective Transmission Provider pages of the Schedule 20A Service Providers, which are located on the ISO OASIS, through which Phase I/II HVDC-TF Service is offered. Some of the information posted on the Transmission Provider pages of the Schedule 20A Service Providers shall include: values for Available Transmission Capability (ATC); offerings for Phase I/II HVDC-TF Service; and procedures for the application for and acquisition of Phase I/II HVDC-TF Service.

**1.10 Pre-Confirmed Request:** is an OASIS transmission service request that commits the Transmission Customer to take and pay for the requested Phase I/II HVDC-TF Service upon acceptance on OASIS by the Schedule 20A Service Provider that can provide the requested Phase I/II HVDC-TF Service.

**1.11 Restated Use Agreement:** is the Agreement among the IRH with respect to the Use Rights, dated as of December 1, 1981, as amended or restated as of September 1, 1985, November 19, 1997, April 8, 1998, and June 1, 2002, and as it may be further amended or restated from time to time.

**1.12 Schedule 20A Service Provider:** is an individual IRH that has a Phase I/II HVDC-TF Service Schedule and offers its own Use Rights or the Use Rights of other IRHs under this Schedule 20A.

**1.12a Submittal Window:** is the 5 minute window, beginning immediately after the expiration of the “no earlier than” request time, within which all service requests will be deemed to have been submitted simultaneously.

**1.13 Support Agreements:** are the certain agreements between the Phase I/II HVDC-TF Owners and the IRH that are not Indirect IRHs, under which the IRH are granted the exclusive rights to the transfer capability of the Phase I/II HVDC-TF and the obligation to pay the costs of the Phase I/II HVDC-TF.

**1.14 Transfer Agreement:** is an agreement, pursuant to the Restated Use Agreement, under which an IRH may transfer all or part of its Use Rights to another entity for a specified period of time.

**1.15 Transmission Customer:** is, for purposes of this Schedule 20A, an Eligible Customer that is receiving or has received Phase I/II HVDC-TF Service.

**1.16 Use Rights:** are the exclusive rights to the Combined Percentage Interest of the transfer capability of the Phase I/II HVDC-TF granted to the each of the IRH under the Support Agreement in exchange for the IRH’s obligation to pay for the Phase I/II HVDC-TF. The maximum MW amount of Use Rights that a Schedule 20A Service Provider may make available is its Combined Percentage Interest times the posted TTC value, plus the maximum MW amount of Use Rights of any other IRH on whose behalf the Schedule 20A Service Provider is posting, rounded down to whole MW.

## 2. Phase I/II HVDC-TF Service

Phase I/II HVDC-TF Service is a Point-to-Point Service offered by the Schedule 20A Service Providers over Phase I/II HVDC-TF using the transfer capability associated with their own Use Rights and the Use Rights of any other IRH that has contracted with a Schedule 20A Service Provider for the offering of Use Rights under this Schedule 20A. Not all IRHs are FERC-jurisdictional utilities and, as such, these IRHs are not required to offer transmission service for their share of the Phase I/II HVDC-TF. An IRH that is not a Schedule 20A Service Provider may, however, choose to make all or a portion of its rights available through an individual Schedule 20A Service Provider and its Phase I/II HVDC-TF Service Schedule by entering into a Transfer Agreement. Subject to a mutually agreeable Transfer Agreement and associated contractual arrangements, a Schedule 20A Service Provider will offer the Use Rights of any other IRH that wishes to make its Use Rights available under this Schedule 20A. In the event that the parties cannot agree on a Transfer Agreement and associated contractual arrangements, either party may petition the Federal Energy Regulatory Commission for relief.

**2.1 Nature of Phase I/II HVDC-TF Service**

**(a) Term of Phase I/II HVDC-TF Service:**

(i) Firm Phase I/II HVDC-TF Service: The minimum term of Firm Phase I/II HVDC-TF Service shall be one day and the maximum term shall be that specified in the Phase I/II HVDC-TF Service Agreement.

(ii) Non-Firm Phase I/II HVDC-TF Service: Non-Firm Phase I/II HVDC-TF Service will be available for periods ranging from one hour to one month and shall be that specified in the Phase I/II HVDC-TF Service Agreement. A Transmission Customer that purchases Non-Firm Phase I/II HVDC-TF 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 may be greater than one month, subject to the requirements of this Schedule 20A.

**(b) Reservation, Interruption and Curtailment Priority for Phase I/II HVDC-TF Service:**

(i) The Schedule 20A Service Providers, individually or collectively, shall post on the Phase I/II HVDC-TF Transmission Provider Page, rules setting reservation, interruption and



## ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

Curtailment priorities for Firm and Non-Firm Phase I/II HVDC-TF Service. Such rules shall be non-discriminatory and consistent with Commission Orders and shall also be in accordance with the Restated Use Agreement.

In instances where an IRH is not a Schedule 20A Service Provider and it desires to offer its Use Rights, that IRH shall arrange for the posting of the associated transmission service and associated reservations on a Phase I/II HVDC-TF Transmission Provider Page.

Each Schedule 20A Service Provider shall be responsible for calculating the ATC for its Use Rights and for the Use Rights of any other IRH with whom it has contracted to offer such Use Rights, and for posting such ATC values on its Phase I/II HVDC-TF Transmission Provider Page.

Phase I/II HVDC-TF reservation priorities shall be established separately from PTF, other OTF or MTF reservation priorities.

(ii) If a Schedule 20A Service Provider fails to post such rules, then reservation, interruption and Curtailment priorities for Firm and Non-Firm Phase I/II HVDC-TF Service shall be those established by relevant reliability authorities (e.g., the Northeast Power Coordinating Council) and under such scheduling and curtailment rules as may be accepted and/or approved by the Federal Energy Regulatory Commission for participation in the regional electricity markets.

(iii) Firm Phase I/II HVDC-TF Service Reservation Priority: The Phase I/II HVDC-TF reservation priority for either Long-Term or Short-Term Firm Phase I/II HVDC-TF Service shall be determined on a first come first served basis by the date and time of the Service request, with requests received within the Submittal Window being subject to the procedures described in Section 2.1(b)(vi) below. However, Pre-Confirmed Requests for Short-Term Point-to-Point Transmission Service will receive priority over earlier-submitted requests that are not pre-confirmed and that have equal or shorter duration. Among requests with the same duration and, as relevant, pre-confirmation status (pre-confirmed or not pre-confirmed), priority will be given to a Transmission Customer's request that offers the highest price, followed by the date and time of the request.

(iv) If the Phase I/II HVDC-TF becomes oversubscribed, requests for service may preempt competing reservations up to the following conditional reservation 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 transfer capability is insufficient to satisfy all requests and reservations, a Transmission Customer with a reservation for shorter term service or equal duration service and lower price has the right of first refusal to match any longer term request or equal duration service with a higher price before losing its reservation priority. A longer term competing request for Firm Phase I/II HVDC-TF Service will be granted if the Transmission 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 I.2.1(f) of this Schedule 20A) from being notified by the Schedule 20A Service Provider of a longer-term competing request for Firm Phase I/II HVDC-TF Service. When a longer duration request preempts multiple shorter duration reservations, the shorter duration reservations shall have simultaneous opportunities to exercise the right of first refusal. Duration, price and time of response will be used to determine the order by which the multiple shorter duration reservations will be able to exercise the right of first refusal. After the conditional reservation deadline, service will commence pursuant to the terms of this Schedule 20A. Firm Phase I/II HVDC-TF Service will always have a reservation priority over Non-Firm Phase I/II HVDC-TF Service under the Tariff.

