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9. **FIRM TRANSMISSION RIGHTS**

## **9.1 Firm Transmission Right Types**

Market Participants may acquire Point-To-Point Firm Transmission Rights (FTRs) and/or Network Service FTRs. All FTRs are defined in a specific direction from one or more Sources to one or more Sinks. FTRs issued by the ISO are specified in whole MW quantities, and these quantities are constant 24 hours per day, seven days per week, over the time period for which the FTR is auctioned. FTRs acquired through a conversion of Existing Rights may be FTR Options or FTR Obligations, according to the preference of the holder of the converted Existing Rights. FTRs allocated by the ISO to a Load Serving Entity or acquired through the auction process will be FTR Obligations. Point-To-Point FTRs are designed to provide both Day-Ahead financial entitlement and Day-Ahead physical scheduling priority, whereas Network Service Rights provide only Day-Ahead financial entitlement. For the purpose of secondary trading, an FTR Holder may unbundle an FTR into smaller whole-MW quantities and into separate hours of the day and/or days of the week, may unbundle Network Service Rights into components of Point-To-Point Rights, and may trade any of the components separately. All such trades must be reported to the ISO's Secondary Registration System.

### **9.1.1 Point-To-Point Rights**

A Point-To-Point FTR specifies a single Source, a single Sink, and a MW quantity of power flow from the Source to the Sink. Point-To-Point FTR Holders shall be entitled to the difference in the Locational Marginal Prices (LMPs) between the Sink and the Source specified by the FTR, multiplied by the MW quantity specified by the FTR. The Source and Sink of a Point-To-Point FTR may include multiple network nodes that have been aggregated into Trading Hubs or Load Aggregation Points and are represented by a single price and quantity for FTR bidding purposes. The MW quantity associated with a Source or Sink at a Trading Hub or Load Aggregation Point is distributed to the underlying network nodes according to the respective Load Distribution Factors (LDFs).

### **9.1.2 Network Service Rights**

A Network Service FTR specifies MW quantities at each of a group of Sources and Sinks, such that the total MW quantity over all Sources equals the total MW quantity over all Sinks. Market Participants that hold Network Service Rights shall be entitled to the difference in the LMPs between the multiple Sources and Sinks, multiplied by the respective awarded quantities. Each multiple Source and Sink has its own price and quantity for purposes of bidding into the FTR

Auction. Network Service Rights allow FTR Bidders the flexibility of supplying multiple Sinks from multiple alternative Sources.

### **9.1.3 FTR Obligations and FTR Options**

Point-To-Point Rights and Network Service Rights allocated by the ISO to Load Serving Entities or released through the FTR Auction are FTR Obligations. For the special case of converted Existing Rights, the Existing Rights holder may choose to receive either FTR Options or FTR Obligations; in either case the converted Existing Rights will become Point-To-Point Rights, in accordance with Section 9.3.3.3.

#### **9.1.3.1 FTR Obligations**

The Holder of a FTR Obligation is entitled to a payment when the hourly Day-Ahead Sink LMP is greater than the Source LMP, and is subject to a charge when the price difference is reversed. The value of the payment or charge is equal to the product (Sink LMP – Source LMP) times the MW quantity of the FTR. The payment or charge for a Network Service Right is calculated by subtracting the sum of the Source LMPs times their associated FTR MW quantities from the sum of the Sink LMPs times their associated FTR MW quantities.

#### **9.1.3.2 FTR Options**

Holders of Point-To-Point FTR Options are entitled to payments when the hourly Day-Ahead Sink LMP is greater than the Source LMP, but are not subject to charges when that price difference is reversed.

### **9.2 Firm Transmission Rights Use for Ancillary Services**

Market Participants that provide Ancillary Services imports at Scheduling Points may choose to purchase and use FTRs from Scheduling Points to Sinks within the ISO Control Area as a hedge against explicit Congestion charges for reserving congested inter-tie transmission capacity in the import direction for Day-Ahead Ancillary Services imports.

### **9.3 Firm Transmission Rights Term and Release**

Each holder of Existing Rights that elects to convert such rights, and each Load Serving Entity that uses New Firm Use (NFU) transmission capacity to serve Load in the ISO Control Area, shall receive allocations of FTRs commensurate with their usage of the transmission system during a Historic Reference Period (HRP) as specified in Section 9.3.3. These allocations shall be combinations of FTRs of three-year, one-year and monthly duration as specified in Sections

9.3.2 and 9.3.3. Converted Rights holders shall have the choice of receiving FTR Options or FTR Obligations, whereas Load Serving Entities that serve Load using NFU transmission capacity shall receive FTR Obligations. If Converted Rights elect to receive FTR Obligations instead of FTR Options, they will be treated like Load Serving Entities as described in Section 9.3.3.4. FTR Obligations shall also be released in three-year, one-year, and monthly FTR Auctions conducted by the ISO as described in Section 9.3.3.56. FTRs acquired through the FTR Auction, as well as FTRs held by Converted Rights holders and Load Serving Entities, may be traded in the FTR Secondary Market as specified in Section 9.6. The ISO Governing Board shall approve the timing, the auction release amounts and allocation amounts of FTRs on a regular basis.

### **9.3.1 Historical Reference Period**

The Historic Reference Period (HRP) is the most recent continuous 12-month period ending on a cut-off date as determined by the ISO and noticed on the ISO Home Page, to allow the ISO a reasonable amount of time to perform the calculations required for the FTR release process, as described in the FTR Policy and Procedures Guide, as periodically updated and notified to the Market Participants.

### **9.3.2 FTR Terms**

Transmission capacity shall be allocated to Converted Rights holders and Load Serving Entities, and released in the FTR Auctions in three terms or durations, namely, long-term (3 years), mid-term (1 year), and short-term (monthly), subject to the release amounts specified in Section 9.3.3.

### **9.3.3 FTR Release**

Allocation and release of transmission capacity shall occur in the following sequence of steps, with each step taking into account transmission capacity already allocated or released in the preceding steps:

- 1) Specification of the network topology and associated path ratings to be used as the basis for allocating and auctioning three-year and one-year FTRs. Distinction shall be made, where relevant, between Contract Paths and other Pathways. The capacity of the Pathways used in the network model to assess and enforce simultaneous feasibility of FTRs for each category and term shall be determined as described in Sections 9.3.3.2 through 9.3.3.5. This procedure will be done annually in preparation for the

release of one-year FTRs. Every third year this network will also be used for the release of three-year FTRs.

- 2) Reservation of the transmission capacity needed for expected use of non-converted Existing Rights.
- 3) Capacity allocation to FTR Options previously allocated to the Existing Rights that converted prior to the HRP.
- 4) (Every third year.) Allocation of long-term FTR Options to those newly Converted Rights that elect to receive FTR Options.
- 5) (Every third year.) Allocation of long-term FTR Obligations to Load Serving Entities and to those newly Converted Rights that elect to receive FTR Obligations.
- 6) (Every third year.) Auction of long-term FTR Obligations.
- 7) Allocation of mid-term FTR Options to those newly Converted Rights that elect to receive FTR Options.
- 8) Allocation of mid-term FTR Obligations to Load Serving Entities and to those newly Converted Rights that elect to receive FTR Obligations.
- 9) Auction of mid-term FTR Obligations.
- 10) Revision of the network topology and associated path ratings as needed to reflect planned outages and de-ratings of transmission facilities, to be used as the basis for allocating and auctioning monthly FTRs. This will be done monthly. In a timely fashion as needed to support this monthly process, the PTOs shall provide to the ISO all available information on planned transmission outages and de-ratings for the coming month.
- 11) Reservation of the transmission capacity needed for expected monthly use of non-converted Existing Rights.
- 12) Allocation of monthly FTR Options to those Converted Rights that have elected to receive FTR Options.
- 13) Allocation of monthly FTR Obligations to Load Serving Entities and to those Converted Rights that have elected to receive FTR Obligations.
- 14) Auction of monthly FTR Obligations.

Allocations of FTRs to Converted Rights shall be structured to reflect the life of the associated Existing Contract, by adjusting the mix of long-term, mid-term and short-term FTRs appropriately. Upon the date of expiration of the associated Existing Contract, the Converted Rights holder will no longer be entitled to, and will no longer receive, an allocation of FTRs.

Simultaneous feasibility for allocation of FTRs to the Converted Rights and Load Serving Entities shall be assessed based on available transmission network capacity, whereas simultaneous feasibility for auctioned FTRs shall be determined by both the available transmission network capacity and the FTR bids.

The simultaneous feasibility conditions imposed on the FTRs shall be consistent with the reliability considerations taken into account in actual operations. Contingency considerations reduce the number of FTRs issued but do not increase the number of FTRs needed in order to offer perfect congestion hedges for any point to point transaction. This means that simultaneous feasibility conditions typically shall include n-1 contingency considerations. All contingencies that need to be considered to preserve the security of the ISO transmission system should be taken into account. This set of contingencies will include, at a minimum, the most important single largest contingency that ISO needs to protect against. Other contingencies will be included as appropriate.

#### **9.3.3.1 Existing Right Modeling**

All Existing Rights, both those that convert to FTRs and those that do not convert, shall be modeled by the ISO in collaboration with the respective PTOs to develop a specification of each Existing Right. The PTOs shall provide the ISO with the following information:

- ?? Contract Path for each Existing Right
- ?? Relation of Existing Right MW with Contract Path OTC for each Existing Right
- ?? Relative priority, to be designated by each PTO for all its Existing Contracts, and coordinated among PTOs such that the Existing Right priority orders are system-wide, and
- ?? Source/Sink designations for each Existing Right, including Location and injection/ejection amounts as a fraction of the full Existing Right on relevant Contract Path (fixed fractions of Existing Rights as Existing Rights vary with OTC levels will be assumed)

Sources and Sinks may be individual network nodes, Trading Hubs or Load Aggregation Points.

