

## Attachment II

## 1.2 Definitions - B

**Back-Up Operation:** The procedures for operating the NYCA in a safe and reliable manner when the ISO's normal communication or computer systems are not fully functional as set forth in Section 2.12 of this ISO OATT and Section 5.3 of the ISO Services Tariff.

**Balance-of-Period Auction:** An auction administered by the ISO in which Transmission Customers may purchase and sell TCCs valid for a future month or months in the same Capability Period in which the auction is conducted; provided, however, that the Balance-of-Period Auction conducted in the last month of a Capability Period will allow for the purchase and sale of TCCs valid for a future month or months in the next Capability Period.

**Base Point Signals:** Electronic signals sent from the ISO and ultimately received by Generators specifying the scheduled MW output for the Generator. Real-Time Dispatch ("RTD") Base Point Signals are typically sent to Generators on a nominal five (5) minute basis. AGC Base Point Signals are typically sent to Generators on a nominal six (6) second basis.

**Basis Amount:** As defined in the ISO Services Tariff.

**Behind-the-Meter Net Generation Resource ("BTM:NG Resource"):** As defined in the ISO Services Tariff.

**Basis Month:** As defined in the ISO Services Tariff.

**Bid/Post System:** An electronic information system used to allow the posting of proposed transmission schedules and Bids for Energy and Ancillary Services by Market Participants for use by the ISO and to allow the ISO to post Locational Based Marginal Prices and schedules.

**Bid:** Offer to sell or bid to purchase Energy, Demand Reductions or Transmission Congestion Contracts and an offer to sell Ancillary Services at a specified price that is duly submitted to the ISO pursuant to ISO Procedures. Bid shall mean mitigated Bid where appropriate.

**Bid Price:** The price at which the Customer offering the Bid is willing to provide the product or service, or is willing to pay to receive such product or service, as applicable. In the case of a CTS Interface Bid, the Bid Price is a dollar value that indicates the bidder's willingness to purchase Energy at a CTS Source and sell it at a CTS Sink across a CTS Enabled Interface if, at the time of scheduling, the forecasted CTS Sink Price minus the forecasted CTS Source Price is greater than, or equal to, the dollar value specified in the bid.

**Bid Production Cost:** Total cost of the Generators required to meet Load and reliability Constraints based upon Bids corresponding to the usual measures of Generator production cost (e.g., running and Minimum Generation Bid, and Start-Up Bid).

**Bidding Requirement:** As defined in the ISO Services Tariff.

**Bilateral Transaction:** A Transaction between two or more parties for the purchase and/or sale of Capacity or Energy other than those in the ISO Administered Markets. A request to schedule

a Bilateral Transaction in the Energy Market shall be considered a request to schedule Point-to-Point Transmission Service.

**Billing Period:** The period of time designated in Sections 2.7.3.2.1, or 2.7.3.2.2 of this ISO OATT over which the ISO will aggregate and settle a charge or a payment for services furnished under this ISO OATT or the ISO Services Tariff.

**Board of Directors (“Board”):** The governing body of the ISO which is comprised of ten (10) persons (Directors) that are unaffiliated with any Market Participants, as described in the ISO Agreement.

**Business Issues Committee:** A standing committee of the ISO created pursuant to the ISO Agreement to establish rules related to business issues and provide a forum for discussion of those rules and issues.

## 1.4 Definitions - D

**DADRP Component:** As defined in the ISO Services Tariff.

**Day-Ahead:** Nominally, the twenty-four (24) hour period directly preceding the Dispatch Day, except when this period may be extended by the ISO to accommodate weekends and holidays.

**Day-Ahead LBMP:** The LBMPs calculated based upon the ISO's Day-Ahead Security Constrained Unit Commitment process.

**Day-Ahead Market:** The ISO Administered Market in which Capacity, Energy and/or Ancillary Services are scheduled and sold Day-Ahead consisting of the Day-Ahead scheduling process, price calculations and Settlements.

**Day-Ahead Reliability Unit:** A Day-Ahead committed Resource which would not have been committed but for the commitment request by a Transmission Owner in order to meet the reliability needs of the Transmission Owner's local system which request was made known to the ISO prior to the close of the Day-Ahead Market.

**Decremental Bid:** A monotonically increasing Bid Price curve provided by an entity engaged in a Bilateral Import, other than an entity submitting a CTS Interface Bid, or Internal Transaction to indicate the LBMP below which that entity is willing to reduce its Generator's output and purchase Energy in the LBMP Markets, or by an entity engaged in a Wheel Through transaction to indicate the Congestion Component cost at or below which that entity is willing to accept Transmission Service.

**Demand Side Resource:** As defined in the ISO Services Tariff.

**Dennison Scheduled Line:** A transmission facility that interconnects the NYCA to the Hydro Quebec Control Area at the Dennison substation, located near Massena, New York and extends through the province of Ontario, Canada (near the City of Cornwall) to the Cedars substation in Quebec, Canada.

**Dependable Maximum Gross Capability ("DMGC"):** As defined in the ISO Services Tariff.

**Dependable Maximum Net Capability ("DMNC"):** The sustained maximum net output of a Generator, as demonstrated by the performance of a test or through actual operation, averaged over a continuous time period as defined in the ISO Procedures.

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

**Desired Net Interchange ("DNI"):** A mechanism used to set and maintain the desired Energy interchange (or transfer) between two Control Areas; it is scheduled ahead of time and can be changed manually in real-time.

**Developer:** An Eligible Customer developing a generation project larger than 20 megawatts, or a merchant transmission project, proposing to interconnect to the New York State Transmission System, in compliance with the NYISO Minimum Interconnection Standard and, depending on the Developer's interconnection service election, also in compliance with the NYISO Deliverability Interconnection Standard.

**Direct Assignment Facilities:** Facilities or portions of facilities that are constructed by the Transmission Owner(s) for the sole use/benefit of a particular Transmission Customer requesting service under the ISO OATT. Direct Assignment Facilities shall be specified in the Service Agreement that governs service to the Transmission Customer and shall be subject to Commission approval.

**Direct Sale:** The sale of [Original Residual TCCs](#), ETCNL, and Grandfathered TCCs directly to a buyer by the Transmission Owner that is the Primary Holder through a non-discriminatory auditable sale conducted on the ISO's OASIS, in compliance with the requirements and restrictions set forth in Commission Orders 888 et seq. and 889 et seq.

**Dispatchable:** A bidding mode in which Generators or Demand Side Resources indicate that they are willing to respond to real-time control from the ISO. Dispatchable Resources, not including the Generator of a BTM:NG Resource, may either be ISO-Committed Flexible or Self Committed Flexible. Dispatchable Generators that are the Generator serving a BTM:NG Resource must be Self-Committed Flexible. Dispatchable Demand Side Resources must be ISO Committed Flexible. Dispatchable Resources that are not providing Regulation Service will follow five-minute RTD Base Point Signals. Dispatchable Resources that are providing Regulation Service will follow six-second AGC Base Point Signals.

**Dispatch Day:** The twenty-four (24) hour (or, if appropriate, the twenty-three (23) or twenty-five (25) hour) period commencing at the beginning of each day (0000 hour).

**DSASP Component:** As defined in the ISO Services Tariff.

**Dynamically Scheduled Proxy Generator Bus:** A Proxy Generator Bus for which the ISO may schedule Transactions at 5 minute intervals in real time. Dynamically Scheduled Proxy Generator Buses are identified in Section 4.4.4 of the Services Tariff.

## 1.5 Definitions - E

**East of Central-East:** An electrical area comprised of Lead Zones F, G, H, I, J, and K, as identifies in the ISO Procedures.

**East of Central-East Excluding Long Island:** An electrical area comprised of Lead Zones F, G, H, I, and J, as identified in the ISO Procedures.

**East of Central-East Excluding New York City and Long Island:** An electrical area comprised of Land Zones F, G, H, I, as identifies in the ISO Procedures.

**Economic Operating Point:** The megawatt quantity which is a function of: i) the real-time LBMP at the Resource bus; and ii) the Supplier's real-time eleven constant cost step Energy Bid, for the Resource, such that (a) the offer price associated with Energy offers below that megawatt quantity (if that megawatt quantity is not that Resource's minimum output level) must be less than or equal to the real-time LBMP at the Resource bus, and (b) the offer price associated with Energy offers above that megawatt quantity (if that megawatt quantity is not that Resource's maximum output level) must be greater than or equal to the real-time LBMP at the Resource bus. In cases where multiple megawatt values meet conditions (a) and (b), the Economic Operating Point is the megawatt value meeting these conditions that is closest to the Resource's real-time scheduled Energy injection. In cases where the Economic Operating Point would be less than the minimum output level, the Economic Operating Point will be set equal to the MW value of the first point on the Energy Bid curve and in cases where the Economic Operating Point would be greater than the maximum output level, the Economic Operating Point will be set equal to the MW value of the last point on the Energy Bid curve. When evaluating the Economic Operating Point of a BTM:NG Resource, only Energy offers corresponding to quantities in excess of its Host Load will be considered.

**Eligible Customer:** (i) An entity that is engaged, or proposes to engage, in the wholesale or retail electric power business including any electric utility, power marketer, Federal power marketing agency, or any person generating Energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, with respect to transmission service that the Commission is prohibited from ordering by Section 212(h) of the Federal Power Act, such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Owner offer the unbundled Transmission Service, or pursuant to a voluntary offer of such service by the Transmission Owner. (ii) Any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Owner offer the transmission service, or pursuant to a voluntary offer of such service by the Transmission Owner, is an Eligible Customer under the Tariff.