(v) Non-Firm Phase I/II HVDC-TF Service Reservation Priority: Non-Firm Phase I/II HVDC-TF Service shall be available from transfer capability in excess of that needed for reliable service to Long-Term and Short-Term Firm Phase I/II HVDC-TF Service. A higher reservation priority will be assigned first to Non-Firm Phase I/II HVDC-TF Service requests or reservations with a longer duration of service than those reservations with a shorter duration and second to Pre-Confirmed Requests. Competing requests of the same pre-confirmation status and equal duration for Non-Firm Phase I/II HVDC-TF Service will be prioritized based on the highest price offered by the Transmission Customer for the transmission service, or in the event the price for all Transmission Customers is the same, will be prioritized on a first-come, first-served basis (i.e., in the chronological sequence in which each Transmission Customer has reserved service). Requests for monthly service received within the Submittal Window shall be subject to the procedures described in Section 2.1(b)(vi) below. Transmission Customers that have already reserved shorter-term service over Phase I/II HVDC-TF have the right of first refusal to match any longer-term request before being preempted, provided that such Transmission Customer's advance reservation is consistent with any modified request for Non-Firm Phase I/II HVDC-TF Service.

(vi) Requests for Firm and monthly Non-Firm Phase I/II HVDC-TF Service are subject to a Submittal Window and to an allocation in accordance with the procedures of this section.

Each Schedule 20A Service Provider will refuse those service requests for the same increment and class of service from the same Transmission Customer which, in aggregate, exceeds that Schedule 20A Service Provider's posted ATC. A single service request will be refused if it exceeds the posted ATC. If multiple identical service requests, as defined by NAESB Standard 001-0.5, for the entire posted ATC are received within the Submittal Window, only the first of those service requests will be considered valid. The remaining identical service requests will be refused.

If sufficient transfer capability is not available to meet all service requests for Phase I/II HVDC-TF Service submitted within the Submittal Window, the Schedule 20A Service Providers will allocate among valid requests received in the Submittal Window, allocating ATC pro-rata, on a whole MW basis, among those requests of the longest duration first and subject to the following order: pre-confirmed Firm, Firm, pre-confirmed Non-Firm and Non-Firm. If the total amount of valid pre-confirmed service requests exceeds a Schedule 20A Service Provider's Firm ATC, each valid pre-confirmed service request for Firm Phase I/II HVDC-TF Service will be multiplied by the ratio of that Schedule 20A Service Provider's Firm or Non-Firm ATC, as applicable, to the total MWs of valid Firm or Non-Firm pre-confirmed service requests, as applicable. If the total amount of valid pre-confirmed Firm service requests does not exceed ATC for Firm Phase I/II HVDC-TF Service, then any remaining non pre-confirmed Firm service requests will be allocated similarly across remaining ATC. Non-Firm service requests for monthly service will follow the same methodology for any remaining ATC.

If a customer withdraws its service request after it has been accepted but prior to the Customer Confirmation Time Limit as identified in FERC Order 638, the pro rata allocation of ATC for the remaining valid service requests will be recalculated and the service requests will be updated accordingly on OASIS.

The Schedule 20A Service Providers will address queue flooding, queue hoarding and denial of service in accordance with in NAESB WEQ-001. If the Schedule 20A Service Providers detect

any of the above activities, the Schedule 20A Service Providers may extend the Submittal Window by additional 5 minute increments.

Each Schedule 20A Service Provider reserves the right to develop additional allocation criteria in the event that the above criteria do not address a particular situation that occurs during the Submittal Window. Such criteria shall either be included in the Business Practice posted on the Schedule 20A Service Provider's Phase I/II HVDC-TF Transmission Provider Page or the Schedule 20A Service Providers will file with the Commission, changes to this Schedule 20A, in compliance with applicable Commission regulations.

In cases where valid service requests received in the Submittal Window result in residual MW(s), the Schedule 20A Service Providers will allocate, via counter offer, the residual MW(s) to the first valid service request queued in the Submittal Window. In cases where more than one residual MW is available, 1 MW will be allocated, via counter offer, to each valid service request, starting with the first valid service request in the Submittal Window and moving to the next until all such MW(s) have been allocated.

**(c) Use of Phase I/II HVDC-TF Service By a Transmission Customer:** A Transmission Customer shall take and pay for Phase I/II HVDC-TF Service for the transmission of any scheduled Real-Time Energy Market transaction (including imports of energy into, exports of energy out of, and wheels of energy through, the New England Control Area ) that requires the use of the Phase I/II HVDC-TF. If a Transmission Customer elects to take Phase I/II HVDC-TF Service, it must first reserve transmission capability (i.e., a confirmed advance Phase I/II HVDC-TF Service reservation) to allow both the delivery of energy and/or capacity to it over the Phase I/II HVDC-TF (to the extent permitted under the Tariff) commensurate with the associated Phase I/II HVDC-TF Service reservation designated by it in a Completed Application for Phase I/II HVDC-TF Service and the delivery of Energy and/or capacity to or from it over the Phase I/II HVDC-TF to the extent permitted under the Tariff. A Transmission Customer that takes Phase I/II HVDC-TF Service under this Schedule 20A must also take any other applicable service, in accordance with the Tariff.

**(d) Phase I/II HVDC-TF Service Agreements:** A standard form Phase I/II HVDC-TF Service Agreement (Attachment A to Part I of this Schedule 20A) will be offered to an Eligible Customer when it submits a Completed Application for Phase I/II HVDC-TF Service pursuant to

this Schedule 20A. Executed Phase I/II HVDC-TF Service Agreements that contain the information required under this Schedule 20A will be reported and/or filed by the Schedule 20A Service Provider with the Commission in compliance with applicable Commission regulations. An Eligible Customer that uses Phase I/II HVDC-TF Service at a Point of Receipt or Point of Delivery that it has not reserved and that has not executed a Phase I/II HVDC-TF Service Agreement will be deemed, for purposes of assessing any appropriate charges and penalties, to have executed the appropriate Service Agreement.

**(e) Classification of Phase I/II HVDC-TF Service:**

(i) Transmission Customers requesting Phase I/II HVDC-TF Service do so with the full realization that such service is subject to availability and Curtailment pursuant to Section II.44 of the Tariff and that the ISO will redispatch all Resources subject to its control, pursuant to the Tariff, in order to meet load and to accommodate External Transactions. Transmission Customers will be charged for the Congestion Costs and any other costs associated with such redispatch in accordance with the Tariff.

(ii) The Point of Receipt and Point of Delivery on the Phase I/II HVDC-TF at which transmission capacity is reserved for Phase I/II HVDC-TF Service by the Transmission Customer shall be set forth in the Phase I/II HVDC-TF Transmission Service Agreement for such service along with a corresponding capacity reservation over the Phase I/II HVDC-TF. The Point of Receipt and Point of Delivery for Phase I/II HVDC-TF Service shall be as mutually agreed upon by the Schedule 20A Service Provider and the Transmission Customer for Phase I/II HVDC-TF Service.

(iii) Non-Firm Phase I/II HVDC-TF Service shall be offered on an hourly, daily, weekly or monthly basis, under applicable terms and conditions contained in this Schedule 20A, and shall not exceed one month's reservation. Firm Phase I/II HVDC-TF Service shall be offered on a daily, weekly, monthly or yearly basis under the applicable terms and conditions contained in this Schedule 20A.

(iv) The Transmission Customer's Reserved Capacity over the Phase I/II HVDC-TF shall be the sum of its Phase I/II HVDC-TF Service reservations.

**(f) Scheduling Associated with Phase I/II HVDC-TF Service:** An advance reservation is required for Phase I/II HVDC-TF Service for any External Transaction that imports energy into, exports energy out of, or wheels energy through, the New England Control Area over the Phase I/II HVDC-TF. The External Transaction, with its supporting advance reservation, shall be submitted by the Transmission Customer for inclusion by the ISO into the Market System for the Real-Time Energy Market pursuant to the Tariff and in accordance with applicable operating procedures. External Transactions submitted into the Real-Time Energy Market and associated with Phase I/II HVDC-TF Service shall be dispatched pursuant to the Tariff. Transmission Customers will be charged for the Congestion Costs and any other costs associated with such dispatch in accordance with the Tariff.