### **9.3.3.2 Exclusion of Non-converted Existing Right Capacity from FTR Allocation and Auction**

Allocation of FTRs to Converted Rights holders and Load Serving Entities and release of FTRs in the FTR Auction shall in no way alter the ability of the non-converted Existing Rights holders to exercise their full Existing Contract scheduling rights in each hour commensurate with the prevailing Operating Transfer Capability (OTC) and the respective Existing Rights terms and conditions. The ISO shall set aside adequate transmission capacity on each encumbered Pathway at a level sufficient to accommodate the Existing Rights holders' use of that Pathway during the HRP, excluding periods of planned outages and force majeure events, as follows:

#### (1) Non-converted Existing Right Capacity Determination

For each Contract Path, for each hour of the HRP when the Contract Path was not on scheduled maintenance or experiencing excessive derate, the following computations shall be performed:

- (a) List the OTC, and determine the Existing Contracts MW amount for each Existing Right at that OTC.
- (b) Add up all Existing Rights MW amounts determined in (a) and take the maximum of the sum of Existing Rights MW amounts among the hours of each month during the HRP as the "monthly maximum Existing Rights capacity". Designate the corresponding hour as the "Existing Rights peak hour of the month", the corresponding OTC as the "monthly OTC", and its difference with corresponding Existing Rights (OTC – Existing Rights) as the "monthly ATC". Determine the Existing Rights at that hour as the "coincident monthly Existing Rights MW" for each Existing Rights holder.
- (c) Designate the maximum of the "monthly maximum Existing Rights capacity" quantities identified in (b) as the "total annual Existing Rights capacity" for the HRP, the relevant OTC as the "annual OTC" for the HRP, the relevant ATC as the "annual ATC" for the HRP, and the corresponding Existing Rights MW amount as the "annual Existing Rights" MW amount for the HRP.

#### (2) Simultaneous Feasibility of Non-converted Existing Rights

The ISO shall verify simultaneous feasibility of the Existing Rights determined in (1) assuming full transmission capacity (no derates) on all Pathways of the network model. The following procedure shall be used to assess and enforce simultaneous feasibility of non-converted Existing Rights:

- a) Using the full network, with all transmission Pathway OTCs at full capacity, place injections and ejections at relevant Sources and Sinks for each Existing Right using the injection/ejection fractions in the Existing Contracts specification of Section

9.3.3.1, and the levels determined in Section 9.3.3.2(1)(c) as the Contract Path MW right.

b) In case of infeasibility, the following actions shall be taken:

i) A tolerance shall be accommodated for each Pathway at 3% of the Pathway OTC.

ii) For Pathways on which simultaneous accommodation of Existing Rights is infeasible, those Existing Rights that contribute to the flow on the Pathway beyond the tolerance shall be curtailed based on the relative scheduling priority established in the Existing Rights specifications (Section 9.3.3.1) until the Pathway limit violations are eliminated. Existing Rights with the same priority shall be curtailed pro rata.

c) The MW quantities at the Source and Sink of the feasible Existing Rights shall be used as the “feasible” usage pattern for purposes of non-converted Existing Right capacity reservation and ATC determination for the subsequent steps described below.

(3) Network Available Transmission Capacity (ATC) Determination

The simultaneously feasible non-converted Existing Rights from part (2) of this section shall be used to reserve transmission capacity for non-converted Existing Rights on each Pathway. The ATC for each Pathway shall be determined by the following formula:

$$\text{ATC} = \max (0, \text{OTC} - \text{Existing Rights})$$

Where the Existing Rights are the sum of all simultaneously feasible Existing Rights contributions on the Pathway, and OTC is the coincident OTC determined in 9.3.3.2(1)(c) for Contract Paths or the full OTC for other Pathways.

(4) The ATC determined in (3) for each Pathway shall be allocated to the three-year, one-year, and monthly FTRs as follows:

?? 30% for long-term (3-year) FTRs

?? 75% for the combination of long-term and mid-term FTRs

?? 100% for the combination of long-term, mid-term, and short-term (monthly) FTRs



- (5) The ATCs determined in step (4) shall be updated annually based on the most recent HRP's Existing Rights and OTC data, and shall be adjusted each month for the monthly FTR release based on forecast minimum ATC (OTC less corresponding Existing Rights) for the subsequent month.

### **9.3.3.3 Allocation of FTR Options to the Converted Rights Holders**

The ISO encourages Existing Rights holders to convert those rights to FTRs. Conversion of these rights will allow the ISO market to function more efficiently, and will allow the holders of the rights to participate fully in the benefits of the market.

The holders of Converted Rights are eligible to receive Point-To-Point FTR Options as described in this section. For the purpose of the simultaneous feasibility test for FTRs, the ISO shall use a Source/Sink pattern for the FTR Option, based on historical usage.

If a Converted Rights holder elects to receive Point-To-Point FTR Obligations instead of Point-To-Point FTR Options, the holder will be treated similarly to the Load Serving Entities receiving FTR Obligations and will be subject to the provisions of Section 9.3.3.4.

Converted Rights shall be distinguished from non-converted Existing Rights in five respects: 1) Converted Rights shall be allocated FTR Options, unless they explicitly request FTR Obligations; 2) the scheduling priority for Converted Rights shall apply in the Day-Ahead Market only (as is the case with all other FTRs); 3) the holder of Converted Rights can earn Congestion Revenues from other users of the transmission capacity by releasing unscheduled rights in the - Ahead Market; 4) the FTRs allocated to Converted Rights are tradable in the FTR Secondary Market; and 5) the FTRs allocated to Converted Rights will be in fixed MW quantities, in contrast to Existing Rights typically defined as a percentage of OTC.

#### **9.3.3.3.1 Accommodating FTR Options Allocated to Previously Converted Rights**

Existing Rights converted prior to the HRP shall be accommodated by allocating transmission capacity from the network ATC that is left over after transmission capacity reservation for non-converted Existing Rights, as specified in Section 9.3.3.2.

For purposes of allocating transmission capacity for the previously Converted Rights, simultaneous feasibility of previously Converted Rights shall be assessed in the following order:

- ?? Long-term (3-year) previously Converted Rights using the network with 30% ATC on each Pathway.

- ?? The total of long-term (3-year) and mid-term previously Converted Rights, using the network with 75% ATC on each Pathway, and keeping fixed the Sources/Sinks for the long-term Converted Rights.
- ?? The total of previously Converted Rights of all terms, using the network with 100% of ATC on each Pathway, and keeping fixed the Source/Sink for the long-term and mid-term Converted Rights.

#### **9.3.3.3.2 Allocation of FTR Options to Newly Converted Rights**

Upon conversion, the volume and pattern of FTR Options to be allocated to Converted Rights shall be based on scheduling history of the converted Existing Rights during the relevant HRP using the following procedure:

(1) Converted Right Capacity Determination

For each Contract Path for each hour of the HRP when the Contract Path was not on scheduled maintenance or experiencing excessive derate, the following computations shall be performed:

- a) Determine the Existing Rights MW amount scheduled (up to 20 minutes before the hour) for each hour of the HRP.
- b) Determine, for each Existing Contract, from the MW schedules determined in (a), the minimum schedule among the hours of each month during the HRP as the “monthly Converted Right Capacity”.
- c) Designate for each Existing Contract the minimum of the “monthly Converted Right Capacity” quantities identified in (b) over the 12-months of the HRP as the “non-simultaneous annual Contract Path MW allocation” for each newly Converted Right holder.

(2) Simultaneous Feasibility of Converted Rights

The following procedure shall be followed to assess and enforce simultaneous feasibility of FTR Options allocated to Converted Rights:

- a) Use the network ATC determined in Section 9.3.3.2. Place fixed injections and ejections at relevant Sources and Sinks for each previously Converted Right based on the levels and patterns determined in Section 9.3.3.3.1. Place injections and ejections at relevant Sources and Sinks for each newly Converted Right based on the injection/ejection fractions in the Existing Rights specification (Section 9.3.3.1), and the levels determined in 9.3.3.3.2(1)(c) as the “non-simultaneous annual Contract Path MW allocation”.

- b) In case of infeasibility, the following actions shall be taken:
- i) A tolerance band shall be accommodated for each Pathway at 3% of the Pathway ATC.
  - ii) For Pathways on which simultaneous accommodation of Converted Rights is infeasible, those Converted Rights that contribute to the flow on the Pathway beyond the tolerance shall be curtailed based on the relative scheduling priority established in the Existing Rights specifications (Section 9.3.3.1) until the Pathway limit violations are eliminated. Converted Rights with the same priority shall be curtailed pro rata.
- c) The MW quantities at the Source and Sink of the feasible Converted Right rights shall be used as the “feasible” usage pattern for purposes of Converted Right FTR Option release described below.

(3) Allocation of Converted Right FTR Options

The MW quantities determined in 9.3.3.3.2(2) shall be used as the reference for the release of Converted Right FTR Options as follows:

?? 30% for long-term Converted Right FTR Options

?? 75% for the combination of long-term and mid-term Converted Right FTR Options

?? 100% for the combination of long-term, mid-term, and monthly Converted Right FTR Options

- (4) The Converted Right FTR Options computed in 9.3.3.3.2(3) for the monthly cycles shall be augmented further based on the most recent similar month data, limited by the monthly ATC levels determined in Section 9.3.3.2(5).

- (5) The total (100%) FTR Options capacity determined in Sections 9.3.3.3.1 and 9.3.3.3.2(3) shall be set aside from the ATC levels determined in Section 9.3.3.2(3), and the remaining ATC shall be used for the allocation and release of FTR Obligations to Load Serving Entities and Converted Rights holders that elect to receive FTR Obligations, and auctioned FTR Obligations as specified in Sections 9.3.3.4 and 9.3.3.5.