**Emergency:** Any abnormal system condition that requires immediate automatic or manual action to prevent or limit loss of transmission facilities or Generators that could adversely affect the reliability of an electric system.

**Emergency State:** The state that the NYS Power System is in when an abnormal condition occurs that requires automatic or immediate, manual action to prevent or limit loss of the NYS

Transmission System or Generators that could adversely affect the reliability of the NYS Power System.

**End-State Centralized TCC Auction:** A Centralized TCC Auction that the ISO will conduct after the ISO develops the necessary software.

**Energy (“MWh”):** A quantity of electricity that is Bid, produced, purchased, consumed, sold, or transmitted over a period of time, and measured or calculated in megawatt hours.

**Energy and Ancillary Services Component:** As defined in the ISO Services Tariff.

**Equivalency Rating:** As defined in the ISO Services Tariff.

**ETA Agent:** A Transmission Customer of the ISO that has been appointed by a Load Serving Entity and approved by the ISO in accordance with ISO Procedures for the purpose of enabling that Transmission Customer to hold all of the rights and obligations associated with Fixed Price TCCs, as provided for in Attachment M of this OATT.

**ETCNL TCC:** A TCC created when a Transmission Owner with ETCNL exercises its right to convert a megawatt of ETCNL into a TCC pursuant to Section 19.4.1 of Attachment M of this ISO OATT.

**Excess Congestion Rents:** Congestion revenues in the Day-Ahead Market for Energy collected by the ISO that are in excess of its Day-Ahead payment obligations. Excess Congestion Rents may arise if Congestion occurs in the Day- Ahead Market for Energy and if the Day-Ahead Transfer Capability of the Transmission System is not exhausted by the set of [already-outstanding](#) TCCs and Grandfathered Rights that ~~have been allocated at the completion of the last Centralized TCC Auction~~ [are valid](#).

**Existing Transmission Agreement (“ETA”):** An agreement between two or more Transmission Owners, or between a Transmission Owner and another entity, in existence at the time of ISO start-up and providing for transmission service by a Transmission Owner to another Transmission Owner or another entity. Table 1A of Attachment L lists all ETAs. ETAs include Transmission Wheeling Agreements (including MWAs and Third Party TWAs) and Transmission Facility Agreements.

**Existing Transmission Capacity for Native Load (“ETCNL”):** Transmission capacity identified on a Transmission Owner’s transmission system to serve the Native Load customers of the current Transmission Owners (as of the filing date of the original ISO Tariff-January 31, 1997) for the purposes of allocating revenues from the sale of TCCs related to that capacity. This includes transmission capacity required: (1) to deliver the output from Generators located out of a Transmission Owner’s Transmission District; (2) to deliver power purchased under power supply contracts; and (3) to deliver power purchased under third party agreements (*i.e.*, Non-Utility Generators). Existing Transmission Capacity for Native Load is listed in Attachment L, Table 3, “Existing Transmission Capacity Reservations for Native Load Table.”

**Expected EDRP/SCR MW:** The aggregate Load reduction (in MW) expected to be realized from EDRP and/or SCRs during the real-time intervals that the ISO has called upon EDRP

and/or SCRs to provide Load reduction in a Scarcity Reserve Region, as determined based on the ISO's calculation of the historical performance of EDRP and SCRs. There will be separate values for voluntary and mandatory Load reductions. When determining the historical performance of SCRs, provision of Load reduction shall be deemed mandatory if the ISO has satisfied the notification requirements set forth in Section 5.12.11.1 of the NYISO Services Tariff as it relates to the SCRs in the applicable Load Zone, otherwise provision of such Load reduction shall be deemed voluntary. When determining the historical performance of the EDRP, provision of Load reduction by EDRP shall be deemed voluntary.

**Expected Load Reduction:** For purposes of determining the Real-Time Locational Based Marginal Price, the reduction in Load expected to be realized in real-time from activation of the Emergency Demand Response Program and from Load reductions requested from Special Case Resources, as established pursuant to ISO Procedures.

**Export:** A Bilateral Transaction or purchase from the LBMP Market where the Energy is delivered to an NYCA interconnection with another Control Area.

**External:** An entity (e.g., Supplier, Transmission Customer) or facility (e.g., Generator, Interface) located outside the Control Area being referenced or between two or more Control Areas. Where a specific Control Area is not referenced, the NYCA is the intended reference.

**External Transactions:** Purchases, sales or exchanges of Energy, Capacity or Ancillary Services for which either the Point of Injection ("POI") or Point of Withdrawal ("POW") or both are located outside the NYCA (i.e., Exports, Imports or Wheels Through).



## 1.15 Definitions - O

**Off-Peak:** The hours between 11:00 p.m. and 7:00 a.m., prevailing Eastern Time, Monday through Friday, and all day Saturday and Sunday, and NERC-defined holidays, or as otherwise decided by ISO.

**On-Peak:** The hours between 7:00 a.m. and 11:00 p.m. inclusive, prevailing Eastern Time, Monday through Friday, except for NERC-defined holidays, or as otherwise decided by the ISO.

**Open Access Same-Time Information System (“OASIS”):** The information system and standards of conduct contained in Part 37 of the Commission’s regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.

**Operating Agreement:** An agreement between the ISO and a non-incumbent owner of transmission facilities in the New York Control Area concerning the operation of the transmission facilities in the form of the agreement set forth in Appendix H (Section 31.11) of Attachment Y.

**Operating Capacity:** Capacity that is readily converted to Energy and is measured in MW.

**Operating Committee:** A standing committee of the ISO created pursuant to the ISO Agreement, which coordinates operations, develops procedures, evaluates proposed system expansions and acts as a liaison to the NYSRC.

**Operating Requirement:** As defined in the ISO Services Tariff.

**Operating Reserves:** Capacity that is available to supply Energy, or to reduce demand and that meets the requirements of the ISO. The ISO will administer Operating Reserves markets, in the manner described in Article 4 and Rate Schedule 4 of this ISO Services Tariff, to satisfy the various Operating Reserves requirements, including locational requirements, established by the Reliability rules and other applicable reliability standards. The basic Operating Reserves products that will be procured by the ISO on behalf of the market are classified as follows:

- (1) Spinning Reserve: Operating Reserves provided by Generators and Demand Side Resources that meet the eligibility criteria set forth in Rate Schedule 4 of this ISO Services Tariff that are already synchronized to the NYS Power System and can respond to instructions to change their output level, or reduce their Energy usage, within ten (10) minutes. Spinning Reserves may not be provided by Demand Side Resources that are Local Generators or by Behind-the-Meter Net Generation Resources that are comprised of more than one generating unit that are dispatched as a single aggregate unit;
- (2) 10-Minute Non-Synchronized Reserve: Operating Reserve provided by Generators, Behind-the-Meter Net Generation Resources that are comprised of more than one generating unit that are dispatched as a single aggregate unit, or Demand Side Resources, including Demand Side Resources using Local Generators, that meet the eligibility criteria set forth in Rate Schedule 4 of this ISO Services Tariff and that can be started, synchronized and can change their output level within ten (10) minutes; and

(3) 30-Minute Reserve: Synchronized Operating Reserves provided by Generators, except Behind-the-Meter Net Generation Resources that are comprised of more than one generating unit and dispatched as a single aggregate unit, and Demand Side Resources that are not Local Generators; or non-synchronized Operating Reserves provided by Generators, Behind-the-Meter Net Generation Resources that are comprised of more than one generating unit and dispatched as a single aggregate unit, or Demand Side Resources that meet the eligibility criteria set forth in Rate Schedule 4 of this ISO Services Tariff and that can respond to instructions to change their output level within thirty (30) minutes, including starting and synchronizing to the NYS Power System.

**Operating Reserve Demand Curve:** A series of quantity/price points that defines the maximum Shadow Price for Operating Reserves meeting a particular Operating Reserve requirement corresponding to each possible quantity of Resources that the ISO's software may schedule to meet that requirement. A single Operating Reserve Demand Curve will apply to both the Day-Ahead Market and the Real-Time Market for each of the ISO's twelve Operating Reserve requirements.

**Operating Study Power Flow:** A Power Flow analysis that is performed at least once before each Capability Period that is used to determine each Interface Transfer Capability for the Capability Period (See Attachment M).

**Operational Control:** Directing the operation of the Transmission Facilities Under ISO Operational Control to maintain these facilities in a reliable state, as defined by the Reliability Rules. The ISO shall approve operational decisions concerning these facilities, made by each Transmission Owner before the Transmission Owner implements those decisions. In accordance with ISO Procedures, the ISO shall direct each Transmission Owner to take certain actions to restore the system to the Normal State. Operational Control includes security monitoring, adjustment of generation and transmission resources, coordination and approval of changes in transmission status for maintenance, determination of changes in transmission status for reliability, coordination with other Control Areas, voltage reductions and Load Shedding, except that each Transmission Owner continues to physically operate and maintain its facilities.

**Optimal Power Flow ("OPF"):** The Power Flow analysis that is performed during the administration of the Centralized TCC Auction [and Reconfiguration Auction](#) to determine the most efficient simultaneously feasible allocation of TCCs to bidders.

**Original Residual TCC:** A TCC converted from Residual Transmission Capacity estimated prior to the first Centralized TCC Auction and allocated among the Transmission Owners utilizing the Interface MW-Mile Methodology prior to the first Centralized TCC Auction.