**(g) Curtailment Associated with Phase I/II HVDC-TF Service:** When the ISO determines that an electrical emergency exists on the New England Transmission System, the ISO shall implement emergency procedures to effect a Curtailment of Phase I/II HVDC-TF Service. The ISO will redispatch all Resources subject to its control, pursuant to the Tariff, in order to meet load and to accommodate External Transactions. External Transactions using Phase I/II HVDC-TF Service shall be Curtailed or interrupted in accordance with Section II.44 of the Tariff. Transmission Customers will be charged for the Congestion Costs and any other costs associated with such redispatch in accordance with the Tariff. Pursuant to such redispatch, in the event that ISO exercises its right to effect a Curtailment of Phase I/II HVDC-TF Service, in whole or part, no credit or other adjustment shall be provided as a result of the Curtailment with respect to the charges payable by the Transmission Customer.

**2.2 Transmission Customer Responsibility for Other Service:** Phase I/II HVDC-TF Service only provides transmission service over the Phase I/II HVDC-TF. The Transmission Customer is responsible for obtaining and paying any applicable costs associated with any service on other transmission facilities that may be required to complete a transaction that utilizes Phase I/II HVDC-TF Service.

**2.3 Availability of Phase I/II HVDC-TF Service:** An Eligible Customer having a Phase I/II HVDC-TF Service Agreement with a Schedule 20A Service Provider is a Transmission Customer (except as provided below) that may utilize the Use Rights offered by that Schedule 20A Service Provider for the transmission of any scheduled Real-Time transaction (includes imports of energy into, exports of energy out of, and wheels of energy through, the New England

Control Area ) that requires the use of the Phase I/II HVDC-TF. Such service shall be provided and administered by the individual Schedule 20A Service Provider and shall be requested pursuant to the applicable terms and conditions of this Schedule 20A. Phase I/II HVDC-TF Service is available to any Eligible Customer who meets the financial assurance requirements of this Schedule 20A. The provision of Phase I/II HVDC-TF Service under this Schedule 20A requires that the Transmission Customer acquire an advance reservation over the Phase I/II HVDC-TF prior to the scheduling of an associated Real-Time transaction that requires the use of the Phase I/II HVDC-TF.

**2.4 Reservation Priority For Existing Firm Service Customers:** Existing firm service customers (wholesale requirements and transmission-only, with a contract term of five years or more), have the right to elect to continue to take Phase I/II HVDC-TF Service from the Schedule 20A Service Providers when the contract expires, rolls over or is renewed, subject to the rights and obligations of the Schedule 20A Service Providers under the Restated Use Agreement, the Support Agreements, and the Phase I/II HVDC-TF Transmission Service Administration Agreement. This transmission reservation priority is independent of whether the existing customer continues to purchase capacity and energy from the Schedule 20A Service Provider or elects to purchase capacity and energy from another supplier. If at the end of the contract term, the Schedule 20A Service Provider's Use Rights cannot accommodate all of the requests for Phase I/II HVDC-TF Service, the existing firm service customer must agree to accept a contract term at least equal to the longest competing request by any new Transmission Customer and to pay the current just and reasonable rate, as approved by the Commission, for such service; provided that, the firm service customer shall have a right of first refusal at the end of such service only if the new contract is for five years or more. The existing firm service customer must provide notice to the Schedule 20A Service Provider whether it will exercise its right of first refusal no less than one year prior to the expiration date of its Phase I/II HVDC-TF Service Agreement. This transmission reservation priority for existing firm service customers is an ongoing right that may be exercised at the end of all firm contract terms of five years or longer, subject to the rights and obligations of the Schedule 20A Service Providers under the Restated Use Agreement, the Support Agreements, and the Phase I/II HVDC-TF Transmission Service Administration Agreement. Service Agreements subject to a right of first refusal entered into prior to the date of the Schedule 20A Service Providers' filing adopting the reformed rollover language herein in compliance with Order No. 890 or associated with a transmission service request received prior to July 13, 2007, unless terminated, will become subject to the five

year/one year requirement on the first rollover date after the date of the Schedule 20A Service Providers' filing adopting the reformed rollover language herein in compliance with Order No. 890; provided that, the one year notice requirement shall apply to such service agreements with five years or more left in their terms as of the date of the Schedule 20A Service Providers' filing adopting the reformed rollover language herein in compliance with Order No. 890.

### **3. Transmission Customer Responsibilities**

**3.1 Conditions Required of Transmission Customers:** Phase I/II HVDC-TF Service will be provided by the Schedule 20A Service Provider only if the following conditions are satisfied by the Transmission Customer.

- (a)** The Transmission Customer has submitted a Completed Application for Phase I/II HVDC-TF Service in accordance with this Schedule 20A;
- (b)** The Transmission Customer continues to qualify as an Eligible Customer;
- (c)** The Transmission Customer and the Schedule 20A Service Provider have executed a Phase I/II HVDC-TF Service Agreement pursuant to this Schedule 20A;
- (d)** The Transmission Customer agrees to have arrangements in place for any other transmission service necessary to effect the delivery from the generating source to the Point of Receipt prior to the time service commences;
- (e)** The Transmission Customer agrees to submit External Transactions into the Markets in accordance with the applicable ISO New England Operating Documents;
- (f)** The Transmission Customer agrees to pay for Phase I/II HVDC-TF Service Charges, any Congestion Costs or other redispatch costs chargeable to such Transmission Customer under this Schedule 20A, and the Tariff, whether or not the Transmission Customer takes service for the full term of its Phase I/II HVDC-TF Service reservation;
- (g)** The Transmission Customer has an advance reservation with a Schedule 20A Service Provider for Phase I/II HVDC-TF Service;



(h) The Transmission Customer meets the creditworthiness procedures in Attachment L to the Schedule 20A Service Provider's Phase I/II HVDC-TF Service Schedule in Part II of Schedule 20A; and

(i) The Transmission Customer provides the information required by the ISO's regional system planning process.

**3.2 Transmission Customer Responsibility for Third-Party Arrangements:** Any arrangements for Transmission Service and the scheduling of transactions that may be required by neighboring electric systems shall be the responsibility of the Transmission Customer requesting service. The Transmission Customer shall provide, unless waived by ISO, notification to ISO identifying such neighboring electric systems and authorizing them to schedule the transactions to be transmitted pursuant to the Tariff on behalf of the Receiving Party at the Point of Delivery or the Delivering Party at the Point of Receipt.

The Transmission Customer shall arrange for Transmission Service, as necessary, in accordance with the Tariff. The ISO 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.

#### **4. Procedures for Arranging Phase I/II HVDC-TF Service**

**4.1 Application:** Eligible Customers seeking Phase I/II HVDC-TF Service must submit a Completed Application for Phase I/II HVDC-TF Service to the Schedule 20A Service Provider in accordance with the applicable section of this Schedule 20A and in accordance with the Schedule 20A Service Provider's rules, as posted on the Phase I/II HVDC-TF Transmission Provider Page. The Schedule 20A Service Provider shall post a copy of its form of Application for Phase I/II HVDC-TF Service on its Phase I/II HVDC-TF Transmission Provider Page.