**9.3.3.4 Allocation of FTR Obligations to the Load Serving Entities**

The ISO, in collaboration with Load Serving Entities, shall determine historic grid usage patterns in a manner analogous to that for Converted Rights specified in Section 9.3.3.3. These historic patterns shall form the basis of an allocation of FTRs to Load Serving Entities, utilizing a simultaneous feasibility assessment using the full network ATC that is left over after the

reservation of transmission capacity for non-converted Existing Rights and the allocation of transmission capacity for Converted Right FTR Options specified in Sections 9.3.3.2 and 9.3.3.3.

#### **9.3.3.4.1 Initial Allocation of Load Serving Entity FTRs**

For the initial allocation of FTR Obligations to the Load Serving Entities, each Load Serving Entity shall put in a request to the ISO, along with justification, as to the level of long-term, mid-term, and short-term FTRs it needs to serve load for the forthcoming 12 months. These shall be used as upper bounds for the allocation of FTR Obligations to the LSE.

The procedure described below shall be followed to determine the allocation to Load Serving Entities of FTR Obligations:

- (1) Determination of non-simultaneous FTR MW eligibility. The non-simultaneous FTR MW eligibility of each Load Serving Entity represents the number of FTRs to which the Load Serving Entity would be entitled, in the absence of simultaneous feasibility constraints, based on the Load Serving Entity's use of the transmission system to serve Load during the relevant HRP. It shall be determined based on Load Serving Entity's historical net load (load minus local generation) in the Load Serving Entity's service area, as follows:
  - a) A "net load duration curve" shall be constructed for each Load Serving Entity for each month during the HRP using the Load Serving Entity's historical net load.
  - b) The net load level exceeded 99.5% of the time during each month of the HRP shall be identified.
  - c) The minimum of the monthly 99.5% levels identified in b) shall constitute the total non-simultaneous FTR MW eligibility of the Load Serving Entity.
  - d) The MW eligibility level determined in c) shall be limited to the amount of FTR Obligations requested by the Load Serving Entity, and may be further constrained because of simultaneous feasibility requirements as specified below.
- (2) Identification of transmission usage pattern. The usage pattern for the Load Serving Entity's FTR Obligations shall be determined as follows:
  - a) The Load Serving Entities shall identify to the ISO:
    - i) Primary (priority 1) Sources and Sinks associated with their intended FTR Obligations usage, along with the MW quantity at each Source or Sink. The Sinks may be individual network nodes, Trading Hubs or Load Aggregation Points.

ii) Up to 3 additional sets of Sources and Sinks with priorities 2 through 4, along with a range (minimum or maximum) MW distribution at each Source or Sink, to be used in case the primary set does not pass the simultaneous feasibility test.

Each usage pattern/range shall be deemed applicable to all hours of the HRP.

- b) In case a Load Serving Entity does not provide the usage information specified in a), the ISO shall use the average historical scheduling pattern during the HRP, if available. If the average historical scheduling pattern is not available, the Load Serving Entity will not be allocated FTR Obligations, and must acquire them in the FTR Auctions described in Section 9.3.3.5.
- c) The MW quantities and ranges associated with the usage patterns shall be deemed to correspond to the total non-simultaneous FTR MW eligibility determined in (1) for each Load Serving Entity.
- d) The ISO shall verify simultaneous feasibility of the Load Serving Entity FTR levels and patterns using the network ATC determined in Section 9.3.3.3.2(5) as follows:
- i) Simultaneous feasibility shall be assessed for the primary (priority 1) patterns (Sources, Sinks, and corresponding MW distributions).
  - ii) If the desired use is infeasible, the number of candidate patterns shall be expanded to include injection locations and ranges associated with the next level of priority.
  - iii) If all priority patterns are exhausted, the non-simultaneous MW eligibility levels determined in (1) shall be reduced *pro rata*.
- (3) The feasible MW levels (and patterns) determined in (2) shall be allocated as FTR Obligations to the respective Load Serving Entities as follows:
- ?? 30% as long-term FTR Obligations
  - ?? 75% as the combination of long-term and mid-term FTR Obligations
  - ?? 100% as the combination of long-term, mid-term, and monthly FTR Obligations
- (4) The Load Serving Entity FTR Obligations computed in (3) for the monthly cycles shall be augmented further based on the most recent similar month data using 99.5% monthly Load Serving Entity net load data, limited by the monthly ATC levels determined in Section 9.3.3.3.2(5).

The total (100%) FTR Obligations capacity determined in step (3) shall be fixed for the release of auctioned FTR Obligations as specified in Section 9.3.3.5. Although transmission capacity reserved for non-converted Existing Rights and Converted Rights is taken out of the ATC, the

capacity allocated to Load Serving Entities shall be incorporated in the subsequent FTR Auction process.

#### **9.3.3.4.2 Modifying Load Serving Entity Allocations**

The FTR Obligations shall be deemed allocated to the Load served by the Load Serving Entity. When customers switch retail providers, the FTRs shall move with them to the new Load Serving Entity. The initial and new Load Serving Entities shall exchange the FTRs and register the transfer using the Secondary Registration System (SRS) as specified in the FTR Policy and Procedures Guide.

#### **9.3.3.5 Network ATC of Firm Transmission Rights Auction**

The network ATC determined in Section 9.3.3.2(4) shall be used for the auction of FTRs as follows:

- ?? The network used for the auction of long-term FTRs shall include 30% of the ATC of each Pathway as determined in Section 9.3.3.2(3) less long-term Converted Right FTR Options. Fixed Sources and Sinks shall be included for the Load Serving Entity's long-term FTR Obligations.
- ?? The network used for the auction of mid-term FTRs shall include 75% of the ATC of each Pathway as determined in Section 9.3.3.2(3) less the long-term and mid-term Converted Right FTR Options. Fixed Sources and Sinks shall be included for the Load Serving Entity's long-term and mid-term FTR Obligations.
- ?? The network used for the auction of short-term (monthly) FTRs shall include all of the ATC of each Pathway as determined in Section 9.3.3.2(5), less all Converted Right FTR Options. Fixed Sources and Sinks shall be included for all Load Serving Entity's FTR Obligations for the month.

#### **9.3.3.6 Firm Transmission Rights Auctions**

The ISO or its representative shall conduct periodic FTR Auctions to allow Market Participants to acquire or sell Firm Transmission Rights in accordance with provisions of this Section. The ISO shall publish information on the ISO Home Page about an upcoming FTR Auction at least seven (7) days prior to the FTR Auction.

##### **9.3.3.6.1 Frequency, Amount, and Timing of FTR Auctions**

FTR Auctions shall be held as frequently as monthly. The FTR Auction time and day of the month shall be indicated in the FTR Policy and Procedures Guide posted on the ISO Home Page.

#### **9.3.3.6.2 Term and Scope of FTR Auctions**

FTRs shall begin at midnight on the first day of the term of the FTRs and expire at midnight on the last day of the term of the FTRs. FTRs sold in the FTR Auction will have terms that extend up to a period of three years. The ISO shall offer for sale in the FTR Auction any remaining ATC for the relevant term after taking into account all the FTRs already outstanding at the time of FTR Auction, the quantity of Existing Rights, and the quantity of FTRs allocated to Load Serving Entities. Any FTR Holder may offer FTRs for sale in the FTR Auction or may sell the FTRs in the FTR Secondary Market and register the transaction in the Secondary Registration System. Market Participants may bid for and acquire any number of FTRs, provided that all awarded FTRs are valid and simultaneously feasible with each other and with all FTRs outstanding at the time of the FTR Auction.

#### **9.3.3.6.3 Eligibility to Participate**

~~9.2.6~~ Any entity, with the exception of the ISO, shall be eligible to acquire FTRs by participating in the ISO's auction of FTRs, as described in Section 9.4, FTR Auction or by purchasing FTRs in the secondary markets. ~~To participate in the ISO's auction of FTRs, an entity must either be a certified Scheduling Coordinator or have met financial requirements equivalent to the financial certification criteria required of all Scheduling Coordinators. An entity may not acquire FTRs with a total value that exceeds the financial security proved by that entity to the ISO. In addition, an FTR Bidder must have, or have access to, the necessary technical equipment to participate in the electronic auction. An FTR Holder that is not a Scheduling Coordinator must be represented by an ISO-approved Scheduling Coordinator for all transactions with the ISO related to FTRs. Any entity wanting to participate in the FTR Auction must meet all requirements as described in the FTR Policy and Procedures Guide.~~

#### **9.3.3.6.4 FTR Auction Process and Market Participant Training**

The FTR Auction process and Market Participant training shall be conducted in accordance with the ISO's FTR Policy and Procedures Guide as posted on the ISO Home Page.

#### **9.3.3.6.5 Offers and Bids**

~~9.4.2.2~~ On or before the date specified in Section 9.4.2.1(v), any entity desiring to obtain FTRs in the ISO's auction must submit, via equipment satisfying the technical requirements specified in accordance with Section 9.4.2.1(v), a bid for each FTR Market in which the entity desires to participate, specifying the number of FTRs the entity is willing to purchase at the price specified in Section 9.4.2.1(ii). ~~All individual bids will remain confidential throughout all rounds of the~~

auction in each FTR. Bids to purchase FTRs and offers to sell FTRs shall be submitted in the form specified by the ISO in accordance with the requirements set forth below and as specified in the FTR Policy and Procedures Guide. Once submitted to the ISO, a bid for bids and offers FTRs in any round of an auction may not be cancelled or rescinded by the FTR Bidders. The ISO shall announce simultaneously to all FTR Bidders the total quantity of FTRs for which valid bids are submitted for each FTR Market.