**Order Nos. 888 et seq.:** The Final Rule entitled Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, issued by the Commission on April 24, 1996, in Docket Nos. RM95-8-000 and RM94-7-001, as modified on rehearing, or upon appeal. (See FERC Stats. & Regs. [Regs. Preambles 1991-1996] ¶ 31,036 (1996) ("Order No. 888"), on reh'g, III FERC Stats. & Regs. ¶ 31,048 (1997) ("Order No. 888-A"), on reh'g, 81

FERC ¶ 61,248 (1997) (“Order No. 888-B”) (Order on reh’g 82 FERC ¶ 61,046 (1998) (“Order No. 888- C”).

**Order Nos. 889 et seq.:** The Final Rule entitled Open Access Same-Time Information System (formerly Real-Time Information Networks) and Standards of Conduct, issued by the Commission on April 24, 1996, in Docket No. RM95-9-000, as modified on rehearing, or upon appeal. (See FERC Stats. & Regs. [Regs. Preambles 1991-1996] ¶ 31,035 (1996) (“Order No. 889”), on reh’g, III FERC Stats. & Regs. ¶ 31,049 (1997) (“Order No. 889-A”), on reh’g, 81 FERC ¶ 61,253 (1997) (“Order No. 889-B”).

**Out-of-Merit Generation:** Resources committed and/or dispatched by the ISO at specified output limits for specified time periods to meet Load and/or reliability requirements that differ from or supplement the ISO’s security constrained economic commitment and/or dispatch.

## 1.18 Definitions - R

**RCRR TCC:** A Load Zone-to-Load Zone TCC created when a Transmission Owner with a RCRR exercises its right to convert the RCRR into a TCC pursuant to Section 19.5.4 of Attachment M of this ISO OATT.

**Reactive Power (MVar):** The product of voltage and the out-of-phase component of alternating current. Reactive Power, usually measured in MVar, is produced by capacitors (synchronous condensers), over-excited Generators, and Qualified Non-Generator Voltage Support Resources, and absorbed by reactors or under-excited Generators and other inductive devices including the inductive portion of Loads.

**Ramp Capacity:** The amount of change in the Desired Net Interchange that generation located in the NYCA can support at any given time. Ramp Capacity may be calculated for all Interfaces between the NYCA and neighboring Control Areas as a whole or for any individual Interface between the NYCA and an adjoining Control Area.

**Real Power Losses:** The loss of Energy, resulting from transporting power over the NYS Transmission System, between the Point of Injection and Point of Withdrawal of that Energy.

**Real-Time Bid:** A Bid submitted into the Real-Time Commitment before the close of the Real-Time Scheduling Window. A Real-Time Bid shall also include a CTS Interface Bid.

**Real-Time Commitment (“RTC”):** A multi-period security constrained unit commitment and dispatch model that co-optimizes to solve simultaneously for Load, Operating Reserves and Regulation Service on a least as-bid production cost basis over a two hour and fifteen minute optimization period. The optimization evaluates the next ten points in time separated by fifteen minute intervals. Each RTC run within an hour shall have a designation indicating the time at which its results are posted: “RTC<sub>00</sub>,” RTC<sub>30</sub>, and “RTC<sub>45</sub>” post on the hour, and at fifteen, thirty, and forty-five minutes after the hour, respectively. Each RTC run will produce binding commitment instructions for the periods beginning fifteen and thirty minutes after its scheduled posting time and will produce advisory commitment guidance for the remainder of the optimization period, RTC<sub>15</sub> will also establish hourly External Transaction schedules, while all RTC runs may establish 15 minute External Transaction schedules at Variably Scheduled Proxy Generator Buses. Additional information about RTC’s functions is provided in Section 4.4.2 of the ISO Services Tariff.

**Real-Time Dispatch (“RTD”):** A multi-period security constrained dispatch model that co-optimizes to solve simultaneously for Load, Operating Reserves, and Regulation Service on a least-as-bid production cost basis over a fifty, fifty-five or sixty-minute period (depending on when each RTD run covers within an hour). The Real-Time Dispatch dispatches, but does not commit, Resources, except that RTD may commit, for pricing purposes, Resources meeting Minimum Generation Levels and capable of starting in ten minutes. RTD may also establish 5-minute External Transaction schedules at Dynamically Scheduled Proxy Generator Buses. Real-Time Dispatch runs will normally occur every five minutes. Additional information about RTD’s functions is provided in Section 4.4.3 of the ISO Services Tariff. Throughout the ISO

Services Tariff the term “RTD” will normally be used to refer to both the Real-Time Dispatch and to the specialized Real-Time Dispatch Corrective Action Mode software.

**Real-Time Dispatch-Corrective Action Mode (“RTD-CAM”):** A specialized version of the Real-Time Dispatch software that will be activated when it is needed to address unanticipated system conditions. RTD-CAM is described in Section 4.4.4 of the ISO Services Tariff.

**Real-Time LBMP:** The LBMPs established through the ISO Administered Real- Time Market.

**Real-Time Market:** The ISO Administered Markets for Energy and Ancillary Services resulting from the operation of the RTC and the RTD.

**Real-Time Scheduling Window:** The period of time within which the ISO accepts offers and Bids to sell and purchase Energy and Ancillary Services in the real-time market which period closes seventy-five (75) minutes before each hour, or eighty-five (85) minutes before each hour for Bids to schedule External Transactions at the Proxy Generator Buses associated with the Cross-Sound Scheduled Line, the Neptune Scheduled Line, the Linden VFT Scheduled Line, or the HTP Scheduled Line.

**Reconfiguration Auction:** The monthly auction administered by the ISO [which will either be: \(i\) a Balance-of-Period Auction; or \(ii\) an auction](#) in which Transmission Customers may purchase and sell one-month TCCs; [provided, however, that the ISO shall only conduct one Reconfiguration Auction type in a month.](#)

**Reference Bus:** The location on the NYS Transmission System relative to which all mathematical quantities, including Shift Factors and penalty factors relating to physical operation, will be calculated. The NYPA Marcy 345 kV transmission substation is designated as the Reference Bus.

**Regional Transmission Group (RTG):** A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

**Regulation Service Demand Curve:** A series of quantity/price points that defines the maximum Shadow Price for Regulation Service corresponding to each possible quantity of Resources that the ISO’s software may schedule to satisfy the ISO’s Regulation Service constraint. A single Regulation Service Demand Curve will apply to both the Day-Ahead Market and the Real-Time Market for Regulation Service. The Shadow Price for Regulation Service shall be used to calculate Regulation Service payments under Rate Schedule 3 of the Service Tariff.

**Reliability Rules:** Those rules, standards, procedures and protocols developed and promulgated by the NYSRC, including Local Reliability Rules, in accordance with NERC, NPCC, FERC, PSC and NRC standards, rules and regulations, and other criteria and pursuant to the NYSRC Agreement.

**Repair Plan:** As defined in the ISO Services Tariff.

**Required System Capability:** Generation capability required to meet an LSE's peak Load plus Installed Capacity reserve obligation as defined in the Reliability Rules.

**Reserved Capacity:** The maximum amount of Capacity and Energy that the ISO agrees to transmit for the Transmission Customer over the NYS Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part 3 of this Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

**Residual Adjustment:** The adjustment made to ISO costs that are recovered through Schedule 1. The Residual Adjustment is calculated pursuant to Schedule 1.

**Residual Capacity Reservation Right ("RCRR"):** A megawatt of transmission capacity from one Load Zone to an electrically contiguous Load Zone, each of which is internal to the NYCA, that may be converted into an RCRR TCC by a Transmission Owner allocated the RCRR pursuant to Section 19.5 of Attachment M.

**Residual Transmission Capacity:** The transmission capacity determined by the ISO before, during and after the Centralized TCC Auction which is conceptually equal to the following:

$$\text{Residual Transmission Capacity} = \text{TTC} - \text{TRM} - \text{CBM} - \text{GTR} - \text{GTCC} - \text{ETCNL}$$

The TCCs associated with Residual Transmission Capacity cannot be accurately determined until the Centralized TCC Auction is conducted.

TTC is the Total Transfer Capability that can only be determined after the Residual Transmission Capacity is known.

GTR is the transmission capacity associated with Grandfathered Rights.

GTCC is the transmission capacity associated with Grandfathered TCCs.

ETCNL is the transmission capacity associated with Existing Transmission Capacity for Native Load.

TRM is the Transmission Reliability Margin.

CBM is the Capacity Benefit Margin.

**Retired:** As defined in the ISO Services Tariff.

**RMR Agreement:** An agreement of limited duration that provides for the continued operation of one or more RMR Generator(s) to satisfy one or more Generator Deactivation Reliability Need(s) entered into between the ISO and an entity or entities that own or have operational control over the RMR Generator(s).

**RMR Avoidable Costs:** The (a) fixed costs of an Initiating Generator that would be avoided if it were to exit the ISO-Administered Markets in the manner specified in its Generator Deactivation Notice, (b) the fixed costs of a Generator already in a Mothball Outage, an ICAP Ineligible Forced Outage, or that has been mothballed since before May 1, 2015 that would be incurred if it were to re-enter the ISO-Administered Markets pursuant to an RMR Agreement that would be avoided if it remained in such state, or (c) the costs necessary for a new Generator

proposed as a Generator Deactivation Solution to enter service. RMR Avoidable Costs include mandatory capital expenditures, fixed operating and maintenance costs, and forgone opportunity costs, determined by the ISO in accordance with Section 38.8 of Attachment FF, as modified by the Commission. RMR Avoidable Costs do not include variable costs or any other type of cost that are included in the Generator's Energy or Ancillary Services reference levels, or that are ordinarily included in Energy or Ancillary Services reference levels.