**4.2 Completed Application:** A Completed Application for Phase I/II HVDC-TF Service shall provide all of the information included at 18 C.F.R. § 2.20 of the Commission's regulations, including but not limited to the following:

## ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

- (i) The identity, address, telephone number and facsimile number of the entity requesting service;
- (ii) A statement that the entity requesting service is, or will be upon commencement of service, an Eligible Customer under this Schedule 20A;
- (iii) The Point(s) of Receipt and Point(s) of Delivery;
- (iv) The maximum amount of capacity and energy expected to be utilized under the Phase I/II HVDC-TF Service Agreement;
- (v) The Service Commencement Date and the term of the requested Phase I/II HVDC-TF Service;
- (vi) The transmission capacity requested for each Point of Receipt and each Point of Delivery on the Phase I/II HVDC-TF. Customers may combine their requests for Phase I/II HVDC-TF Service in order to satisfy the minimum transmission capacity requirement;
- (vii) A statement indicating that if the Transmission Customer submits a Pre-Confirmed Request, then the Transmission Customer will take and pay for the requested Phase I/II HVDC-TF Service upon acceptance on OASIS by the Schedule 20A Service Provider that can provide the requested Phase I/II HVDC-TF Service; and
- (viii) Any additional information required by the ISO's regional system planning process.
- (ix) In addition to the information specified above and when required to properly evaluate the application for service, the Schedule 20A Service Provider also may request that the Eligible Customer provide the following:
  - Ø 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.
  - Ø A description of the supply characteristics of the capacity and energy to be delivered.

**4.3 Deposit:** If required by the Schedule 20A Service Provider, a Completed Application for Phase I/II HVDC-TF Service by a Transmission Customer shall also include a deposit of either (a) one (1) month's charge for Reserved Capacity over the Phase I/II HVDC-TF for service requests of one (1) month or greater or (b) the full charge for Reserved Capacity over the Phase I/II HVDC-TF for service requests of less than one (1) month. If the Application for Phase I/II HVDC-TF Service is rejected by the Schedule 20A Service 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), the deposit will be returned with interest, less any reasonable costs incurred by the Schedule 20A Service Provider, the ISO or any affected Transmission Owners in connection with the review of the Application for Phase I/II HVDC-TF Service. If an Application for Phase I/II HVDC-TF Service is withdrawn or the Eligible Customer decides not to enter into a Phase I/II HVDC-TF Transmission Service Agreement, the deposit will be refunded in full, with interest, less reasonable costs incurred by the Schedule 20A Service Provider, the ISO or any affected Transmission Owners to the extent such costs have not already been recovered from the Eligible Customer. The Schedule 20A Service 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. If a Phase I/II HVDC-TF Service Agreement is executed, the deposit, with interest, will be returned to the Transmission Customer upon expiration or termination of the Phase I/II HVDC-TF Service Agreement. Applicable interest will be calculated in accordance with Commission regulations from the day the deposit is credited to the Schedule 20A Service Provider's account.

**4.4 Notice of Deficient Application:** If an Application for Phase I/II HVDC-TF Service fails to meet the requirements of this Schedule 20A, the Schedule 20A Service Provider will notify the entity requesting service within fifteen (15) days of the Schedule 20A Service Provider's receipt of the Application for Phase I/II HVDC-TF Service of the reasons for such failure. The Schedule 20A Service Provider and the Eligible Customer will attempt to remedy minor deficiencies in the Application for Phase I/II HVDC-TF Service through informal communications. If such efforts are unsuccessful, the Schedule 20A Service Provider will return the Application for Phase I/II HVDC-TF Service, along with any deposit (less the reasonable costs incurred by the Schedule 20A Service Provider, the ISO or any affected Transmission Owners in connection with the Application for Phase I/II HVDC-TF Service), with interest, to the Eligible Customer. Upon receipt of a new or revised Application for Phase I/II HVDC-TF

Service that fully complies with the requirements of this Schedule 20A, the Eligible Customer will be assigned a new reservation priority based upon the date of receipt by the Schedule 20A Service Provider of the new or revised Application for Phase I/II HVDC-TF Service.

**4.5 Response to a Completed Application:** Following receipt of a Completed Application for Phase I/II HVDC-TF Service, the Eligible Customer will be notified as soon as practicable, but not later than thirty (30) days after the date of receipt of a Completed Application for Phase I/II HVDC-TF Service. Responses by the Schedule 20A Service Provider must be made as soon as practicable to all Completed Applications for Phase I/II HVDC-TF Service and the timing of such responses must be made on a nondiscriminatory basis.

**4.6 Execution of Phase I/II HVDC-TF Service Agreement:** Whenever the Schedule 20A Service Provider determines that the requested service can be provided, it will notify the Eligible Customer as soon as practicable but no later than thirty (30) days after receipt of the Completed Application for Phase I/II HVDC-TF Service, and will tender a Phase I/II HVDC-TF Service Agreement to the Eligible Customer. Failure of an Eligible Customer to execute and return the Phase I/II HVDC-TF Service Agreement or request the filing of an unexecuted Phase I/II HVDC-TF Service Agreement, within fifteen (15) days after it is tendered by the Schedule 20A Service Provider, shall be deemed a withdrawal and termination of the Application for Phase I/II HVDC-TF Service and any deposit (less the reasonable costs incurred by the Schedule 20A Service Provider, the ISO and any affected Transmission Owners in connection with the Application for Phase I/II HVDC-TF Service) submitted will be refunded with interest. Nothing herein limits the right of an Eligible Customer to file another Completed Application for Phase I/II HVDC-TF Service after such withdrawal and termination.

**4.7 Reservation of Phase I/II HVDC-TF Service:** OASIS requests for yearly or monthly service shall be submitted no earlier than sixty (60) days before service is to commence; requests for weekly, daily and hourly service shall be submitted no earlier than twenty-one (21) days before service is to commence.

**4.8 Extensions for Commencement of Firm Phase I/II HVDC-TF Service:** The Transmission Customer can obtain, subject to availability, up to five 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 Phase I/II HVDC-TF

Service for each year or fraction thereof within 15 days of notifying the Schedule 20A Service Provider it intends to extend the commencement of service. If during any extension for the commencement of service an Eligible Customer submits a Completed Application for Firm Phase I/II HVDC-TF Service, and such request can be satisfied only by releasing all or part of the Transmission Customer's Reserved Capacity over the Phase I/II HVDC-TF, the original Reserved Capacity over the Phase I/II HVDC-TF will be released unless the following condition is satisfied: within thirty (30) days, the original Transmission Customer agrees to pay the applicable rate for Firm Phase I/II HVDC-TF Service for its Reserved Capacity over the Phase I/II HVDC-TF for the period that its reservation overlaps the period covered by such Eligible Customer's Completed Application for Phase I/II HVDC-TF Service. In the event the Transmission Customer elects to release the Reserved Capacity over the Phase I/II HVDC-TF, the reservation fees or portions thereof previously paid will be forfeited.

**4.9 Confidentiality of Information and Standards of Conduct.** The Schedule 20A Service Provider will treat all information included in the Completed Application for Phase I/II HVDC-TF Service as confidential in accordance with the standards of conduct contained in 18 C.F.R. Part 37 of the Commission's regulations except to the extent that disclosure of such information is required by this Schedule 20A, the Phase I/II HVDC-TF Service Agreement, Schedule 20A Service Provider's Business Practices, by regulatory or judicial order, or for reliability purposes pursuant to Good Utility Practice.

**5. Determination of Available Transfer Capability**

The Schedule 20A Service Provider will make a determination on a non-discriminatory basis of ATC pursuant to Attachment C to this Schedule 20A and Section II, Attachment C of the Tariff.

**6. Payment for Phase I/II HVDC-TF Service**

**6.1 Phase I/II HVDC-TF Service Charge:** A Transmission Customer shall pay the Schedule 20A Service Provider's Phase I/II HVDC-TF Service Charge to the Schedule 20A Service Provider under the terms of this Schedule 20A.

**6.2 Discounts:** Information regarding any discounts to the Phase I/II HVDC-TF Service Charge shall be offered by the Schedule 20A Service Provider in a not unduly discriminatory manner and posted on its Phase I/II HVDC-TF Transmission Provider Page pursuant to

Commission regulations. Three principal requirements apply to discounts for transmission service over the Phase I/II HVDC-TF: (1) any offer of a discount made by a Schedule 20A Service 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 by the Schedule 20A Service Provider on the OASIS. For any discount agreed upon for service on a path, from Point(s) of Receipt to Point(s) of Delivery, the individual Schedule 20A Service Provider must offer the same discounted Phase I/II HVDC-TF Service rate for the same time period to all of its Eligible Customers.