Bids to purchase FTRs shall specify the FTR type (Point-To-Point Right or Network Service Right). Bids for Point-To-Point Rights shall specify the associated Source and Sink and a monotonically increasing staircase bid curve of up to 10 quantities (MW) and prices (\$/MW). The Source and Sink can be either a network node or a standard Trading Hub; in addition, a Sink may be a Load Aggregation Point. Trading Hub and Load Aggregation Point injections and ejections shall be distributed to their underlying nodes using the relevant Load Distribution Factors. Bids for Network Service Rights shall specify associated Sources and Sinks, and a staircase bid curve of up to 10 quantities (MW) and prices (\$/MW) for each Source and Sink. The bid curve for Sources must be monotonically increasing and for Sinks, monotonically decreasing. The Network Service Right awarded through the FTR Auction will consist of a set of Sources and Sinks and associated MW quantities, such that the sum of the MW quantities for all Sources equals the sum of the MW quantities for all Sinks. The valuation of such a Network Service Right is equal to the sum of the auction clearing prices at each Sink weighted by their associated MW quantities as specified by the FTR, minus the sum of the auction clearing prices at each Source weighted by their associated MW quantities as specified by the FTR. This valuation shall be the price paid by the FTR Bidder for the Network Service FTR.

A bid to purchase a specified megawatt quantity of FTRs shall constitute a bid to purchase a quantity of FTRs equal to or less than the specified quantity. A bid to purchase may not specify a minimum quantity that the FTR Bidder wishes to purchase. Bids to purchase and offers to sell FTRs shall be specified in whole megawatts and shall specify positive MW quantities. Bid and offer prices may be positive or negative. Bids shall be accepted by the ISO subject to such reasonable standards for the creditworthiness of the FTR Bidder or for the posting of security for performance as the ISO shall establish and describe in the FTR Policy and Procedures Guide, as posted on the ISO Home Page.

At the close of the bidding period each month, the ISO will utilize the bids as input to an FTR power flow optimization model. This model, containing all applicable transmission constraints and reliability requirements, shall determine the awarded FTRs subject to simultaneous feasibility of all FTRs including FTRs allocated or sold in previous FTR allocations and FTR



Auctions. The winning bids shall be determined from the power flow optimization model that, while respecting transmission constraints and the maximum megawatt quantities of the bids and offers, shall select the set of simultaneously feasible FTRs with the highest net total auction value as determined by the bids of buyers. In the event that there are two or more identical bids for the selected FTRs and there is insufficient Available Transfer Capacity to accommodate all of the identical bids, then each such FTR Bidder will receive a pro rata share of the FTRs that can be awarded.

An FTR Holder that wishes to sell an FTR may do so by placing an FTR bid in the opposite direction at a negative price, where the negative price is the minimum price at which it wishes to sell the FTR. FTRs shall be sold at the market-clearing price for FTRs between specified pairs of Sources and Sinks, as determined by the bid value of the marginal FTR that could not be awarded because it would not be simultaneously feasible with the rest. The power flow optimization model shall determine LMPs at each Source and Sink of all awarded FTRs. These LMPs shall be used to determine the payments and charges for each awarded FTR in accordance with Section 9.4.1.

#### **9.3.3.6.6 Announcement of Winners and Prices**

~~9.4.2.8~~ Within two (2) business days after the close of an FTR Auction, the ISO shall post the preliminary results on the ISO Home Page the prices at which FTRs are sold in each FTR Market through the primary auction, of the provisional winning bidders, the megawatt quantity, and the Source and Sink for each FTR awarded in the FTR Auction and the price at which each FTR was awarded. The ISO shall not disclose the prices specified in any bid to purchase or sell.

FTR Bidders shall pay the amount determined by the ISO to be due resulting from the FTR Auction within five (5) business days of receiving an invoice from the ISO by making payment to the ISO Clearing Account. If the FTR Bidder fails to make timely payment of the full amount due, the ISO may enforce any guarantee, letter of credit or other credit support provided by the defaulting FTR Bidder in accordance with the provisions of this section. If the ISO is required to institute proceedings to collect any unpaid amount, the defaulting FTR Bidder shall pay interest on the unpaid amount at the ISO Default Interest Rate for the period from the Payment Date until the date on which payment is remitted to the ISO Clearing Account. Within two (2) business days of the receipt of payments, excluding any delinquencies, the ISO shall post on the ISO Home Page the final FTR Auction results comprised of the final winning bidders, the megawatt quantity, and the Source and Sink for each FTR awarded in the FTR Auction and the

price at which each FTR was awarded. The ISO shall not disclose the prices specified in any bid to purchase or sell.

#### **9.3.3.6.7 FTR Auction Design**

The FTR Auction shall be an optimization problem of maximizing the FTR Auction revenue with simultaneous feasibility of all awarded and pre-existing FTRs. The FTR Auction revenue is determined by the bids of awarded FTRs. Awarded Point-To-Point Rights are balanced Schedules from the respective Source to the respective Sink. Awarded Network Service Rights are balanced Schedules from the respective Sources to the respective Sinks.

##### **9.3.3.6.7.1 Network Model**

The full network model with external network equivalents used in the FTR Auctions will be the same as that used in the Day-Ahead, Hour-Ahead and Real-Time Markets, except that the model in the FTR Auctions will not include transmission facility resistances (it will be a DC network model). Therefore, transmission losses will be ignored in the FTR Auction model.

##### **9.3.3.6.7.2 Network Constraints**

Only active power limits on transmission lines, transformers, and transmission interfaces shall be enforced in the FTR Auctions.

##### **9.3.3.6.7.3 Long-Term FTR Auction**

All transmission facilities shall be in service in the network model for the long-term FTR Auction. The transmission capacity available for long-term FTRs on each Pathway shall be determined in accordance with Section 9.3.3.5. Long-term FTR Obligations allocated to Load Serving Entities shall be included in the network model as fixed injections to provide additional transmission capacity for counterflows as needed.

##### **9.3.3.6.7.4 Mid-Term FTR Auction**

All transmission facilities shall be in service in the network model for the mid-term FTR Auction. The transmission capacity available for mid-term FTRs in each Pathway shall be determined in accordance with Section 9.3.3.5. Long-term and mid-term FTR Obligations allocated to Load Serving Entities and long-term FTR Obligations sold in the long-term FTR Auction shall be included in the network model as fixed injections to provide additional transmission capacity for counterflows as needed.

#### **9.3.3.6.7.5 Short-Term FTR Auction**

Transmission facilities that are expected to be in service during the term of the short-term FTR Auction shall be in service in the network model for the short-term FTR Auction. The transmission capacity available for short-term FTRs on each Pathway shall be determined in accordance with Section 9.3.3.5. Long-term, mid-term, and short-term FTR Obligations allocated to Load Serving Entities, long-term FTR Obligations sold in the long-term FTR Auction, and mid-term FTR Obligations sold in the mid-term FTR Auction, shall be included in the network model as fixed injections to provide additional transmission capacity for counterflows as needed.

#### **9.4 Firm Transmission Rights Settlement**

Settlement of FTRs shall take place in the Day-Ahead Market and shall provide a hedge against Day-Ahead congestion costs. There will not be any settlements for FTR Holders in the Hour-Ahead or Real-Time Markets.

##### **9.4.1 FTR Auction Revenue Allocation**

Point-To-Point Obligations purchased at an FTR Auction shall be charged the product (Sink LMP – Source LMP) times the MW quantity of the FTR. This charge will be a payment to the FTR purchaser if the price difference is negative. Network Service Rights purchased at an FTR Auction shall be charged the sum of the auction clearing prices at each Sink weighted by their associated MW quantities as specified by the FTR, minus the sum of the auction clearing prices at each Source weighted by their associated MW quantities as specified by the FTR. This charge will also be a payment to the FTR purchaser if the calculated charge is negative. FTR Holders who sell FTRs in an FTR Auction will receive the revenues generated by the FTRs they sold. Any remaining net revenues from an FTR Auction shall be paid to Participating Transmission Owners (PTOs) in proportion to their Transmission Revenue Requirement (TRR).

##### **9.4.2 Firm Transmission Rights Holder Payments and Charges**

In each hour of the Day-Ahead Market, settlement will be calculated with all FTR Holders based upon the Day-Ahead LMPs regardless of the FTR term. All FTRs of the same type (Options or Obligations) shall be treated the same regardless of when and how they are acquired.

###### **9.4.2.1 Congestion Revenue Allocation**

In each hour of the Day-Ahead Market, the Day-Ahead Energy Settlement, including explicit charges for inter-tie transmission capacity reservation for Day-Ahead Ancillary Services imports,

shall result in Day-Ahead Congestion Revenue. This Congestion Revenue is due to transmission losses in the network and binding network constraints. If the Congestion Revenue is positive, it shall be allocated to FTR Holders as follows:

1. Holders of Point-To-Point Options shall be entitled to a payment equal to the product (Sink LMP – Source LMP) times the MW quantity of the FTR, if that amount is positive. If the price difference is negative, no payment or charge shall be due.
2. The holder of a Point-To-Point FTR Obligation shall be entitled to a payment equal to the product (Sink LMP – Source LMP) times the MW quantity of the FTR, if that amount is positive. If the result of this calculation is negative, the holder of the Point-To-Point FTR Obligation shall be charged that amount.
3. The holder of a Network Service FTR Obligation shall be entitled to a payment equal to the sum of the LMPs at each Sink weighted by their associated MW quantities as specified by the FTR, minus the sum of the LMPs at each Source weighted by their associated MW quantities as specified by the FTR. If the result of this calculation is negative, the holder of the Network Service Obligation shall be charged that amount.