**RMR Generator:** The Generator or Generators operating under an RMR Agreement.

**Rolling RTC:** The RTC run that is used to schedule a given 15-minute External Transaction. The Rolling RTC may be an RTC<sub>00</sub>, RTC<sub>15</sub>, RTC<sub>30</sub> or RTC<sub>45</sub> run.

## **14.1 Transmission Service Charge (“TSC”)**

### **14.1.1 Applicability of the Transmission Service Charge to Wholesale Customers**

Each month, each wholesale Transmission Customer shall pay to the appropriate Transmission Owner the applicable Wholesale Transmission Service Charge (“Wholesale TSC”) calculated in accordance with ~~Section 14.1.2.2 of this Attachment for the first two months of LBMP implementation and in accordance with~~ Section 14.1.2.1 of this Attachment ~~thereafter~~.

The TSC shall apply to Transmission Service:

14.1.1.1 from one or more Interconnection Points between the NYCA and another Control Area to one or more Interconnection Points between the NYCA and another Control Area (“Wheels Through”);<sup>1</sup>

14.1.1.2 from the NYCA to one or more Interconnection Points between the NYCA and another Control Area, including transmission to deliver Energy purchased from the LBMP Market and delivered to such a Control Area Interconnection Point (“Exports”);<sup>1</sup> or

14.1.1.3 to serve Load within the NYCA; except, the Wholesale TSC shall not apply to:

14.1.1.3.1 a Transmission Owner’s use of its own system to provide bundled retail service to its Native Load Customers pursuant to a retail service tariff on file with the PSC or, in the case of LIPA, has been approved by the Long Island Power Authority’s Board of Trustees;

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<sup>1</sup> The TSC shall not apply to Wheels Through or Exports scheduled with the ISO to destinations within the New England Control Area provided that the conditions listed in Section 2.7.2.1.4 of this Tariff are satisfied.



14.1.1.3.2 Transmission Service pursuant to an Existing Transmission Agreement

whereby the otherwise applicable TSC does not apply pursuant to Attachment K;

or

14.1.1.3.3 retail Transmission Service pursuant to any tariff or rate schedule of a

Transmission Owner that explicitly provides for other transmission charges in lieu

of the Wholesale TSC, subject to any applicable provisions of the Federal Power

Act.

Each Transmission Owner subject to FERC and/or PSC jurisdiction may file with FERC a separate TSC applicable to retail access in accordance with its retail access program filed with the PSC. To the extent that LIPA's rates for service are established by the Long Island Power Authority's Board of Trustees pursuant to Article 5, Title 1-A of the New York Public Authorities Law, Section 1020-f(u) and 1020-s and are not subject to FERC jurisdiction, this requirement will not apply to LIPA.

## 14.1.2 Wholesale TSC Calculation

Sections 14.1.2-14.1.6 do not apply to the development of the NYPA TSC, which is described in Section 14.1.7.

### 14.1.2.1 Wholesale TSC Formula

~~Beginning with the second month of the Capability Period corresponding to the initial auction for Long Term TCCs through the end of the LBMP Transition Period, e~~E

Each Transmission Owner, except NYPA, shall calculate its TSC applicable to Transmission Service to serve Load within or exiting the NYCA at its Transmission District as follows:

$$\text{WHOLESALE TSC} = \{(\text{RR}\div 12) + (\text{CCC}\div 12) + (\text{LTPP}\div 12) - \text{SR} - \text{ECR} - \text{CRR} - \text{WR} - \text{Reserved}\}/(\text{BU}\div 12).$$

Where:

RR = The Annual Transmission Revenue Requirement, as stated in Table 1 of this Attachment. Gross Receipts Tax (“GRT”) treatment by each individual company is described in Section 14.1.7. Revenues from grandfathered agreements listed on Attachment H-1 are treated as a revenue credit in the RR.

CCC = The annual Scheduling, System Control and Dispatch Costs of the individual Transmission Owner (*i.e.*, the transmission component of control center costs) as stated on Table 1 of this Attachment.

~~LTPP = The Transmission Owner’s annual Net LBMP Transition Period Payment (“LTPP”) (expressed as a positive value) or receipt (expressed as a negative value) as described in Attachment K, Section 17.6 (Note—The LTPP will be established once for the entire LBMP Transition Period after the Initial Auction, as defined in Attachment M, for Long Term TCCs). Prior to a 205 Filing under the FPA by the Transmission Owners, the LTPP will be set at zero.~~

SR = The Transmission Owner’s revenues associated with the sale of certain TCCs, as described in Section 14.1.2.1.1 of this Attachment;

ECR = The Transmission Owner's share of Net Congestion Rents in a month, calculated pursuant to Attachment N of the OATT;

CRR = The Transmission Owner's Congestion Payments received from Grandfathered TCCs and Imputed Revenues from Grandfathered Rights from ETA's, the expenses for which are included in the Transmission Owner's Revenue Requirement;

WR = The Transmission Owner's revenues from external sales (Wheels Through and Export Transactions) not associated with Existing Transmission Agreements included in Attachment L, Tables 18.1, 18.2 and 18.3 and wheeling revenue, associated with OATT reservations extending beyond the start-up of the ISO, (i.e., grandfathered OATT agreements), as described in Section 14.1.2.1.2 of this Attachment;

Reserved = The Transmission Owner's Congestion payments associated with, and value from the sale of ETCNL TCCs and RCRR TCCs, as described in Section 14.1.2.1.3 of this Attachment; and

BU = The Transmission Owner's Billing Units (annual MWh) for the Transmission District (see Table 1 of this Attachment). The Transmission Owner's BU has been adjusted upward to include subtransmission and distribution losses.

#### 14.1.2.1.1 Elements of SR Component

$$SR = SR_1 + SR_2 + SR_3.$$

SR<sub>1</sub> will equal the revenues from the Direct Sale by the Transmission Owner of Original Residual TCCs, TCCs derived from Existing Transmission Capacity for Native Load, and Grandfathered TCCs associated with ETAs, the expenses for which are included in the Transmission Owner's Revenue Requirements where the Transmission Owner is the Primary ~~Owner~~Holder of said TCCs. SR<sub>1</sub> for a month in which a Direct Sale is applicable shall equal the total nominal revenue that the Transmission Owner will receive under each applicable TCC sold in a Direct Sale divided by the duration of that TCC (in months).

SR<sub>2</sub> will equal the Transmission Owner's revenues from the Centralized TCC Auctions and Reconfiguration Auctions allocated pursuant to Attachments N. SR<sub>2</sub> includes revenues

from: (a) TCCs associated with Residual Transmission Capacity that are sold in the Centralized TCC Auctions [and Reconfiguration Auctions](#); (b) the sale of Grandfathered TCCs associated with ETAs, if the expenses for those ETAs are included in the Transmission Owner's Revenue Requirements; and (c) TCCs derived from Existing Transmission Capacity for Native Load that are sold in the Centralized TCC Auction.

Revenue from TCCs associated with Residual Transmission Capacity includes payments for Original Residual TCCs that the Transmission Owners sell through the Centralized TCC Auctions [and Reconfiguration Auctions](#) and the allocation of revenue for other TCCs sold through the Centralized TCC Auctions [and Reconfiguration Auctions](#) (per the Facility Flow-Based Methodology described in Attachment N).

~~SR<sub>1</sub> shall be updated prior to the start of each month based on actual data for the calendar month prior to the month in which the adjustment is made (i.e., January actual data will be used in February to calculate the TSC effective in March). SR<sub>1</sub> for a month in which a Direct Sale is applicable shall equal the total nominal revenue that the Transmission Owner will receive under each applicable TCC sold in the Direct Sale divided by the duration of the TCC (in months). SR<sub>2</sub> shall equal the Transmission Owner's share of Net Auction Revenue for all rounds of a Centralized TCC Auction, as calculated pursuant to Attachment N, divided equally among the months covered by the Centralized TCC Auction. SR<sub>2</sub> shall be adjusted after each Centralized TCC Auction and the revised SR<sub>2</sub> shall be effective at the start of each Capability Period.~~

SR<sub>3</sub> shall equal the Transmission Owner's share of revenues from the award and renewal of Historic Fixed Price TCCs, as determined pursuant to Section 20.4 of Attachment N. The share of revenues allocated to a Transmission Owner pursuant to Section 20.4 of Attachment N

shall be adjusted after each Centralized TCC Auction and divided equally across the months for which the Historic Fixed Price TCCs that were awarded or renewed prior to the relevant Centralized TCC Auction are valid. Notwithstanding anything to the contrary herein, with respect to the Transmission Owner's share of any revenues for Historic Fixed Price TCCs that took effect on or before November 1, 2016, such revenues (or any portion thereof) shall be accounted for in SR<sub>3</sub> by dividing such revenues (or any portion thereof) equally across the six months of the first Capability Period following the effective date of this provision provided that the NYISO has informed the Transmission Owner of its respective share of such revenues (or any portion thereof) at least two weeks prior to the start of such Capability Period, otherwise such revenues (or any remaining portion thereof) shall be accounted for in SR<sub>3</sub> by dividing such revenues (or any remaining portion thereof) equally across the six months of the Capability Period that follows the first Capability Period following the effective date of this provision.