**6.3 Resales:** The rates and rules governing charges and discounts stated in Sections 6.1 and 6.2 above shall not apply to resales of transmission service, compensation for which shall be governed by Section 8 of this Schedule 20A.

## **7. Changes in Service Specifications of Phase I/II HVDC-TF Service**

**7.1 Modification on a Firm Basis:** Any request by a Transmission Customer to modify Point(s) of Receipt and Point(s) of Delivery on a firm basis shall be treated as a new request for Phase I/II HVDC-TF Service in accordance with this Schedule 20A, except that such Transmission Customer shall not be obligated to pay any additional deposit if the capacity reservation over the Phase I/II HVDC-TF does not exceed the amount reserved in the existing Phase I/II HVDC-TF Service Agreement. While such new request is pending, the Transmission Customer shall retain its reservation priority for service at the firm Receipt Point(s) and Delivery Point(s) specified in the Transmission Customer's existing Phase I/II HVDC-TF Service Agreement.

**7.2 Modifications on a Non-Firm Basis:** The Transmission Customer taking Firm Phase I/II HVDC-TF Service may submit a request to the Schedule 20A Service Provider for transmission service on a non-firm basis over Point(s) of Receipt and Point(s) of Delivery other than those specified in the Phase I/II HVDC-TF Service Agreement ("Secondary Receipt and Delivery Points"), in amounts not to exceed the Transmission Customer's firm capacity reservation over the Phase I/II HVDC-TF, without incurring an additional Non-Firm Phase I/II

HVDC-TF Service charge or executing a new Phase I/II HVDC-TF Service Agreement, subject to the following conditions:

- (a) Phase I/II HVDC-TF 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 Phase I/II HVDC-TF Service reserved by Transmission Customers under this Schedule;
- (b) the Transmission Customer shall retain its right to schedule Firm Phase I/II HVDC-TF Service at the Point(s) of Receipt and Point(s) of Delivery specified in the relevant Phase I/II HVDC-TF Service Agreement in the amount of the Transmission Customer's original Phase I/II HVDC-TF Service reservation over the Phase I/II HVDC-TF; and
- (c) Phase I/II HVDC-TF Service over Secondary Receipt and Delivery Points on a non-firm basis shall not require the filing of an Application for Non-Firm Phase I/II HVDC-TF Service under this Schedule. However, all other requirements of this Schedule (except as to Phase I/II HVDC-TF Service charges) shall apply to Phase I/II HVDC-TF Service on a non-firm basis over Secondary Receipt and Delivery Points.

## **8. Sale, Assignment or Transfer of Phase I/II HVDC-TF Service**

**8.1 Procedures for Sale, Assignment or Transfer of Service:** Pursuant to Commission-approved rules posted by the Schedule 20A Service Provider on its Phase I/II HVDC-TF Transmission Provider Page, and subject to the requirements of the Restated Use Agreement, a Transmission Customer may sell, assign, or transfer all or a portion of its rights under its Phase I/II HVDC-TF Service Agreement, but only to another Eligible Customer (the "Assignee"). The Transmission Customer that sells, assigns or transfers its rights under its Phase I/II HVDC-TF Service Agreement is hereafter referred to as the "Reseller." Compensation to Resellers shall be at rates established by agreement between the Reseller and the Assignee.

The Assignee must execute a service agreement with the Schedule 20A Service Provider governing reassignments of transmission service prior to the date on which the reassigned service commences. The Schedule 20A Service Provider shall charge the reseller, as appropriate, at the rate stated in the Reseller's Service Agreement with the Schedule 20A Service Provider or the associated OASIS schedule and credit the Reseller with the price reflected in the Assignee's

Service Agreement with the Schedule 20A Service Provider or the associated OASIS schedule; provided that, such credit shall be reversed in the event of non-payment by the Assignee. 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 Phase I/II HVDC-TF Service Agreement, the Assignee shall receive the same services as did the Reseller and the transmission priority of service for the Assignee shall be the same as that of the Reseller. The Assignee shall be subject to all terms and conditions of this Schedule 20A. If the Assignee requests a change in service, the reservation priority of service will be determined by the Schedule 20A Service Provider pursuant to this Schedule 20A.

**8.2 Limitations on and Obligations of 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 Phase I/II HVDC-TF Service Agreement, the Schedule 20A Service Provider will consent to such change subject to the provisions of this Schedule 20A, provided that the change will not impair the operation of the Markets or the operation and reliability of the New England Transmission System. The Reseller shall remain liable for the performance of all obligations under the Phase I/II HVDC-TF Service Agreement, except as specifically agreed to by the Schedule 20A Service Provider, the Reseller and the Assignee through an amendment to the Phase I/II HVDC-TF Service Agreement.

**8.3 Information on Resale of Service:** In accordance with this Schedule 20A, Transmission Customers may use the Phase I/II HVDC-TF Transmission Provider Page to post information regarding transmission capacity over the Phase I/II HVDC-TF available for resale. All sales or assignments of capacity must be conducted through or otherwise posted on the Schedule 20A Service Provider's OASIS on or before the date the reassigned service commences and are subject to Section 8.1.

## **9. Real Power Losses**

Real power losses across the Phase I/II HVDC-TF shall be allocated solely to Transmission Customers that use Phase I/II HVDC-TF. Such allocation for transactions across the Phase I/II HVDC-TF shall be pursuant to the Tariff and in accordance with the operating protocols adopted by TransÉnergie and the Phase I/II HVDC-TF Owners. The Transmission Customer will be responsible for the losses associated with Phase I/II HVDC-TF Service, in addition to any losses associated with other transmission service under the Tariff.



**10. No Obligation to Build or Expand the Phase I/II HVDC-TF**

A Schedule 20A Service Provider's status under the Tariff shall not impose any obligation on it to build transmission facilities or expand the Phase I/II HVDC-TF. The offering of Phase I/II HVDC-TF Service under the Tariff shall not impose on the Phase I/II HVDC-TF Owners, the IRH or the ISO an obligation to build any transmission facilities to accommodate Phase I/II HVDC-TF Service.

**11. No Effect on PTF Rates**

Inclusion of Phase I/II HVDC-TF Service under the Tariff shall not affect rates for service on the PTF under the Tariff.

**12. Ancillary Services**

Transmission Customers taking service over the Phase I/II HVDC-TF Transmission System are required to acquire Ancillary Services from (a) the Schedule 20A Service Provider pursuant to the provisions within Section II to this Schedule 20A and (b) the Control Area Operator pursuant to the provisions within the Tariff. The specific Ancillary Services, prices and/or compensation methods are described in Section II to this Schedule 20A and in the applicable Schedules of the OATT.

**13. Congestion Costs and FTRs**

Congestion Costs will not be calculated, and therefore FTRs will not be offered, between any set of points on the Phase I/II HVDC-TF. Transmission Customers taking Phase I/II HVDC-TF Service in conjunction with service over the PTF, however, shall be subject to applicable Congestion Costs for any use of the PTF.

**14. Creditworthiness**

Each Schedule 20A Service Provider will specify its Creditworthiness procedures in Attachment L to its Phase I/II HVDC-TF Service Schedule in Part II of Schedule 20A.

**15. Billing and Payment**

**15.1 Billing Procedure:** Within a reasonable time after the first day of each month, the Schedule 20A Service Provider shall submit an invoice to the Transmission Customer for the charges for all Phase I/II HVDC-TF Service furnished under this Schedule 20A during the preceding month. The invoice shall be paid by the Transmission Customer within twenty (20)

days of receipt. All payments shall be made in immediately available funds payable to the Schedule 20A Service Provider, or by wire transfer to a bank named by the Schedule 20A Service Provider.