For each hour of the Day-Ahead Market in which the net of all FTR payments and charges is less than the Congestion Revenue, all FTR Holders shall be paid and charged fully according to their entitlements. The remaining Congestion Revenue shall be credited to the monthly FTR Balancing Account. If the net of all FTR payments and charges exceeds the Congestion Revenue, all FTR Holders shall be paid and charged pro rata in proportion to their entitlements. Any payment or charge shortfalls shall be accumulated and tracked monthly by FTR for the monthly clearing of the monthly FTR Balancing Account.

If the Congestion Revenue is negative, it shall be debited to the monthly FTR Balancing Account and all FTR entitlements shall be accumulated as payment or charge shortfalls accordingly. The Congestion Revenue may be negative if the ATC of the network is reduced by outages or derates to less than the ATC held by FTRs.

In each hour of the Hour-Ahead Market, the Hour-Ahead Energy settlement, including explicit charges for inter-tie transmission capacity reservation for Hour-Ahead Ancillary Services imports, shall result in Hour-Ahead Congestion Revenue. This Congestion Revenue is due to transmission losses in the network and due to binding network constraints. The Hour-Ahead Congestion Revenue shall be credited if positive, or debited if negative, to the monthly FTR Balancing Account in accordance with Section 9.4.2.2.

#### **9.4.2.2 Firm Transmission Rights Balancing Account**

Revenue adequacy (whether or not the ISO will collect sufficient Congestion Revenues to pay the financial entitlements owed to holders of FTRs) will depend on the differences between the transmission model, contingency specification and constraint set used for the simultaneous feasibility test and those used for scheduling the Day-Ahead Market. The less significant the differences, the less chance there is for a revenue inadequacy condition. Thus, in specifying the simultaneous feasibility test conditions, the objective is to try to choose settings that will be consistent with the state of the transmission system at the time that it is scheduled.

In any given hour in the Day-Ahead Market, FTR Holders are paid their FTR entitlement, which can be used to offset or completely eliminate Congestion costs that materialize due to LMP differences across the transmission network. If the ATC of the transmission network in that hour is no less than the ATC that is held by FTR Holders, the Congestion Revenue would be sufficient to pay all FTR entitlements fully, since FTRs are awarded and auctioned so that they are simultaneously feasible. If ATC has become unavailable due to outages, derates or unexpected loop flows, however, the Congestion Revenue may not be sufficient to pay the FTR Holders fully. Any Congestion Revenue to PTOs from the Day-Ahead and Hour-Ahead Markets, as well as PTO debits in accordance with the ISO Tariff, will be accumulated in the monthly FTR Balancing Account. Funds in the monthly FTR Balancing Account will be used to reduce or eliminate FTR Holders' Congestion Revenue deficiency.

##### **9.4.2.2.1 Monthly Clearing**

At the end of each month, if that month's FTR Balancing Account contains excess revenue, it shall be used to pay down the net FTR shortfall for that month. If the net FTR shortfall for the month is less than the revenue in the monthly FTR Balancing Account, all FTR monthly payment and charge shortfalls shall be paid and charged fully and the net payment shall be debited to the monthly FTR Balancing Account. The remaining revenue in the monthly FTR Balancing Account shall be credited to the yearly FTR Balancing Account. If the net FTR shortfall for the month exceeds the revenue in the monthly FTR Balancing Account, all FTR monthly payment and charge shortfalls shall be paid and charged pro rata in proportion to their monthly shortfall and the remaining monthly payment and charge shortfalls shall be accumulated and tracked yearly by FTR for the yearly clearing of the yearly FTR Balancing Account. If the balance in the monthly FTR Balancing Account is negative at the time of the monthly clearing, all FTR monthly payment and charge shortfalls shall be accumulated and tracked yearly by FTR for the yearly clearing of the yearly FTR Balancing Account and the

balance of the monthly FTR Balancing Account shall be debited to the yearly FTR Balancing Account.

#### **9.4.2.2.2 Yearly Clearing**

At the end of each year, if the yearly FTR Balancing Account contains revenue, it shall be used to pay down the net FTR shortfall over the year. If the net FTR shortfall for the year is less than the revenue in the yearly FTR Balancing Account, all FTR yearly payment and charge shortfalls shall be paid and charged fully and the net payment shall be debited to the yearly FTR Balancing Account. The remaining revenue in the yearly FTR Balancing Account shall be paid to the PTOs in proportion to their TRR. If the net FTR shortfall for the year exceeds the revenue in the yearly FTR Balancing Account, all FTR yearly payment and charge shortfalls shall be paid and charged pro rata in proportion to their yearly shortfall. If the balance in the yearly FTR Balancing Account is negative at the time of the annual clearing, no additional payments or charges shall be made.

### **9.5 Firm Transmission Rights Activity Rules and Monitoring**

#### **9.5.1 Affiliate Disclosure Requirements**

~~9.2.7~~—All entities that which acquire FTRs by participating in the ISO's FTR Auction of FTRs, as described in Section 9.4, directly from the ISO pursuant to Section 9.4.3, or by purchasing FTRs in secondary markets, must register as an FTR Holder with the ISO. To complete this registration, the FTR Holders must notify the ISO, through the form specified for that purpose by the ISO, of all Affiliates entities with which the FTR Holder is affiliated that are themselves FTR Holders or Market Participants. An Affiliate is an entity, company, or person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with the subject entity, company, or person. The requirement that an FTR Holder notify the ISO of all Affiliates that are FTR Holders or Market Participants is continuing for as long as the FTR Holder owns FTRs, and FTR Holders must provide the ISO with supplemental notification concerning FTR Holders and/or Market Participants that become affiliated with the FTR Holder or Affiliates that subsequently become FTR Holders or Market Participants in order to satisfy this requirement. This notification requirement is a continuing obligation, and FTR Holders must provide the ISO with this information at the time they register to participate in the FTR Auction and within five (5) business days of the acquisition of FTRs in the FTR Secondary Market, and must provide subsequent notifications concerning changes in affiliated entities within five (5) business days of such change.

## **9.5.2 FTR Concentration**

### **9.5.2.1 FTR Concentration Limits**

The ISO will monitor the FTR, Energy and Congestion markets and may impose position limits on the total number of FTRs that may be held by any one affiliate group if anomalous market behavior, gaming, or exercise of market power are observed that may be attributed to FTR concentration.

### **9.5.2.2 Monitoring of FTR Concentration**

For FTR Holders with a concentration of FTR ownership or control using more than 25% of the ATC released for any FTR term on any Pathway used in the FTR Auction, the ISO shall monitor:

- ?? Unused FTRs (FTRs above and beyond what the entity needs to hedge against congestion charges based on the entity's scheduling practices);
- ?? FTRs in the opposite direction to what the entity needs to hedge against congestion charges based on the entity's scheduling practices (e.g., outbound FTRs for a Load Serving Entity or inbound FTRs for a generation owner);
- ?? Schedule shifts for congestion management;
- ?? The frequency of the entity being pivotal in the Energy or Congestion markets;
- ?? Net FTR revenues (above the level used to hedge schedules).

The ISO also shall monitor FTR Secondary Market activity as specified in Section 9.6.

**9.8.2** The ISO shall publish on the ISO Home Page such information concerning the concentration of ownership of FTRs ~~in each FTR Market~~ as determined by the ISO Board of Governors from time to time.

## **9.6 Firm Transmission Rights Secondary Market**

The ISO shall not run an FTR Secondary Market but will provide FTR participants an interface to facilitate and track their FTR Secondary Market transactions. The ISO shall monitor the total FTR concentration (as specified in Section 9.5) and the secondary market transactions (as specified below).

**9.8.3**—To facilitate the operation of secondary markets in FTRs, the ISO shall post on ~~WeNet~~ and the ISO Home Page: (i) the identity of entities that hold FTRs that have been registered with the ISO, together with the quantity of FTRs held by such ~~entities in each FTR Market~~ the path rating of the interface and their corresponding Sources and Sinks; and (ii) the name and a

contact telephone number or teletype number of any entity that operates a secondary market in FTRs and that requests the ISO to post such information. The ISO also shall ~~also~~ post the prices at which FTRs are transferred through secondary market transactions and shall indicate whether such transfers are conditional.

#### **9.6.1 Trade Registration**

FTRs traded in the FTR Secondary Market must be reported to the ISO. ~~9.8.1~~ Both the FTR Holder of record and the entity to which the FTRs have been transferred shall register the transfer of the FTR with the ISO by notifying the ISO through the form specified for that purpose by the ISO, and within the number of business days following the transfer published by the ISO on the ISO Home Page and WENet but no later than such time as the ISO shall specify before the deadline applicable to scheduling Energy in the Day-Ahead Market, of (i) the date of the transaction; ~~(ii) (i)~~ the identity of the FTR Holder of record; ~~(iii) (ii)~~ the identity of the entity to which the FTRs have been transferred; ~~(iv) (iii)~~ the quantity ~~and identification numbers of the~~ FTRs being transferred; (v) the Sources and Sinks of the FTRs being transferred; ~~(vi) (iv)~~ the portion of the term of the FTR for which they are transferred; ~~(vii) (v)~~ the price at which the FTRs are being transferred; and ~~(viii) (vi)~~ whether the transfer of FTRs is subject to any conditions. The entity to which the FTRs have been transferred must also notify the ISO of all entities with which the transferee is affiliated that are FTR Holders or Market Participants as defined in the ISO Tariff, pursuant to Section ~~9.2.7~~ 9.5.1. After the ISO receives such notices, the transferee shall be considered the FTR Holder of record with respect to the portion of the term of the FTR that is transferred. In order to use the Scheduling ~~P~~riority of an FTR, an FTR must be registered with the ISO.