~~ECR = — The Transmission Owner's share of Net Congestion Rents in a month, calculated pursuant to Attachment N;~~

~~CRR = — The Transmission Owner's Congestion Payments received from Grandfathered TCCs and Imputed Revenues from Grandfathered Rights from ETA's, the expenses for which are included in the Transmission Owner's Revenue Requirement;~~

~~WR = — The Transmission Owner's revenues from external sales (Wheels Through and Export Transactions) not associated with Existing Transmission Agreements included in Attachment L, Tables 18.1, 18.2 and 18.3 and wheeling revenue, associated with OATT reservations extending beyond the start-up of the ISO. (i.e., grandfathered OATT agreements)~~

#### **14.1.2.1.12**

#### **Elements of the WR Component**

The WR component will equal the sum of: (1) TSC revenues received from new external transactions (Wheels Through and Export Transactions); (2) transmission revenues received under grandfathered OATT agreements and actual revenues under Schedule 1 to the grandfathered OATT agreements, but not under Schedules 2 through 6 to the grandfathered OATT agreements; and (3) any revenues related to pre-OATT grandfathered arrangements if the transmission owner increased its OATT revenue requirement to derive its RR component to reflect the fact that revenues related to such transactions are at risk due to options available to the customers resulting from the current restructuring, and the customer retains its grandfathered arrangement.

In each subcomponent of the WR component above, the revenues will include the Gross Receipts Tax (“GRT”) when the Transmission Owner has included the GRT in the RR.

#### **14.1.2.1.2.1**

#### **Treatment of Schedule 1 Associated with Grandfathered OATT Service**

All customers under grandfathered OATT service agreements must continue to pay the Schedule 1 charge applicable under the individual OATT, absent a settlement to the contrary. The revenues received from Schedule 1 charges paid by grandfathered OATT customers will be treated as revenue credit in the WR component as part of the wheeling revenue associated with OATT reservations extending beyond the start-up of the ISO.

#### **14.1.2.1.3 Elements of the Reserved Component**

$$\text{Reserved} = \text{Reserved}_1 + \text{Reserved}_2 + \text{Reserved}_3 + \text{Reserved}_4$$

Reserved<sub>1</sub> will equal the Transmission Owner's Congestion payments for a month received pursuant to Section 20.2.3 of Attachment N of this Tariff for the Transmission Owner's ETCNL TCCs.

Reserved<sub>2</sub> will equal the Transmission Owner's Congestion payments for a month received pursuant to Section 20.2.3 of Attachment N of this Tariff for the Transmission Owner's RCRR TCCs.

Reserved<sub>3</sub> will equal the value that a Transmission Owner receives for the sale of its ETCNL TCCs in a month, with the value for each ETCNL TCC sold divided equally over the month(s) ~~remaining until the expiration of~~ for which that sold ETCNL TCC is valid.

Reserved<sub>4</sub> will equal the value that a Transmission Owner receives for the sale of its RCRR TCCs in a month, with the value for each RCRR TCC sold divided equally over the month(s) ~~remaining until the expiration of~~ for which that sold ~~ETCNL~~ RCRR TCC is valid.

~~BU = The Transmission Owner's Billing Units (annual MWh) for the Transmission District (see Table 1 of this Attachment) The Transmission Owner's BU has been adjusted upward to include subtransmission and distribution losses.~~

The RR, SR and CRR will not include expenses for the Transmission Owner's purchase of TCCs or revenues from the sale of said TCCs or from the collection of Congestion Rents for said TCCs. The ECR, CRR, WR, and Reserved shall be updated prior to the start of each month based on actual data for the calendar month prior to the month in which the adjustment is made (e.g., January actual data will be used in February to calculate the TSC effective in March). The TSC shall not apply to the scheduled quantities physically Curtailed by the ISO.

Each Member System is responsible for calculating: (1) the RR component of its TSC charge; (2) the CCC component of its TSC charge; (3) the SR<sub>1</sub> portion of the SR component of its TSC charge; and ~~(34)~~ the BU component of its TSC charge.

~~The LTPP component of each Member System's TSC charge is initially set at zero. Any changes must be made by unanimous consent of the Transmission Owners (See ISO OATT Original Sheet No. 267). The Member Systems will make a Section 205 filing to propose any change to the LTPP.~~

The NYISO is responsible for calculating or providing the information necessary to calculate: (1) the SR<sub>2</sub> portion of the SR component of each Member System's TSC charge based on information provided by the Member System and information derived from ISO operation; (2) the ECR component of each Member System's TSC charge based on information derived from ISO operation; (3) the CRR component of each Member System's TSC charge based on information derived from ISO operation; (4) the Reserved component of each Member System's TSC charge based on information provided by the Member System and information derived from ISO operation; and (5) the WR component of each Member System's TSC charge based on information provided by the Member System and information derived from ISO operation. Any calculations that the ISO is responsible for are subject to review and comment by all affected parties.

The RR term will be updated based on Transmission Owner filings to FERC (or a NYISO filing to FERC on behalf of LIPA) under the FPA. These filings will be made when a Transmission Owner determines that a change to its RR is required under Section 205.



The CCC term will be updated based on Transmission Owner filings to FERC (or a NYISO filing to FERC on behalf of LIPA) under the FPA. These filings will be made when the Transmission Owner determines that a change to the CCC is required.

SR: The revenue from the Direct Sale of TCCs will be determined monthly and will enter the TSC formula through the SR term with a two-month lag (e.g., January actual data will be used in February to calculate the SR term used in the TSC for March). The revenue that a Transmission Owner receives from a TCC sold in a Centralized Auction or Reconfiguration Auction will be divided equally among the month(s) for which the sold TCC is ~~valid~~. The revenue from these TCCs will enter the TSC formula month-by-month through the SR term, ~~beginning with the first month of the period covered by the Centralized Auction~~ with a two-month lag (e.g., January actual data will be used in February to calculate the SR term used in the TSC for March). For Balance of Period Auctions, the ISO shall also provide each Transmission Owner information regarding their respective share of Net Auction Revenues for each month covered by each Balance-of-Period Auction. The ISO is responsible for ~~calculating~~ providing the information necessary to calculate the SR<sub>2</sub> and SR<sub>3</sub> portions of the SR component of each Transmission Owner's TSC. ~~The Transmission Owner will not adjust the~~ information provided by the ISO's ~~calculation~~.

The ECR revenue will be calculated monthly and will enter the TSC formula with a two-month lag (e.g., January actual data will be used in February to calculate the ECR term used in the TSC for March). The ISO is responsible for calculating the ECR component of each Transmission Owner's TSC. The Transmission Owner will not adjust the ISO's calculation.

The CRR revenue will be calculated monthly and will enter the TSC formula with a two-month lag (e.g., January actual data will be used in February to calculate the CRR term used in

the TSC for March). Each Transmission Owner will identify for the ISO each ETA (“Identified ETA”), under which the Transmission Owner is a customer, the expenses for which are included in the Transmission Owner’s RR. The ISO shall calculate that Transmission Owner’s Congestion Payments received from Grandfathered TCCs and Imputed Revenues from Grandfathered Rights from the Transmission Owner’s Identified ETAs. If the inclusion of the costs under an Identified ETA in the Transmission Owner’s RR is subject to refund, then the CRR shall be subject to adjustment. If the costs under one or more of the Identified ETAs are removed from the RR and the Transmission Owner is required to recalculate its TSC with the adjusted RR, then in recalculating the TSC, the Transmission Owner shall reverse the portion of the CRR that was attributed to each such ETA. The Transmission Owner shall rebill the customers based on the recalculated TSC. To the extent the Transmission Owner owes a refund to the customer, it shall comply with any applicable refund obligations, including payment of interest to the extent due pursuant to 18 C.F.R. § 35.19a(a)(2)(iii), or its successor. If the reversal of the CRR results in a higher TSC than was charged, the customer shall pay in the time prescribed for payment of TSCs the Transmission Owner the difference between the TSC payments it made and the rebilled amounts, with interest thereon from the dates payments were made to the date that the rebilled amounts are due. Said interest will be calculated in the same manner as interest on over-payments as specified in 18 C.F.R. § 35.19a(a)(2)(iii), or its successor.

The Reserved will be calculated monthly and will enter the TSC formula with a two-month lag (e.g., January actual data will be used in February to calculate the ETCNL TCC term used in the TSC for March). The ISO ~~shall~~is responsible for providing the information necessary to calculate ~~a~~the Reserved Component of each Transmission Owner’s ~~Reserved~~TSC.

WR: The revenue that a Transmission Owner collects for new external sales will be calculated monthly and will enter the WR term in the TSC formula with a two-month lag (*i.e.*, January actual data will be used in February to calculate the WR term used in the TSC for March). The ISO is responsible for calculating new external sales subcomponent of the WR component of each Transmission Owner's TSC. The Transmission Owner will not adjust the ISO's calculation. The actual revenue that a Transmission Owner collects for grandfathered OATT service that extends beyond ISO start-up, and revenues related to pre-OATT grandfathered arrangements as provided for under numbers (2) and (3) of Original Sheet No. 214A, will also be calculated monthly and will enter the WR term in the TSC formula based upon the prior month's information. For the first month the credit will be equal to the actual revenues received under those grandfathered agreements to be included in the WR component.

The BU term will be updated based on Transmission Owner filings to FERC (or a NYISO filing to FERC on behalf of LIPA) under the FPA. These filings will be made when the Transmission Owner determines that a change to its BU is required.