**15.2 Interest on Unpaid Balances:** Interest on any unpaid amounts (including amounts placed in escrow) shall be calculated in accordance with the methodology specified for interest on refunds in the Commission's regulations. Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment. When payments are made by mail, bills shall be considered as having been paid on the date of receipt by the Schedule 20A Service Provider.

**15.3 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 Schedule 20A Service Provider on or before the due date as described above, and such failure of payment is not corrected within thirty (30) calendar days after the Schedule 20A Service Provider notifies the Transmission Customer to cure such failure, a default by the Transmission Customer shall be deemed to exist. Upon the occurrence of a default, the Schedule 20A Service Provider may initiate a proceeding with the Commission to terminate Phase I/II HVDC-TF Service but shall not terminate such service until the Commission approves any such request. In the event of a billing dispute between the Schedule 20A Service Provider and the Transmission Customer, the Schedule 20A Service Provider will continue to provide Phase I/II HVDC-TF 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 escrow account 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 Phase I/II HVDC-TF Service, then the Schedule 20A Service Provider may provide notice to the Transmission Customer of its intention to suspend such service in sixty (60) days, in accordance with Commission policy.

## **16. Standards for Business Practices and Communication Protocols for Public Utilities**

The following NAESB Version 002.1 Standards are hereby incorporated by reference in this Schedule 20A to the extent they apply to the Schedule 20A Service Providers:

## ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

Open Access Same-Time Information Systems (OASIS), Version 1.5 (WEQ-001, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009), with the exception of Standards 001-0.1, 001-0.9 through 001-0.13, 001-1.0, 001-9.7, 001-14.1.3, and 001-15.1.2;

Open Access Same-Time Information Systems (OASIS) Standards & Communication Protocols, Version 1.5 (WEQ-002, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009);

Open Access Same-Time Information Systems (OASIS) Data Dictionary, Version 1.5 (WEQ-003, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009);

Coordinate Interchange (WEQ-004, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009) including Purpose and Applicability, excluding Standards 004-0.1 through 004-18.2, but including 004-A through 004-D;

Public Key Infrastructure (PKI) (WEQ-012, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009); and

Open Access Same-Time Information Systems (OASIS) Implementation Guide, Version 1.5 (WEQ-013, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009).

The Schedule 20A Service Providers have been granted a waiver of the following NAESB Version 001 Standards by Order of the Commission dated April 15, 2009 in FERC Docket Nos. ER09-626-000 and ER09-626-001.

Manual Time Error Correction (WEQ-006, Version 001, Oct. 31, 2007, with minor corrections applied on Nov. 16, 2007);

The Schedule 20A Service Providers have been granted a waiver of the following NAESB Version 002.1 Standards by Order of the Commission dated December 3, 2010 in FERC Docket No. ER 11-23-000.

Area Control Error (ACE) Equation Special Cases (WEQ-005, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009);

## ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

Inadvertent Interchange Payback (WEQ-007, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009);

Transmission Loading Relief – Eastern Interconnection (WEQ-008, Version 002.1, March. 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009); and

Gas/Electric Coordination (WEQ-011, Version 002.1, March 11, 2009, with minor corrections applied May 29, 2009 and September 8, 2009), including Standards 011-0.1 through 011-1.6. *To the extent that this standard does apply to an individual Schedule 20A Service Provider, the incorporation of this standard shall be addressed within the respective Schedule 20A Service Provider-specific schedule under Part II of this Schedule 20A.*

**SCHEDULE 20A**

**ATTACHMENT A**

**PHASE I/II HVDC-TF SERVICE AGREEMENT**

This Phase I/II HVDC-TF Service Agreement (“Service Agreement”), dated as of \_\_\_\_\_, is entered into, by and between \_\_\_\_\_ (“Schedule 20A Service Provider”) and \_\_\_\_\_ (“Transmission Customer”).

**PART I – General Terms and Conditions**

1. Service Provided: Phase I/II HVDC-TF Service under Part II, Schedule 20A of the ISO New England Inc., Transmission, Markets and Services Tariff (“Tariff”) (Check applicable service):

Non-Firm (Part I)  Firm (Parts I & II)

2. The Transmission Customer is an Eligible Customer under the Tariff and is a party to either a Market Participant Service Agreement or a Transmission Service Agreement.

3. The Transmission Customer has submitted a Completed Application and the required deposit, if applicable, for Phase I/II HVDC-TF Service under this Service Agreement and the Tariff.

4. The Transmission Customer agrees to supply information associated with its request for Phase I/II HVDC-TF Service to the Schedule 20A Service Provider that the Schedule 20A Service Provider deems reasonably necessary in accordance with Schedule 20A and Good Utility Practice in order for it to receive the requested service.

5. The Schedule 20A Service Provider agrees to provide and the Transmission Customer agrees to take and pay for Phase I/II HVDC-TF Service in accordance with the provisions of the Tariff and this Service Agreement.

ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

6. Service will be subject to some combination of the charges detailed in Part II, Schedule 20A of the Tariff. The appropriate charges will be determined in accordance with the terms and conditions of Schedule 20A.

7. 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 Customer:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Schedule 20A Service Provider:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

8. The Tariff is incorporated herein and made a part hereof.

9. Nothing contained in this Service Agreement shall be construed as affecting in any way the right of the Schedule 20A Service Provider to file with the Commission under Section 205 of the Federal Power Act and pursuant to the Commission's rules and regulations promulgated thereunder for a change in any rates, terms and conditions of this Service Agreement. Nothing contained in this Service Agreement shall be construed as affecting in any way the ability of the Transmission Customer to file with the Commission under Section 206 of the Federal Power Act and pursuant to the Commission's rules and regulations promulgated thereunder for a change in any rates, terms and conditions of this Service Agreement.

10. Phase I/II HVDC-TF Service under this Service Agreement shall commence on the later of: (1) \_\_\_\_\_, or (2) such other date as it is permitted to become effective by the Commission. Service shall terminate on \_\_\_\_\_.

**PART II – Firm Phase I/II HVDC-TF Service**

1. Specifications for Phase I/II HVDC-TF Service.
  - a. Term of Transaction: \_\_\_\_\_
  - b. Description of capacity and energy to be transmitted over the Phase I/II HVDC-TF including the electric Control Area in which the transaction originates:  
\_\_\_\_\_  
\_\_\_\_\_
  - c. Point(s) of Receipt and Capacity Reservation:  
\_\_\_\_\_  
\_\_\_\_\_
  - d. Delivering Party: \_\_\_\_\_
  - e. Point(s) of Delivery and Capacity Reservation:  
\_\_\_\_\_  
\_\_\_\_\_
  - f. Receiving Party: \_\_\_\_\_
  - g. Reserved Capacity: \_\_\_\_\_
  - h. Service under this Service Agreement shall be subject to the following charges:  
\_\_\_\_\_  
\_\_\_\_\_

Additional terms and conditions as may be specified in individual Schedule 20A Service Providers' Service Schedule:

\_\_\_\_\_  
\_\_\_\_\_

ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

IN WITNESS WHEREOF, the Parties have caused this Phase I/II HVDC-TF Service Agreement to be executed by their respective authorized officials.