#### **9.6.2 ~~9.8~~Assignment of Firm Transmission Rights**

~~9.8.1~~ An FTR may be assigned, sold, or otherwise transferred in whole MW and full hourly increments by the FTR Holder to any entity eligible to be an FTR Holder ~~in full MW increments,~~ either for the entire term of the FTR or for any portion of that term ~~provided, however, that any such transfer shall be in full hour increments that correspond to the FTR issued to the FTR Holder.~~ All FTRs that are so assigned, sold, or otherwise transferred by the FTR Holder are subject to the applicable terms and conditions for FTRs approved by FERC and set forth in the ISO Tariff.



## **9.7 Issuance of Firm Transmission Rights by the ISO**

The ISO can issue Firm Transmission Rights to new Participating Transmission Owners or to entities who add new transmission capacity to the ISO grid through construction of new facilities or upgrading of existing facilities. There are two options for entities adding new transmission capacity: the merchant transmission option and the rate of return transmission option.

### **9.7.1 New Participating Transmission Owners**

**9.4.3** For the ten-year transition period described in Section 4 of Schedule 3 to Appendix F of the ISO Tariff, a New Participating Transmission Owner (PTO) shall receive FTR Options (or if it so elects, FTR Obligations) for the Pathway ~~Inter-Zonal Interfaces~~ to which the transmission facilities and Converted Rights for the Pathway ~~Inter-Zonal Interfaces~~ that the New Participating TO turns over to the ISO's Operational Control give it transmission rights. The amount of FTRs will be determined when the Transmission Control Agreement is executed and shall be commensurate with the transmission capacity the New Participating TO is turning over to ISO Operational Control. FTRs issued in accordance with this section shall entitle the FTR Holder to receive ~~Usage Charge~~ Congestion Revenues commensurate with the FTR type (Options or Obligations) and to priority in the scheduling of Energy and Ancillary Services in the Day-Ahead Market in accordance with the provisions of the ISO Tariff. FTRs associated with Converted Rights shall terminate on the earlier of termination of the Existing Contract or the end of the ten-year transition period.

### **9.7.2 Merchant Transmission Option**

When new transmission capacity is added under a merchant transmission model (the owner of the new capacity does not recover the investment cost under a FERC regulated and approved rate of return through the TAC or through direct payment from a PTO) and this new transmission capacity is provided to be put under ISO Operational Control and the ISO accepts it, the ISO will provide FTRs to the party responsible for the increased transmission capacity for the full amount of the increase in capacity, as approved by WECC or the appropriate party, in a combination of long-term, mid-term and monthly Point-To-Point FTRs in proportions as indicated in Section 9.3. Such allocation by the ISO will require the party responsible for the increased transmission capacity to provide to the ISO a set of desired Sources and Sinks for defining the FTRs. Under this option the entity shall not receive an amount of FTRs greater than the approved amount of the increase in transmission capacity. Of necessity these may have to be monthly FTRs initially, until such time as the next annual FTR Auction occurs.

### **9.7.3 Rate of Return Transmission Option**

When new transmission capacity is created under a FERC regulated and approved rate of return model (the owner of the new capacity recovers the investment cost plus rate of return through the TAC or through direct payment from a PTO), the owner will not receive any FTRs for the new capacity created. Instead, any increase in the ATC available will be allocated fully through the FTR Auction process and the associated auction revenues will be paid to the appropriate PTO to reduce the TAC.

Prior to the start of operation of any change of capacity, whether due to creation of a new facility, upgrade of an existing facility or a retirement or downgrade of an existing facility, the ISO will perform engineering studies to determine changes in system capacity and any necessary changes to the FTR release as a result of the change. At the next FTR Auction, the ISO will make the proper changes to accommodate the changes to grid transfer capacity. Any decrease in transmission capacity will be reflected through the reduction of available capacity in the next monthly FTR Auction and all subsequent FTR Auctions, as appropriate.

### **9.1 General**

~~9.1.1 Commencing in 2000, on the effective date established by the ISO Governing Board, the ISO shall make FTRs available in the amounts determined in accordance with Section 9.3, with the rights and other characteristics described in Sections 9.2, 9.6, 9.7 and 9.8, and through the processes described in Section 9.4. Proceeds of the ISO's auction of FTRs shall be distributed as described in Section 9.5. The owners of FTRs shall be entitled to share in Usage Charge revenues associated with Inter-Zonal Congestion in accordance with Section 9.6, and to scheduling priority in the event of congestion in the Day-Ahead Market, as described in Section 9.7. For the purpose of Section 9, the term "Zone" shall be construed to mean both "Zone" and "Scheduling Point."~~

### **9.2 Characteristics of Firm Transmission Rights**

~~9.2.1 Each FTR shall be defined by a transmission path from an originating Zone to a contiguous receiving Zone. Each FTR shall entitle the FTR Holder to a share of Usage Charges attributable to Inter-Zonal Congestion for transfers on that path from the designated~~

~~originating Zone to the designated receiving Zone in accordance with Section 9.6. An FTR is a right in one direction only. An FTR Holder shall not be entitled to share in (i) Usage Charges attributable to Inter-Zonal Congestion from the designated receiving Zone to the designated~~

~~originating Zone; or (ii) Usage Charges payable in accordance with Section 7.3.1.5.1 to a Scheduling Coordinator that counter-schedules from the designated originating Zone to the designated receiving Zone.~~

~~**9.2.2** The ISO Governing Board shall, from time to time, approve the amount of FTRs to be auctioned for each FTR Market and the ISO shall publish this information on the ISO Home Page at least thirty (30) days prior to the auction. The ISO may issue FTRs in one or more auctions in any year so long as the total FTRs for any interface do not exceed the maximum amount permitted in Section 9.3.~~

~~**9.2.2.1** Should the ISO create additional Zones or otherwise change the ISO's defined Inter-Zonal Interface, and if such changes would affect outstanding FTRs, such changes will not take effect prior to the expiration date of any such outstanding FTRs. The ISO shall also publish an announcement of any such pending changes on the ISO Home Page and WEnet at least thirty (30) days prior to the applicable FTR auction.~~

~~**9.2.2.2** Any additional FTRs auctioned as a result of changes in the ISO's defined Inter-Zonal Interfaces shall not affect the rights associated with existing FTRs.~~

~~**9.2.3** Each FTR shall be issued in the denomination of 1 MW. The initial release of FTRs shall start with the hour beginning at 12:00 a.m., on February 1, 2000 and end with the hour beginning at 11:00 p.m., on March 31, 2001. An FTR shall not afford the FTR Holder any right to share in Usage Charges attributable to Inter-Zonal Congestion occurring in any hour before or after the term of the FTR.~~

~~**9.2.4** The portion of the Usage Charges to which the FTR Holder is entitled shall be determined in accordance with Section 9.6.~~

~~9.2.5~~ FTR Holders shall be entitled to priority in the scheduling of Energy in the Day-Ahead Market as specified in Section 9.7.

\* \* \* \*

~~9.3~~ **Maximum Number of Firm Transmission Rights**

~~9.3.1~~ On each Inter-Zonal Interface and direction combination for which FTRs are issued, the ISO shall issue a number of FTRs that is less than or equal to the difference between:

~~(i) The WSCC approved path rating of the interface in the direction from the originating Zone to the receiving Zone or, if the interface has not received a WSCC approved rating, a rating determined by a methodology that is consistent with the WSCC's rating methodology; and~~

~~\_\_\_\_\_ (ii) The portion of the transfer capability of the interface available for transmission scheduling under Existing Contracts as Existing Rights.~~

~~and ensures the ISO's ability to honor all of its FTRs simultaneously under normal operating conditions.~~

#### **~~9.4 Issuance of Firm Transmission Rights by the ISO~~**

~~9.4.1 The ISO shall make FTRs available by conducting an annual primary auction of FTRs, commencing approximately two months before the beginning of the term of the FTRs; provided; however that for the initial FTR release, the primary auction shall be as determined by the ISO Governing Board. The auction of FTRs shall be a simultaneous multi-round, clearing price auction conducted separately and independently, as set forth in Section 9.4.2, for each FTR Market. In addition, if the ISO Governing Board decides to make available, between annual auctions, FTRs in addition to those that were purchased in the last annual auction, the ISO may conduct additional auctions of such FTRs in accordance with Section 9.4.2. The term of such FTRs shall only be for the remaining duration of the FTR term defined for the primary auction applicable to the year during which they were issued.~~

~~9.4.2 The ISO shall conduct the auction of FTRs through the following procedures:~~

~~9.4.2.1 At least thirty (30) days prior to the scheduled start of the auction, the ISO shall post on the ISO Home Page the following information:~~

- ~~(i) the number of FTRs to be issued for each FTR Market;~~
- ~~(ii) the starting bid price at which FTRs will be made available in each FTR Market in the first round of the auction, which price will be set in each FTR Market at a level equal to the greater of (a) \$100 per MW-year; (b) twenty (20) percent of the ratio of the net Usage Charges collected by the ISO with respect to that FTR Market in the most recent twelve-month period for which data are available to the total MW-years of Energy scheduled over the Inter-Zonal Interface in the relevant direction during that period; or (c) twenty (20) percent of the ratio of the net Grid Operation Charges (for new Inter-Zonal Interfaces that previously were transmission paths within a Zone) collected by the ISO in the most recent twelve-month period for which data are available to the total MW-years of Energy scheduled over the transmission paths in the relevant direction during that period, provided that, if data are available for only a portion of the twelve-month period, such data shall be used on annualized basis;~~
- ~~(iii) the formula through which the ISO will determine how much to adjust the price of FTRs in each FTR Market for subsequent rounds of the auction, including the initial coefficients to be used in the formula and the range over which the coefficients may be adjusted in accordance with Section 9.4.2.3;~~