#### **~~14.1.2.2 — Implementation of TSC~~**

~~At the start of LBMP implementation, certain variables of the TSC equation will not be available. For the first and second month of LBMP implementation, the only terms in the TSC equation that will be known by each Transmission Owner are its Annual Transmission Revenue Requirement (RR), Scheduling, System Control and Dispatch Costs (CCC), Revenues from the Sale of TCCs in the Transitional Auction (SR<sub>2</sub>), Wheeling Revenues Associated with continuing OATT reservations (WR) and Billing Units (BU), which have been approved by or filed with FERC or, in the case of LIPA, approved by the Long Island Power Authority's Board of Trustees. (Billing Units for "metered" retail customers are based on manual meter readings).~~

~~For these two months each Transmission Owner shall calculate its TSC using the following equation:~~

$$\text{WHOLESALE TSC} = \{[(\text{RR} \div 12) + (\text{CCC} \div 12) - \text{SR} - \text{WR}] / (\text{BU} \div 12)\}$$

~~LTPP will not be available until after the Initial Auction as defined in Attachment M for Long Term TCCs. For the third month of LBMP implementation until the second month of the Capability Period corresponding to the initial auction for Long Term TCCs, each Transmission Owner shall calculate its TSC using the following equation:~~

$$\text{WHOLESALE TSC} = \{[(\text{RR} \div 12) + (\text{CCC} \div 12) - \text{SR} - \text{ECR} - \text{CRR} - \text{WR}] / (\text{BU} \div 12)\}$$

~~From the second month of the Capability Period corresponding to the initial auction for Long Term TCCs, until the conclusion of the LBMP Transition Period, the TSC shall be calculated using the equation in Section 14.1.2.1.~~

~~After the conclusion of the LBMP Transition Period, the LTPP component will no longer be applicable and each Transmission Owner shall calculate its Wholesale TSC using the following equation:~~

$$\text{WHOLESALE TSC} = \{[(\text{RR} \div 12) + (\text{CCC} \div 12) - \text{SR} - \text{ECR} - \text{CRR} - \text{WR} - \text{Reserved}] / (\text{BU} \div 12)\}$$

### **14.1.3 Filing and Posting of Wholesale TSCs**

The Transmission Owners shall coordinate with the ISO to update certain components of the Wholesale TSC formula on a monthly basis or Capability Period basis. Each Transmission Owner may update its Wholesale TSC calculation to change its RR, CCC, or BU component value(s). Such updates, however, shall be subject to necessary FERC filings under the FPA. Each Transmission Owner will calculate its monthly Wholesale TSC and provide the ISO with the Wholesale TSC by no later than the fourteenth of each month, for posting on the OASIS to become effective on the first of the next calendar month. ~~Beginning with the implementation of~~

~~LBMP, and~~ The monthly Wholesale TSCs for each of the Transmission Districts shall be posted on the OASIS by the ISO no later than the fifteenth of each month or as soon thereafter as is reasonably possible but in no event later than the 20th of the month to become effective on the first of the next calendar month.

#### 14.1.4 TSC Calculation Information

The Annual Transmission Revenue Requirements (“RR”); Scheduling, System Control and Dispatch Costs (“CCC”), Billing Units (“BU”) and Rates of the Transmission Owners, except NYPA, for the purpose of calculating the respective Transmission District-based Wholesale TSC are shown in Table 1 below.

TABLE 1 - WHOLESALE TSC CALCULATION INFORMATION

Transmission Owner	Revenue Requirement (RR)	Scheduling System Control and Dispatch Costs (CCC)	Annual Billing Units (BU) MWh	Rate \$/MWh <sup>1</sup>
Central Hudson Gas & Electric Corp.	\$16,375,919	\$1,309,980	4,723,659	\$3.7441
Consolidated Edison Co. of NY, Inc.	\$385,900,000	\$21,000,000	49,984,628	\$8.1405
LIPA	\$105,602,083	\$3,453,343	20,618,939	\$5.2891
New York Electric & Gas Corporation <sup>2</sup>	\$94,143,899	\$1,633,000	14,817,111	\$6.4639
Niagara Mohawk Power Corporation	See Attachment H, Section 14.1.9	See Attachment H, Section 14.1.9	See Attachment H, Section 14.1.9	See Attachment H, Section 14.1.9
Orange and Rockland Utilities, Inc.	\$21,034,831	\$942,579	3,595,947	\$6.1117
Rochester Gas and Electric Corporation	\$25,795,509	\$583,577	6,967,556	\$3.7860

<sup>1</sup> The rate column represents the unit rate prior to crediting; the actual rate will be determined pursuant to the applicable TSC formula rate.

<sup>2</sup> NYSEG’s RR, BU and unit Rate prior to adjustment pursuant to Attachment H, are subject to retroactive modification pursuant to the provisions of the Settlement Agreement approved by the Commission in its March 26, 2004 order issued in Docket No. EL04-56-000. For any Transmission Customer that “opts out” of the Settlement

Agreement as described in paragraph 1.E thereof, the applicable NYSEG "RR" shall be \$100,541,739; the "BU" shall be 13,741,901 MWh; and, the "Rate" prior to adjustment pursuant to Attachment H, shall be \$7.4235 effective as of March 1, 2004.

#### **14.1.5 Treatment of Gross Receipts Tax**

##### **14.1.5.1 Central Hudson Gas & Electric Corporation**

Central Hudson's TSC shall be increased by dividing the following surcharge factors into the total of all applicable rates and charges to reflect the New York State GRT (0.94922 in the MTA regions and 0.95750 in the non-MTA regions), which is not specifically provided for in the transmission rate, to the extent such tax is imposed on Central Hudson as a result of the transmission service provided to such Customer. Central Hudson shall make an appropriate filing pursuant to Section 205 of the Federal Power Act to implement any change in the specified tax rate prior to altering the tax rate under this provision.

##### **14.1.5.2 Consolidated Edison Company of New York, Inc.**

The GRT is included in Con Edison's TSC rate. Con Edison will not charge separately for GRT.

##### **14.1.5.3 LIPA**

The GRT is included in LIPA's TSC rate. LIPA will not charge separately for GRT.

##### **14.1.5.4 New York State Electric & Gas Corporation**

The Transmission Customer shall pay an amount sufficient to reimburse NYSEG for any amounts payable by NYSEG as sales, excise, value-added, gross receipts or other applicable taxes with respect to the total amount payable to NYSEG pursuant to the Tariff. The total of all rates and charges will be divided by the appropriate tax factor listed below, depending upon the geographic location of the Transmission Customer's Point(s) of Delivery

Within the Metropolitan Commuter Transportation District: 0.984583

Not within the Metropolitan Commuter Transportation District: 0.986823

These tax factors incorporate the taxes imposed on the Transmission Provider's electric revenues pursuant to New York law and represents the Franchise Tax on Gross Earnings, the Gross Income Tax, and where applicable the Metropolitan Commuter Transportation District Surcharge.

This Provision shall be effective upon commencement of services under the ISO OATT.

#### **14.1.5.5 Niagara Mohawk Power Corporation**

For the settled Niagara Mohawk TSC rate, the GRT is included in the RR and there will be no separate GRT tax assessed; For the filed Niagara Mohawk TSC rate, GRT initially is included in the RR and there will be no separate GRT assessed; however, this issue with regard to GRT is subject to final Commission action in Docket No. OA96-194-000, including all stipulations executed in connection therewith.

#### **14.1.5.6 Orange and Rockland Utilities, Inc.**

The Transmission Customer's rate will be increased to reflect the gross receipts tax ("GRT") which is not specifically provided for in the transmission rate and ancillary service rates, that a governmental authority may impose on Orange and Rockland as a result of the Transmission Service provided to such Transmission Customer pursuant to Sections 186 and 186-a of the New York Tax Law. The current effective GRT rate for the Section 186-a tax is 3.25% from October 1, 1998 through October 31, 1999 and 2.5% on and after January 1, 2000. The maximum locality rate allowable under state law for each locality is specified below. However, if the actual locality rate is less than the maximum locality rate permitted under state

law, O&R shall charge the actual tax rate levied by the locality. The currently effective GRT rate for the Section 186 tax is .75%.

Airmont	1.0%
Bloomington	1.0%
Chestnut Ridge	1.0%
Goshen	1.0%
Grandview on Hudson	1.0%
Greenwood Lake	1.0%
Harriman	1.0%
Haverstraw	1.0%
Highland Falls	1.0%
Hillburn	1.0%
Kaser	1.0%
Kiryas Joel	1.0%
Middletown	1.0%
Monroe	1.0%
Montebello	1.0%
New Hempstead	1.0%
New Square	1.0%
Nyack	1.0%
Otisville	1.0%
Piermont	1.0%
Pomona	1.0%
Port Jervis	1.0%
Sloatsburg	1.0%
South Nyack	1.0%
Spring Valley	1.0%
Suffern	1.0%
Unionville	1.0%
Upper Nyack	1.0%
Warwick	1.0%
Washingtonville	1.0%
Wesley Hills	1.0%
West Haverstraw	1.0%
Wurtsboro	1.0%

#### **14.1.5.7 Rochester Gas & Electric Corporation**

The Transmission Customer's rate will be increased to reflect the gross receipts tax which is not specifically provided for in the transmission rate and ancillary service rates, that a governmental authority may impose on RG&E as a result of the Transmission Service provided to such Transmission Customer pursuant to Sections 186 and 186-a of the New York Tax Law.



The currently effective GRT rate for the Section 186-a tax is 3.5% and each locality rate is specified below. The currently effective GRT rate for the Section 186 tax is .75%.