Transmission Customer:

By: \_\_\_\_\_  
Name Title Date

\_\_\_\_\_  
Print Name

Schedule 20A Service Provider:

By: \_\_\_\_\_  
Name Title Date

\_\_\_\_\_  
Print Name



**SCHEDULE 20A**

**ATTACHMENT A-1**

**Form of PHASE I/II-TF Service Agreement For  
The Resale, Reassignment or Transfer of  
Point-To-Point Phase I/II HVDC-TF Service**

1. This Phase I/II HVDC-TF Service Agreement (“Service Agreement”), dated as of \_\_\_\_\_, is entered into, by and between \_\_\_\_\_ (“Schedule 20A Service Provider”) and \_\_\_\_\_ (“Assignee”).
2. The Assignee has been determined by the Schedule 20A Service Provider to be an Eligible Customer under the Tariff pursuant to which the transmission service rights to be transferred were originally obtained.
3. The terms and conditions for the transaction entered into under this Service Agreement shall be subject to the terms and conditions of Part I of Schedule 20A and the Schedule 20A Service Provider’s Service Schedule of Schedule 20A, except for those terms and conditions negotiated by the Reseller of the reassigned transmission capacity (pursuant to Section I.8.1 of this Tariff) and the Assignee, to include: contract effective and termination dates, the amount of reassigned capacity or energy, point(s) of receipt and delivery. Changes by the Assignee to the Reseller’s Points of Receipt and Points of Delivery will be subject to the provisions of Section I.8.2 of this Tariff.
4. The Schedule 20A Service Provider shall credit the Reseller for the price reflected in the Assignee’s Service Agreement or the associated OASIS schedule.
5. 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.

ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

Schedule 20A Service Provider:

---

---

---

Assignee:

---

---

---

6. The Tariff is incorporated herein and made a part hereof.

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

Schedule 20A Service Provider:

By: \_\_\_\_\_  
Name Title Date

\_\_\_\_\_  
Print Name

Assignee:

By: \_\_\_\_\_  
Name Title Date

\_\_\_\_\_  
Print Name

**Specifications For The Resale, Reassignment Or Transfer of  
Long-Term Firm Point-To-Point Phase I/II HVDC-TF Service**

1. Term of Transaction: \_\_\_\_\_

Start Date: \_\_\_\_\_

Termination Date: \_\_\_\_\_

2. Description of capacity and energy to be transmitted by the Schedule 20A Service Provider including the electric Control Area in which the transaction originates.

\_\_\_\_\_

3. Point(s) of Receipt: \_\_\_\_\_

Delivering Party: \_\_\_\_\_

4. Point(s) of Delivery: \_\_\_\_\_

Receiving Party: \_\_\_\_\_

5. Maximum amount of reassigned capacity: \_\_\_\_\_

6. Designation of party(ies) subject to reciprocal service obligation: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. Name(s) of any Intervening Systems providing transmission service: \_\_\_\_\_

\_\_\_\_\_

(Name of Transmission Owner) Open Access Transmission Tariff

8. Service under this Service 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 Direct Assignment Facilities Charge: \_\_\_\_\_  
\_\_\_\_\_

8.4 Ancillary Services Charges: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

9.0 Name of Reseller of the reassigned transmission capacity:  
\_\_\_\_\_

**II. PHASE I/II HVDC-TF SERVICE SCHEDULES**

The specific terms and conditions for rates and charges of the individual Schedule 20A Service Providers' offering of their Phase I/II HVDC-TF Use Rights are found in the Phase I/II HVDC-TF Service Schedules in this Part II of Schedule 20A.

**SCHEDULE 20A**

**ATTACHMENT C**

**METHODOLOGY TO ASSESS AVAILABLE TRANSFER CAPABILITY**

**1. INTRODUCTION**

This Attachment C to Schedule 20A applies to the calculation of transfer capability of the Phase I/II HVDC-TF by the Schedule 20A Service Providers.

**1.1 Scope of Document**

This Attachment C to Schedule 20A addresses the following items with respect to the Phase I/II HVDC-TF between the Hydro-Quebec Control Area and the New England Control Area for the Schedule 20A Service Providers:

- Total Transfer Capability (TTC) methodology
- Available Transfer Capability (ATC) methodology
- Existing Transmission Commitments (ETC)
- Use of Transmission Reliability Margin (TRM)
- Use of Capacity Benefit Margin (CBM)
- Use of Roll-over Rights (ROR) in the calculation of ETC

**1.2 Overview of Phase I/II HVDC-TF**

The Phase I/II HVDC-TF is a 2,000 MW HVDC tie line in New England that interconnects the New England Control Area with the Hydro-Québec Control Area in the Province of Québec, Canada. This HVDC line has one termination point in New England (with paired operation with complementary facilities in Québec). The specific facilities in New England are the Sandy Pond HVDC Terminal, which interconnects Central Massachusetts and the Nicolet and/or Radisson HVDC terminals of Hydro-Québec. Additional information on the Phase I/II HVDC-TF can be found at ISO New England OASIS web site under the “IRH”.

### 1.3 Definitions

Capitalized terms used and defined in this Attachment C to Schedule 20A shall have the meaning given them under this Attachment. Capitalized terms used and not defined in this Schedule 20A but defined in other sections of Schedule 20A or the ISO Tariff shall have the meaning given them under those sections. Capitalized terms used in this Attachment C to Schedule 20A that are not defined in it or elsewhere in Schedule 20A or the ISO Tariff shall have the meanings in the Restated Use Agreement or those customarily attributed to applicable criteria, rules, standards and operating procedures.

**Balancing Authority (BA):** The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**Balancing Authority Area:** The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Export:** New England to Hydro-Quebec

**Import:** Hydro-Quebec to New England

**Operating Horizon (OH):** For the purposes of this document,

- CVPS resets the OH at 16:00 eastern prevailing time each day. At that time, the OH spans from 16:00 through midnight two days out for a total of 56 hours. As time progresses the total hours remaining in the OH decreases until 16:00 the following day when the OH is once again reset to 56 hours.
- All SSPs (except CVPS) individually reset their OHs at noon eastern prevailing time each day. At that time, the OH spans from noon through midnight of the next day for a total of 36 hours. As time progresses the total hours remaining in the OH decreases until noon the following day when the OH is once again reset to 36 hours.

**Planning Horizon (PH):** For the purpose of this Attachment C to Schedule 20A, PH for any Schedule 20A Service Provider is any period before the OH.

**Scheduling Horizon (SH):** For the purpose of this Attachment C to Schedule 20A, SH is Real-Time and the hour before and utilizes Firm and Non-Firm Phase I/II HVDC-TF Service pursuant to ISO New England Operating Documents.

## **2. PHASE I/II HVDC-TF TOTAL TRANSFER CAPABILITY (TTC)**

The Total Transfer Capability (TTC) is the amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected transmission systems by way of all transmission lines (or paths) between those areas under specified system conditions. TTC for the Phase I/II HVDC-TF is calculated by the ISO as Transmission Operator using the NERC Standard MOD-029-1 Rated System Path Methodology and posted on the ISO New England OASIS site. Therefore, all requirements associated with the documentation of TTC methodology are addressed in Sections 1 and 3 of Section II, Attachment C – Available Transfer Capability Methodology of the ISO Tariff.

## **3. PHASE I/II HVDC-TF AVAILABLE TRANSFER CAPABILITY (ATC)**

### **General**

NERC standards: MOD-001-1 – Available Transmission System Capability and MOD-029-1 – Rated System Path Methodology define the required items to be identified when describing a transmission provider's ATC methodology. However, several of those items are not applicable to the Phase I/II HVDC-TF due to the fact that the Phase I/II HVDC-TF is a DC facility and sinks into a region where advance transmission service is not required. Because of this arrangement, loop flow is not an issue; and since associated regional transmission service is not sold in advance of real-time flow within ISO New England, the flow on the Phase I/II HVDC-TF does not typically impact the calculation of any other transfer capability.

Each Schedule 20A Service Provider, based on its Planning and Operating Horizon timing guidelines, will calculate and post as specified in Section 5 of this document Firm and Non-Firm Phase I/II HVDC-TF ATC separately using the NERC Standard MOD-029-1 Rated System Path Methodology.