- ~~(iv) the date and time prior to the commencement of the auction by which each entity desiring to bid on FTRs must have satisfied the necessary financial requirements as outlined in Section 9.2.6;~~
- ~~(v) the specifications for the technical equipment necessary to participate in the auction, which will be conducted electronically, the date and time by which bids must be submitted in the first round of the auction, which shall be the same for all FTR Markets, and the form and format in which bids must be submitted; and~~
- ~~(vi) a schedule for the conduct of subsequent rounds of the auction, including the interval between rounds of the auction and the anticipated duration of the auction.~~

~~\* \* \* \*~~

~~**9.4.2.3** In each round of the auction following the first round, the ISO will increase the price at which FTRs are made available in each FTR market in accordance with the formula posted in accordance with Section 9.4.2.1(iii), or in accordance with any adjustment to the coefficients in that formula that is announced by the ISO to the FTR Bidders at least one round in advance of the round for which the adjustment is made. Price increases need not be uniform for all FTR Markets.~~



~~In the case of an FTR Market in which the demand for FTRs in the preceding round is less than or equal to the quantity of FTRs being made available, the price shall not increase and the auction for that FTR Market shall close. After each round of the auction, the ISO shall announce simultaneously to all FTR Bidders the total quantity of FTRs for which valid bids were submitted in each FTR Market, whether the auction for each FTR Market is closed, and, the revised prices for the following round of the auctions that remain open. Within the timeframe set by the ISO in accordance with Section 9.4.2.1(vi), each FTR Bidder may submit bids for the quantity of FTRs it desires to purchase in each FTR Market at the revised price, provided that an FTR Bidder may not bid for a number of FTRs in an FTR Market that exceeds the total number of FTRs in that FTR Market for which that entity submitted bids in the preceding round of the auction. The ISO shall conduct subsequent rounds of the auction in each FTR Market until the demand for FTRs in the FTR Market is less than or equal to the quantity of FTRs being made available, at which point the auction shall be closed in that FTR Market.~~

~~**9.4.2.4** — Subject to Section 9.4.2.5, each successful FTR Bidder shall receive a number of FTRs in each FTR market equal to the number of FTRs for which it bid in the last round of the auction for that FTR Market.~~

~~**9.4.2.5** — For any FTR Market in which, when the auction has closed, the number of FTRs being made available exceeds the demand for FTRs in that FTR Market in the last round of the auction, each FTR Bidder shall be awarded a number of FTRs determined in accordance with the following formula, provided that, if the number of FTRs that would be awarded under the formula to an FTR Bidder that did not submit a bid in the last round of the auction is less than five percent (5%) of the initial bid submitted by that FTR Bidder for the FTR Market, that FTR Bidder shall have the option of declining the award of FTRs resulting from the formula:~~

$$N = B + [(R / TR) * D]$$

where

$N$  = The total number of FTRs awarded to an FTR Bidder for an FTR Market, which shall be in whole MWs and shall not exceed the number of FTRs for which that FTR Bidder bid in the round preceding the final round of the auction;

$B$  = The number of FTRs for which an FTR Bidder bid in the final round of the auction for the FTR Market in accordance with Section 9.4.2.4 (or zero, if the FTR Bidder did not bid in that round);

$R$  = The difference between the number of FTRs for which the FTR Bidder bid in the round preceding the final round of the auction and  $B$ , but not less than zero;

$TR$  = The total of the demand reductions ( $R$ ) for all FTR Bidders that submitted bids in the last round of the auction (treating the failure by an FTR Bidder to submit a bid as a bid of zero); and

$D$  = The difference between the total demand for FTRs in the final round of the auction and the quantity of FTRs being made available for the FTR Market.

**9.4.2.6** The price of FTRs in an FTR Market shall be the last price at which the demand for FTRs in the FTR Market exceeded or equaled the quantity of FTRs being made available pursuant to Section 9.4.2.1(i), except that, if the demand for FTRs in an

~~FTR Market in the first round of the auction was less than the quantity of FTRs being made available for that FTR Market, the price of FTRs in that FTR Market shall be the first round price and each FTR Bidder in that FTR Market will receive a number of FTRs equal to the quantity of bids they submitted in the first round. Any remaining FTRs in that FTR Market will not be awarded in that auction.~~

~~**9.4.2.7** — Each FTR Bidder shall pay the ISO an amount equal to the sum, for all FTR Markets, of the products of the FTR price in each FTR Market (determined in accordance with Section 9.4.2.6) and the total quantity of FTRs awarded to that FTR Bidder in that FTR Market (determined in accordance with Section 9.4.2.4 or Section 9.4.2.5, as applicable). FTR Bidders shall pay the amount determined in accordance with the foregoing sentence within ten (10) business days of receiving an invoice from the ISO by making payment to the ISO Clearing Account in accordance with Section 11.10. If the FTR Bidder fails to make timely payment of the full amount due, the ISO may enforce any guarantee, letter of credit or other credit support provided by the defaulting FTR Bidder in accordance with Section 9.4.2.7 and, if the ISO is required to institute proceedings to collect any unpaid amount, the defaulting FTR Bidder shall pay interest on the unpaid amount at the ISO Default Interest Rate for the period from the Payment Date until the date on which payment is remitted to the ISO Clearing Account.~~

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~~**9.5 — Distribution of Auction Revenues Received by the ISO for Firm Transmission Rights**~~

~~**9.5.1** — For each Inter-Zonal Interface and direction for which an FTR is defined, the total proceeds received by the ISO through the auction described in Section 9.4 shall be allocated and paid by the ISO to the Participating TO that is entitled in accordance with Section 7.3.1.6 to receive Usage Charge revenues with respect to the corresponding Inter-Zonal Interface. Each Participating TO shall credit its FTR auction proceeds against its high voltage TRBA if the FTR is for a High Voltage~~

~~Transmission Facility or against its low voltage TRBA if the FTR is a for a Low Voltage Transmission Facility.~~

~~**9.5.2** — In the event the transmission facilities or rights making up an Inter-Zonal Interface with respect to which FTRs are defined are owned by more than one Participating TO, the proceeds of the auction of such FTRs shall be allocated to those Participating TOs who auction FTRs in proportion to the FTRs associated with their Inter-Zonal Interface as of the date of the FTR auction compared to all FTRs auctioned for such Inter-Zonal Interface.~~

## ~~**9.6 — Distribution of Usage Charges to FTR Holders**~~

~~**9.6.1** The FTR Holder shall be entitled to receive from the ISO a portion of the total Congestion revenues related to Inter-Zonal Congestion calculated by the ISO in the Day-Ahead Market and collected by the ISO with respect to the Inter-Zonal Interface and direction combination for which the FTR was defined. This portion equals the Usage Charge calculated by the ISO in the Day-~~

Ahead Market for the transfer of 1 MW from the originating Zone to the receiving Zone during each hour in which Usage Charges apply, multiplied by the number of FTRs owned by that FTR Holder, subject to adjustment in accordance with Section 9.6.3.

~~9.6.2~~ In addition, an FTR holder shall be entitled to receive a portion of the additional net Usage Charges related to Inter-Zonal Congestion calculated by the ISO in the Hour-Ahead Market and collected by the ISO with respect to the Inter-Zonal Interface and direction combination for which the FTR was defined. The FTR Holder shall receive a portion of the net Usage Charges in the Hour-Ahead Market proportionate to the share of the Usage Charges it received in the Day-Ahead Market in accordance with Section 9.6.1.

~~9.6.3~~ When the Day Ahead scheduling capability of an Inter-Zonal Interface and direction is less than its scheduling capacity, determined in accordance with Section 9.3, prior to the Day-Ahead Market, the entitlements of FTR Holders associated with that FTR Market to Usage Charge revenues shall not be reduced until and unless the entitlements of Participating TOs associated with that FTR Market to Usage Charge revenues in accordance with Section 7.3.1.6 have been reduced to zero. In that event, the financial entitlements associated with the corresponding FTRs shall be multiplied by a factor equal to the amount of scheduling capability available to holders of the remaining FTRs divided by the number of such FTRs. When the Day Ahead scheduling capability of an Inter-Zonal Interface and direction is greater than its scheduling capacity, determined in accordance with Section 9.3, prior to the Day-Ahead Market, the entitlements of FTR Holders associated with that FTR market to Usage Charge revenues shall not be increased.

~~9.6.4~~ When the congestion Usage Charges calculated and collected by the ISO from the Hour-Ahead Market with respect to transfers across an Inter-Zonal Interface in a particular direction result in a net obligation to the ISO, in the circumstances described in Section 7.3.1.7, the

provisions of this Section 9.6 shall continue to apply, and FTR Holders shall be required to pay the ISO these amounts.

~~9.6.5~~—The ISO will calculate the congestion Usage Charge revenues to be credited or debited to the account of each FTR Holder on an hourly basis. Such calculation will identify the Inter-Zonal Interface and direction to which each credit or debit applies.

## **9.7 — Scheduling Priority of FTR Holders**

~~9.7.1~~—FTRs will not affect the ISO's dispatch and operation of the ISO Controlled Grid except that each FTR Holder will have a priority, as described in this Section 9.7, for the scheduling of Energy in the Day-Ahead Market when an Inter-Zonal Interface experiences Inter-Zonal Congestion in the direction for which its FTR is defined. Any FTRs not used in Preferred Schedules in the Day-Ahead Market for any hour have no scheduling priority for that hour in the trading day. FTR Holders shall have no scheduling priority in the Hour-Ahead Market or in real time operations.

~~9.7.2~~—When Inter-Zonal Congestion is experienced or projected to be experienced in the Day-Ahead Market, the ISO shall first attempt to relieve the Inter-Zonal Congestion using Adjustment Bids submitted by Scheduling Coordinators in accordance with Section 7.2.4.