City of Rochester	3.0%
Leroy	1.0%
Manchester	1.0%
Perry	1.0%
Shortsville	1.0%
Warsaw	1.0%
Hilton	1.0%
Pittsford	1.0%
Caledonia	1.0%
Wolcott	1.0%
Avon	1.0%
Leicester	1.0%
Nunda	1.0%
Genesco	1.0%
Mt. Morris	1.0%
Sodus Point	1.0%
Livonia	1.0%
Meridian	1.0%
City of Canandaigua	1.0%
Fairport	1.0%
Brockport	1.0%
Scottsville	1.0%
East Rochester	1.0%

#### **14.1.6 TSC For Retail Access Customers (“RTSC”)**

Customers who apply for unbundled Transmission Service in accordance with the provisions of a Transmission Owner’s retail access program filed with the PSC or, in the case of LIPA, approved by the Long Island Power Authority’s Board of Trustees, will be responsible for paying a retail transmission service charge as detailed in Section 5 of this Tariff.

#### **14.1.7 NYPA Transmission Service Charge**

The NYPA TSC for service to its directly connected Loads (Reynolds Metals, GM-Massena, Town of Massena and the City of Plattsburgh) shall, at the Eligible Customer’s option, be (a) \$1.30 per kilowatt-month or (b) no more than \$3.75 per MWh; not to exceed \$60.00 per

MW Day applied to peak MWh scheduled any hour each day; not to exceed \$300.00 per MW-Week applied to the peak MWh scheduled any hour each week. The TSC applicable to service over the Vermont intertie<sup>2</sup> and the Ontario-Hydro intertie shall be the same as (b). The TSC applicable to service over the Hydro-Quebec intertie shall be no more than \$4.62 per MWh; not to exceed \$73.85 per MW-Day applied to peak MWh scheduled each day; not to exceed \$369.23 per MW-Week applied to the peak MWh scheduled any hour each week. NYPA shall coordinate with the ISO to update its TSC. Such updates shall be subject to FERC filings.

#### **14.1.8 Discounting**

Each Transmission Owner may advise the ISO of discounts to its TSC applicable during a specified period to all deliveries to a particular Interconnection between the NYCA and another Control Area. The ISO shall post the discounts on the OASIS for the specified period.

Three principal requirements apply to discounts for Transmission Service as follows: (1) any offer of a discount made by a Transmission Owner 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 a Transmission Owner's wholesale merchant or an Affiliate's use) must occur solely by posting on the OASIS; and (3) once a discount is negotiated, details must be immediately posted on the OASIS. For any discount that the Transmission Owner agrees to and advises the ISO of, the same discounted Transmission Service rate will be offered to all Transmission Customers for the same period for all deliveries to a particular Interconnection between the NYCA and another Control Area. The ISO will post the discounts on the OASIS for the specified period.

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<sup>2</sup>The NYPA TSC shall not apply to service over the Vermont intertie provided that the conditions listed in Section 2.7.2.1.4 of this Tariff are satisfied.

**TABLE 2**  
**Applicable Wholesale TSC for Exports from**  
**New York State, by Transmission Circuit**

Ckt.Id	From/To	kV	From Co./To Ext.	Wholesale TSC Paid
5018	Ramapo / Branchburg	500	O&R/PJM	Con Ed/O&R
398	Pleasant Valley/ Long Mtn	345	CHG&E / NE	Con Ed
B3402	Farragut / Hudson	345	Con Ed / PJM	Con Ed
C3403	Farragut / Hudson	345	Con Ed / PJM	Con Ed
A2253	Goethals / Linden	230	Con Ed / PJM	Con Ed
FE	Smithfield / Falls Village	69	CHG&E/NE	CHG&E
1385	Northport / Norwalk 1	138	LIPA / NE	LIPA
393	Alps / Berkshire	345	NMPC / NE	NMPC
69	So. Ripley / Erie East	230	NMPC / PJM	NMPC
E205W	Rotterdam / Bear Swamp	230	NMPC / NE	NMPC
BP76	Packard / Beck	230	NMPC / OH	NMPC
171	Falconer / Warren	115	NMPC / PJM	NMPC
6	Hoosick / Bennington	115	NMPC / NE	NMPC
7	Whitehall / Blissville	115	NMPC / NE	NMPC
1	Dennison / Rosemont	115	NMPC / HQ	NMPC
2	Dennison / Rosemont	115	NMPC / HQ	NMPC
37-HS	Stolle Road / Homer City	345	NYSEG / PJM	NYSEG
30-HW	Watercure / Homer City	345	NYSEG / PJM	NYSEG
70-EH	Hillside / East Towanda	230	NYSEG / PJM	NYSEG
952	Goudey / Laurel Lake	115	NYSEG / PJM	NYSEG
956	No. Waverly / East Sayre	115	NYSEG / PJM	NYSEG
J	So. Mahwah / Waldwick	345	O&R / PJM	Con Ed/O&R
K	So. Mahwah / Walkwick	345	O&R / PJM	Con Ed/O&R
7040	Massena / Chateaugay	765	NYPA / HQ NYPA	NYPA
PA302	Niagara / Beck A	345	NYPA / OH	NYPA
PA301	Niagara / Beck B	345	NYPA / OH	NYPA
L34P	Moses / St. Lawrence	230	NYPA / OH	NYPA
L33P	Moses / St. Lawrence	230	NYPA / OH	NYPA
PA27	Niagara / Beck	230	NYPA / OH	NYPA
PV-20	Plattsburgh / Grand Isle	115	NYPA / NE	NYPA

<sup>1</sup> All scheduling over the Northport - Norwalk Intertie is conducted by LIPA pursuant to Section 5.7 of this Tariff.

**TABLE 3**  
**Applicable Wholesale TSC for Municipal Utilities,**  
**Electric Cooperatives and Loads**

Except for those municipal utilities and electric cooperatives that continue to take transmission service under an Existing Transmission Agreement, the following Loads shall be obligated to pay the noted Transmission District - based TSC as applicable in accordance with Section 2.7 of this Tariff.

Load	TSC Paid	Load	TSC Paid	Load	TSC Paid
		Greene	NYSEG	Sherrill	NMPC
		Green Island	NMPC	Silver Springs	NYSEG
		Greenport	LIPA	Skaneateles	NMPC
		Groton	NYSEG	Solvay	NMPC
		Hamilton	NYSEG	Spencerport	RG&E
		Holley	NMPC	Springville	NMPC
		Ilion	NMPC	Steuben	NYSEG
Akron	NMPC	Lake Placid	NMPC	Theresa	NMPC
Andover	NMPC	Little Valley	NMPC	Tupper Lake	NMPC
Angelica	RG&E	Marathon	NYSEG	Watkins Glen	NYSEG
Arcade	NMPC	Mayville	NMPC	Wellsville	NMPC
Bath	NYSEG	Mohawk	NMPC	Westfield	NMPC
Bergen	NMPC	Oneida -Madison	NMPC/ NYSEG	Massena	NYPA
Boonville	NMPC	Otsego	NYSEG	Freeport	LIPA
Brolton	NMPC	Penn Yan	NYSEG	Jamestown	NMPC
Castile	NYSEG	Philadelphia	NMPC	Rockville Ctr.	LIPA
Churchville	NMPC	Plattsburgh	NYPA	Alcoa	(1)
Delaware	NYSEG	Richmondville	NMPC	Reynolds	NYPA
Endicott	NYSEG	Rouses Point	NYSEG	Gen. Motors (Massena, NY)	NYPA
Fairport	NMPC	Salamanca	NMPC	Cornwall	NMPC
Frankfort	NMPC	Sherburne	NYSEG		

Notes: (1) - Load is treated as an entity external to the NYCA.

#### **14.1.9 Niagara Mohawk Power Corporation Wholesale TSC Formula Components RR, CCC and BU and Sources of Data Inputs**

Niagara Mohawk Power Corporation (“NMPC”) will calculate and update each of its RR, CCC, and BU components annually using the formulas for each component contained in

Attachment 1 and in accordance with the update procedures set forth in Section 14.1.9.4. With the exception of forecasted information, the cost data used in the Formula Rate will be cost data from NMPC's annual FERC Form 1, NMPC's Annual Report to the New York State Public Service Commission, or NMPC's official books of record.

#### **14.1.9.1 Definitions**

Capitalized terms used in this calculation will have the following definitions:

##### **Allocation Factors**

14.1.9.1.1 Electric Wages and Salaries Allocation Factor shall be fixed at 0.835.

14.1.9.1.2 Gross Transmission Plant Allocation Factor shall equal the total investment in Transmission Plant in Service, Transmission Related Electric General Plant, Transmission Related Common Plant and Transmission Related Intangible Plant divided by Gross Electric Plant.

14.1.9.1.3 Transmission Wages and Salaries Allocation Factor shall be fixed at 0.13.

14.1.9.1.4 Gross Electric Plant Allocation Factor shall equal Gross Electric Plant divided by the sum of Total Gas Plant, Total Electric Plant, and total Common Plant.

##### **Ratebase and Expense Items**

14.1.9.1.5 Administrative and General Expense shall equal expenses as recorded in FERC Account Nos. 920-935. FERC Account No. 926 shall be adjusted by reversing the adjustment to the deferred pension costs booked per the NYPSC Statement of Policy for Accounting and Ratemaking Treatment for Pension and Post-Retirement Benefits Other than Pensions. In addition, Administrative and

General Expenses shall exclude the actual Post-Employment Benefits Other than Pensions (“PBOP”) expenses included in FERC Account No. 926, and shall add back the FERC accepted Post Employment Benefit Other than Pensions of \$88,644,000 annually or \$7,387,000 per month or any other amount subsequently approved by FERC under Section 205 or 206 of the Federal Power Act.

14.1.9.1.6 Amortization of Investment Tax Credits shall equal credits as recorded in FERC Account No. 420, per 18 C.F.R. Parts 101 (Electric) and 201 (Gas).