### **Phase I/II HVDC-TF Capacity Benefit Market (CBM)**

CBM is defined as the amount of firm transmission transfer capability set aside by a TSP for use by the Load Serving Entities. The use of CBM on Phase I/II HVDC-TF is governed by the overall ISO approach



## ISO New England - ISO New England Inc. Transmission, Markets and Services Tariff

to capacity planning requirements in the ISO New England Operating Documents. Load Serving Entities operating within the New England Control Area are required to arrange their Capacity Requirements prior to the beginning of any given month in accordance with the ISO Tariff. As such, no CBM on Phase I/II HVDC-TF is set aside by any SSP for use by Load Serving Entities in ATC calculations. Therefore CBM is zero and will not be included in the calculations of ATC. As long as this market design is in place in New England, the CBM will continue to be set to zero.

### **Existing Transmission Commitments, Firm (ETC<sub>F</sub>)**

The ETC<sub>F</sub> are those Phase I/II HVDC-TF confirmed Firm transmission reservation (PTP<sub>F</sub>) plus any rollover rights for Firm transmission reservations (ROR<sub>F</sub>) that have been exercised. There are no allowances necessary for Native Load forecast commitments (NL<sub>F</sub>), Network Integration Transmission Service (NITS<sub>F</sub>), grandfathered Transmission Service (GF<sub>F</sub>) and other service(s), contract(s) or agreement(s) (OS<sub>F</sub>) to be considered in the ETC<sub>F</sub> calculation.

### **Existing Transmission Commitments, Non-Firm (ETC<sub>NF</sub>)**

The ETC<sub>NF</sub> are those Phase I/II HVDC-TF confirmed Non-Firm transmission reservations (PTP<sub>NF</sub>). There are no allowances necessary for Non-Firm Network Integration Transmission Service (NITS<sub>NF</sub>), Non-Firm grandfathered Transmission Service (GF<sub>NF</sub>) or other service(s), contract(s) or agreement(s) (OS<sub>NF</sub>).

### **Transmission Reliability Margin (TRM)**

The TRM is the amount of transmission transfer capability necessary to provide reasonable assurance that the interconnected transmission network will be secure. TRM accounts for the inherent uncertainty in system conditions and the need for operating flexibility to ensure reliable system operation as system conditions change. TRM is only applicable to Firm Phase I/II HVDC-TF ATC and shall not be applied to Non-Firm Phase I/II HVDC-TF ATC.

The ISO, as Transmission Operator, is responsible for calculating the TRM on the Phase I/II HVDC-TF interface. The Phase I/II HVDC-TF interface poses one of the largest contingency risks in the NYISO, PJM and New England Control Areas. As such, the Import TRM on the Phase I/II HVDC-TF is directly related to these operational limits which can be enforced at any time and the Import TRM is calculated as TTC minus the largest single source contingency. Therefore the SSPs set the Import TRM at 800 MW such that Firm transmission service is not sold above this operational limit.

Export TRM is established based on the methodology to account for operational uncertainties on the Hydro-Quebec TransEnergie transmission system. Therefore, the Export TRM is calculated as TTC minus these operational uncertainties.

For additional information on TRM, refer to the ISO Tariff, Attachment C – Available Transfer Capability Methodology, Section 5.2.2 – TRM Calculation for the OTF.

#### **4. CALCULATION OF PHASE I/II HVDC-TF ATC**

##### **4.1 Calculation of Phase I/II HVDC-TF Firm ATC ( $ATC_F$ )**

###### **4.1.1 Calculation of $ATC_F$ in the PH**

Consistent with the NERC definition,  $ATC_F$  is the capability for Firm transmission reservations that remain after allowing for  $ETC_F$ , CBM, TRM,  $Postbacks_F$  and  $counterflows_F$ .

As discussed above, Phase I/II HVDC-TF CBM is zero. Firm Transmission Service over the Phase I/II HVDC-TF that is available in the Planning Horizon (PH) includes: Yearly, Monthly, Weekly, and Daily.  $Postbacks_F$  and  $counterflows_F$  of Phase I/II HVDC-TF transmission reservations are not considered in the  $ATC_F$  calculation. Therefore,  $ATC_F$  in the PH is equal to the TTC minus  $ETC_F$  and TRM.

###### **4.1.2 Calculation of $ATC_F$ in the OH**

Consistent with the NERC definition,  $ATC_F$  is the capability for Firm transmission reservations that remain after allowing for  $ETC_F$ , CBM, TRM,  $Postbacks_F$  and  $counterflows_F$ .

As discussed above, Phase I/II HVDC-TF CBM is zero. Daily Firm Transmission Service over the Phase I/II HVDC-TF is the only firm service offered in the Operating Horizon (OH).  $Postbacks_F$  and  $counterflows_F$  of Phase I/II HVDC-TF transmission reservations are not considered in the  $ATC_F$  calculation. Therefore,  $ATC_F$  in the OH is equal to the TTC minus  $ETC_F$  and TRM.

##### **4.2 Calculation of Non-Firm ATC ( $ATC_{NF}$ )**

###### **4.2.1 Calculation of $ATC_{NF}$ in the PH**

$ATC_{NF}$  is the capability for Non-Firm transmission reservations that remain after allowing for  $ETC_F$ ,  $ETC_{NF}$ , scheduled CBM ( $CBM_S$ ), unreleased TRM ( $TRM_U$ ), Non-Firm Postbacks ( $Postbacks_{NF}$ ) and Non-Firm counterflows ( $counterflows_{NF}$ ).

As discussed above, the CBM for Phase I/II HVDC-TF is zero. Non-Firm ATC available in the PH includes: Monthly, Weekly, Daily and Hourly.  $TRM_U$ ,  $Postbacks_{NF}$  and  $counterflows_{NF}$  of Phase I/II HVDC-TF transmission reservations are not considered in this calculation. Therefore,  $ATC_{NF}$  in the PH is equal to the TTC minus  $ETC_F$  and  $ETC_{NF}$ .

#### **4.2.2 Calculation of $ATC_{NF}$ in the OH**

$ATC_{NF}$  available in the OH includes: Daily and Hourly.

$TRM_U$  and  $counterflows_{NF}$  are not considered in this calculation and CBM is zero. Therefore,  $ATC_{NF}$  in the OH is equal to the TTC minus  $ETC_F$ , and  $ETC_{NF}$  plus  $Postbacks_{NF}$ .

#### **4.3 Negative ATC**

Due to the calculation methodologies defined above, typically there should not be negative ATC values posted.

### **5. POSTING OF PHASE I/II HVDC-TF ATC**

#### **5.1 Location of ATC Posting**

ATC values are posted separately on the Phase I/II HVDC-TF Transmission Provider's Page for the Schedule 20A Service Providers. In addition, a summary of the level of service available from the Schedule 20A Service Providers is available on the ISO New England OASIS site under the "IRH".

#### **5.2 Updates To ATC**

When any of the variables in the ATC equations change, the ATC values are recalculated and immediately posted.

#### **5.3 Coordination of ATC Calculations**

The Phase I/II HVDC-TF is a controllable DC inter-Control Area tie line. Therefore it is not necessary to coordinate the Phase I/II HVDC-TF ATC values with the Hydro-Québec Control Area.

### 5.4 Load Forecast

The Phase I/II HVDC-TF is a controllable DC inter-Control Area tie line. Therefore, the ISO load forecast has no impact on the Phase I/II HVDC-TF ATC. The ISO is responsible for calculating the load forecast for the region and posts the load forecast on the ISO New England OASIS site.

### 5.5 ATC Mathematical Algorithms

The mathematical algorithms are posted on the ISO New England OASIS web site at [http://www.oatioasis.com/ISNE/ISNEdocs/sched20A\\_atc\\_algorithm.docx](http://www.oatioasis.com/ISNE/ISNEdocs/sched20A_atc_algorithm.docx). Each SSP will provide a link to this document on their individual web sites.

### 5.6 Generation and Transmission Outages

The Phase I/II HVDC-TF is a controllable DC inter-Control Area tie line and therefore generation or transmission outages have no impact on the Phase I/II HVDC-TF ATC.

## 6. ATC PROCESS FLOW DIAGRAM