~~9.7.2.1~~—If the ISO is unable to relieve the Day-Ahead Inter-Zonal Congestion using Adjustment Bids, then the ISO will allocate Day-Ahead inter-zonal transmission capacity first to schedules of Market Participants that are using Existing Contract rights that have higher scheduling priority than Converted Rights capacity and second to Market Participants who hold FTRs and have indicated to the ISO that they wish to exercise their scheduling priority option. The ISO will allocate any remaining transmission capacity to remaining Market Participants' schedules pro rata.

~~9.7.3~~—When the scheduling capability of an Inter-Zonal Interface is less than or greater than its normal scheduling capability prior to the Day-Ahead Market, as described in Section 9.6.3, the priority scheduling rights of FTR Holders, as described in Section 9.7.2, shall remain constant (in

MWs) to the extent that the total scheduling rights of FTR Holders do not exceed the total Interface scheduling capability of the associated Inter-Zonal Interface after adjustments have been made for transmission capacity allocated to Existing Contract rights that have higher scheduling priority than Converted Rights. If the total Interface scheduling capability, adjusted for transmission capacity allocated to Existing Contract rights that have higher scheduling priority than Converted Rights, is less than the total of all scheduling capability represented by FTR holders who have chosen to exercise the FTR scheduling priority option, scheduling capability shall be allocated to FTR Holders pro rata.

**9.7.4** The scheduling priority of FTR Holders:

- ~~\_\_\_\_\_ (i) \_\_\_\_\_ Shall not apply in the Hour-Ahead Market or in real-time dispatch and operation of the ISO Controlled Grid;~~
- ~~\_\_\_\_\_ (ii) \_\_\_\_\_ Shall not apply to any transfer of Energy other than a transfer across the Inter-Zonal Interface in the direction for which the FTR was defined during the hour or hours during which the circumstances described in Section 9.7.2.1 apply; and~~
- ~~\_\_\_\_\_ (iii) \_\_\_\_\_ Shall not be transferable, except in connection with a transfer of the FTR that is registered with the ISO, as described in Section 9.8. **[Not Used]**~~

**9.7.4** The scheduling priority of FTR Holders:

- ~~(i) \_\_\_\_\_ Shall not apply in the Hour-Ahead Market or in real-time dispatch and operation of the ISO Controlled Grid;~~
- ~~(ii) \_\_\_\_\_ Shall not apply to any transfer of Energy other than a transfer across the Inter-Zonal Interface in the direction for which the FTR was defined during the hour or hours during which the circumstances described in Section 9.7.2.1 apply; and~~
- ~~(iii) \_\_\_\_\_ Shall not be transferable, except in connection with a transfer of the FTR that is registered with the ISO, as described in Section 9.8.~~

**9.8** ~~Assignment of Firm Transmission Rights~~

~~9.8.1 An FTR may be assigned, sold, or otherwise transferred by the FTR Holder to any entity eligible to be an FTR Holder in full MW increments, either for the entire term of the FTR or for any portion of that term providing, however, that any such transfer shall be in full hour increments that correspond to the FTR issued to the FTR Holder. All FTRs that are so assigned, sold, or otherwise transferred by the FTR Holder are subject to the terms and conditions for FTRs approved by FERC and set forth in the ISO Tariff. Both the FTR Holder of record and the entity to which the FTRs have been transferred shall register the transfer of the FTR with the ISO by notifying the ISO through the form specified for that purpose by the ISO, and within the number of business days following the transfer published by the ISO on the ISO Home Page and WEnet but no later than such time as the ISO shall specify before the deadline applicable to scheduling Energy in the Day-Ahead Market, of (i) the identity of the FTR Holder of record; (ii) the identity of the entity to which the FTRs have been transferred; (iii) the quantity and identification numbers of the FTRs being transferred; (iv) the portion of the term of the FTR for which they are transferred; (v) the price at which the FTRs are being transferred; and (vi) whether the transfer of FTRs is subject to any conditions. The entity to which the FTRs have been transferred must also notify the ISO of all entities with which the transferee is affiliated that are FTR Holders or Market Participants as defined in the ISO Tariff, pursuant to Section 9.2.7. After the ISO receives such notices, the transferee shall be considered the FTR Holder of record with respect to the portion of the term of the FTR that is transferred. In order to use the Scheduling Priority of an FTR, pursuant to section 9.7, an FTR must be registered with the ISO.~~

~~9.8.2 The ISO shall publish on the ISO Home Page such information concerning the concentration of ownership of FTRs in each FTR Market as determined by the ISO Board of Governors from time to time.~~

~~9.8.3 To facilitate the operation of secondary markets in FTRs, the ISO shall post on WEnet and the ISO Home Page: (i) the identity of entities that hold FTRs that have been registered with the ISO, together with the quantity of FTRs held by such entities in each FTR Market and the path~~



~~rating of the interface; and (ii) the name and a contact telephone number or telecopy number of any entity that operates a secondary market in FTRs and that requests the ISO to post such information. The ISO shall also post the prices at which FTRs are transferred through secondary market transactions and shall indicate whether such transfers are conditional.~~

\* \* \* \* \*

## **Appendix A – Master Definitions**

**Contract Path** The Pathway over which a party has Existing Rights.

**Converted Rights** Those transmission service rights as defined in Section 2.4.4.2.1 of the ISO Tariff, or those Existing Rights that are relinquished in exchange for FTRs.

**FTR (Firm Transmission Right)**

A financial contract that entitles the ftr holder to a stream of revenues (or charges) based on the hourly energy price differences across specified network locations in the Day-Ahead Market. Holders of point-to-point FTR also hold physical scheduling rights (i.e., priority against schedule curtailment) in the Day-Ahead Market. Transmission capacity for which scheduling rights have not been utilized by FTR holders in the Day-Ahead Market becomes available as new firm use in the Day-Ahead and subsequent markets, as specified in the ISO Tariff.

~~A contractual right, subject to the terms and conditions of the ISO tariff, that entitles the FTR holder to receive, for each hour of the term of the FTR, a portion of the usage charges received by the ISO for the transportation of energy from a specific originating zone to a specific receiving zone and, in the event of uneconomic curtailment to manage day-ahead congestion, to a day-ahead scheduling priority higher than that of a schedule-using converted rights capacity that does not have an FTR.~~

**FTR Auction**

An auction conducted by the ISO to allow Market Participants to acquire or sell Firm Transmission Rights in accordance with provisions of Section 9.3.3.6 of the ISO Tariff.

**FTR Balancing Account**

An account maintained by the iso in which surplus or deficit congestion revenues from the Day-Ahead and Hour-Ahead Markets accumulate.

**FTR Bidder**

An entity that submits a bid in an FTR ~~a~~Auction conducted by the ISO, or any third party as selected by the ISO and noticed to the Market Participants, in accordance with Section ~~9.3.3.6.5~~ 9.4 of the ISO Tariff.

**FTR Market** A transmission path from an originating Zone to a contiguous receiving Zone for which FTRs are auctioned by the ISO in accordance with Section 9.4 of the ISO Tariff.

**FTR Obligation** An FTR that pays the FTR Holder when the hourly Day-Ahead Locational Marginal Price at the Sink specified by the FTR is greater than the Locational Marginal Price at the Source specified by the FTR (i.e., Sink LMP – Source LMP > 0), and charges the FTR Holder when this price difference is reversed (i.e., Sink LMP – Source LMP < 0).

**FTR Option** An FTR that pays the FTR Holder when the hourly Day-Ahead Locational Marginal Price at the Sink specified by the FTR is greater than the Locational Marginal Price at the Source specified by the FTR (i.e., Sink LMP – Source LMP > 0), but does not charge the FTR Holder when this price difference is reversed (i.e., Sink LMP – Source LMP ≤ 0).

**FTR Policy And Procedures**

**Guide** A document that provides the necessary detail for the FTR Auction process and the various policies and procedures associated with Firm Transmission Rights.

**FTR Secondary Market** The market where FTRs may be purchased or sold after being acquired through the FTR Auction or allocated by the ISO. The FTR Secondary Market is not an ISO-operated market.

<b><u>Historic Reference Period (HRP)</u></b>	<u>The most recent continuous 12-month period ending on a cut-off date, as determined by the ISO and noticed on the ISO Home Page, to allow the ISO a reasonable amount of time to perform the calculations required for the FTR allocation process, as described in the FTR Policy And Procedures Guide.</u>
<b><u>Network Service Rights</u></b>	<u>Firm Transmission Rights that generalize Point-to-Point Rights by allowing multiple Sources and Sinks to be specified. Network Service Rights are multipoint-to-multipoint rights. Network Service Rights are offered only as FTR Obligations and do not have Day-Ahead scheduling priority.</u>
<b><u>New Firm Use</u></b>	<u>The amount of transfer capability left after apportioning Existing Rights not converted to FTRs, Converted Rights, and the various types and terms of FTRs.</u>
<b><u>Pathway</u></b>	<u>A network branch (or branch group) in a specified direction (from/to or import/export) with a specified transmission limit that is enforced in the ISO's Congestion Management process.</u>
<b><u>Point-to-Point Rights</u></b>	<u>Firm Transmission Rights that consist of balanced power transfers from a Source to a Sink. The Sources and Sinks for Point-to-Point Rights must be network nodes, Load Aggregation Points or Trading Hubs.</u>
<b><u>Secondary Registration System</u></b>	<u>The ISO-maintained system in which entities are required to record FTR Secondary Market transactions with the ISO and assign FTR scheduling rights to SCs.</u>
<b><u>Sink</u></b>	<u>A Location at which Energy is withdrawn.</u>
<b><u>Source</u></b>	<u>A Location at which Energy is injected.</u>