14.1.9.1.7 Amortization of Debt Discount Expense shall equal expenses as recorded in FERC Account No. 428.

14.1.9.1.8 Amortization of Loss on Reacquired Debt shall equal expenses as recorded in FERC Account No. 428.1.

14.1.9.1.9 Amortization of Premium on Debt –Credit shall equal the expenses as recorded in FERC Account 429.

14.1.9.1.10 Amortization of Gain on Reacquired Debt--Credit shall equal the expenses as recorded in FERC Account No. 429.1.

14.1.9.1.11 Common Plant shall equal the balance of plant recorded in FERC Account Nos. 389-399. Common Plant shall be defined as the plant common to NMPC’s gas and electric functions per 18 C.F.R. Parts 101 (Electric) and 201 (Gas).

14.1.9.1.12 Common Plant Depreciation Expense shall equal the common plant depreciation expenses as recorded in FERC Account No. 403, 404 and 405 associated with Common Plant per 18 C.F.R. Parts 101 (Electric) and 201 (Gas).

14.1.9.1.13 Common Plant Depreciation Reserve shall equal the common plant depreciation reserve balance as recorded in FERC Account No. 108 associated with Common Plant per 18 C.F.R. Parts 101 (Electric) and 201 (Gas).

14.1.9.1.14 Depreciation Expense for Transmission Plant in Service shall equal depreciation expenses as recorded in FERC Account No. 403, 404 and 405 calculated using the depreciation rates set forth in the following table:

**Depreciation Rates**

<u>FERC Account/NMPC Internal Account No.</u>		<u>Annual Rate</u>
350	Land –Rights of Way and Easements	1.32
352	Structures and Improvements	2.08
353	Station Equipment	2.44
353.55	Station Equipment – EMS	3.40
354	Towers and Fixtures	1.71
355	Poles and Fixtures	2.00
356	Overhead Conductors and Devices	1.60
357	Underground Conduit	1.33
358	Underground Conductors and Devices	1.48
359	Roads and Trails	1.33
370	Meters	
	Meters	5.05
	Installation	5.05

14.1.9.1.15 Distribution Plant shall equal the plant balance as recorded in FERC Account Nos. 360 – 374.

14.1.9.1.16 Equity AFUDC Component of Depreciation Expense shall equal the activity recorded in FERC Account No. 419.1.

- 14.1.9.1.17 Electric Environmental Remediation Expense shall be the environmental remediation expense as recorded in FERC Account 930.2.
- 14.1.9.1.18 Electric General Plant shall equal the plant balance recorded in FERC Account Nos. 389-399. Electric General Plant shall be defined as the general plant associated with NMPC's electric function.
- 14.1.9.1.19 Electric General Plant Depreciation Expense shall equal general plant depreciation expenses as recorded in FERC Account No. 403, 404 and 405 associated with Electric General Plant.
- 14.1.9.1.20 Electric General Plant Depreciation Reserve shall equal the general plant depreciation reserve balance as recorded in FERC Account No. 108 associated with Electric General Plant.
- 14.1.9.1.21 Electric Property Insurance shall equal property insurance recorded in FERC Account No. 924.
- 14.1.9.1.22 Electric Research and Development Expense shall equal research and development expenses as recorded in FERC Account No. 930.2.
- 14.1.9.1.23 Gain on Reacquired Debt shall equal the balance as recorded in FERC Account No. 257.
- 14.1.9.1.24 Gross Electric Plant shall equal Total Electric Plant plus an allocation of Common Plant determined by multiplying Common Plant by the Electric Wages and Salaries Allocation Factor.
- 14.1.9.1.25 Gross Plant (Gas & Electric) shall equal Total Gas Plant plus Total Electric Plant plus Total Common Plant.



- 14.1.9.1.26 Gross Transmission Investment shall equal the total of Transmission Plant in Service, Transmission Related Electric General Plant, Transmission Related Common Plant and Transmission Related Intangible Plant.
- 14.1.9.1.27 Intangible Electric Plant shall equal the balance of plant recorded in FERC Account Nos. 301-303. Intangible Electric Plant shall be defined as the intangible plant associated with NMPC's electric functions.
- 14.1.9.1.28 Intangible Electric Plant Depreciation Expense shall equal the intangible electric plant depreciation expenses as recorded in FERC Account No. 403, 404 and 405 associated with Intangible Electric Plant.
- 14.1.9.1.29 Intangible Electric Plant Depreciation Reserve shall equal the intangible plant depreciation reserve balance as recorded in FERC Account No. 108 associated with Intangible Electric Plant.
- 14.1.9.1.30 Loss on Reacquired Debt shall equal the loss on reacquired debt as recorded in FERC Account No. 189.
- 14.1.9.1.31 Materials and Supplies shall equal materials and supplies balance as recorded in FERC Account No. 154 per 18 C.F.R. Parts 101 (Electric) and 201 (Gas).
- 14.1.9.1.32 Payroll Taxes shall equal the electric payroll tax expenses related to FICA and federal and state unemployment as recorded in FERC Account 408.1..
- 14.1.9.1.33 Plant Held for Future Use shall equal the balance as recorded in FERC Account No. 105 for transmission uses within 5 years.

- 14.1.9.1.34 Prepayments shall equal prepayment balance as recorded in FERC Account No. 165 per 18 C.F.R. Parts 101 (Electric) and 201 (Gas) less prepaid state and Federal income taxes.
- 14.1.9.1.35 Real Estate Tax Expenses shall equal electric real estate tax expense as recorded in FERC Account 408.1..
- 14.1.9.1.36 Regulatory Assets and Liabilities shall equal state and federal regulatory asset balances in FERC Account Nos. 182.3 and 254, assets and liabilities solely related to FAS109, and excess AFUDC.
- 14.1.9.1.37 Total Accumulated Deferred Income Taxes shall equal the sum of deferred tax balances recorded in FERC Account Nos. 281 - 283 plus accumulated deferred investment tax credits as reflected in FERC Account No. 255, minus the deferred tax balance in FERC Account No. 190. Total Accumulated Deferred Income Taxes shall exclude the specifically identified generation-related stranded cost deferred taxes.
- 14.1.9.1.38 Total Electric Plant shall equal the sum of Transmission Plant, Distribution Plant, Electric General Plant and Intangible Electric Plant.
- 14.1.9.1.39 Total Gas Plant shall equal the plant balance recorded in 18 C.F.R. Part 201, FERC Account Nos. 301-399. Total Gas Plant shall exclude Common Plant.
- 14.1.9.1.40 Transmission Depreciation Reserve shall equal electric transmission plant related depreciation reserve balance as recorded in FERC Account No. 108, plus Transmission Related General Plant Accumulated Depreciation, Transmission Related Amortization of Other Utility Plant, and Common Plant Accumulated Depreciation associated with Gross Electric Plant.

- 14.1.9.1.41 Transmission Operation and Maintenance Expense shall equal the sum of electric expenses as recorded in FERC Account Nos. 560 and 562-574 which shall include Transmission Support Payments, but shall exclude expenses incurred pursuant to agreements entered into with generators or other similar resources for the purpose of supporting transmission reliability that do not qualify as Transmission Support Payments .
- 14.1.9.1.42 Transmission Plant shall equal the gross plant balance as recorded in FERC Account Nos. 350-359.
- 14.1.9.1.43 Transmission Related Bad Debt Expense shall equal Bad Debt Expense as reported in FERC Account 904 related to NMPC's wholesale transmission billing.
- 14.1.9.1.44 Unamortized Discount on Long-Term Debt shall equal the balance in FERC Account No. 226.
- 14.1.9.1.45 Wholesale Metering Investment shall equal the gross plant investment associated with any Revenue or Remote Terminal Unit ("RTU") meters and associated equipment connected to an internal or external tie at voltages equal to or greater than 23 kV. The gross plant investment shall be determined by multiplying the number of such existing wholesale meters recorded in FERC Account No. 370.3 and in blanket metering accounts by the average cost of the meters plus the average costs of installation. To the extent future gross plant investment for Wholesale Metering can be specifically identified, actual gross meter costs will be used.

### **Forecast and True-up Related Terms**

14.1.9.1.46 Forecast Period shall mean the calendar year immediately following the calendar year for which the most recent FERC Form 1 data is available, as of the beginning of the Update Year.

14.1.9.1.47 Forecasted Transmission Plant Additions (“FTPA”) shall mean the sum of:

14.1.9.1.47.1 NMPC’s actual Transmission Plant additions during the first quarter (January 1 through March 31) of the Forecast Period; and

14.1.9.1.47.2 NMPC’s forecasted transmission investment for the Forecast Period less the amount (i), divided by 2.

14.1.9.1.48 Interest on refunds, surcharges, or adjustments, as applicable, shall mean interest calculated in accordance with the methodology specified in the Commission’s regulations at 18 C.F.R. § 35.19a (a) (2) (iii) (or as such provision may be renumbered in the future).

14.1.9.1.49 Actual Transmission Revenue Requirement shall mean the current Historical Transmission Revenue Requirement (as defined in Attachment 1).

14.1.9.1.50 Actual Scheduling, System Control and Dispatch cost shall mean the most recently established CCC (as defined in Attachment 1).

14.1.9.1.51 Actual Billing Units shall mean the most recently established BU (as defined in Attachment 1).

14.1.9.1.52 Prior Year Transmission Revenue Requirement shall equal RR less Annual True-Up (“ATU”), as defined in Attachment 1, for the most recently ended calendar year as of the beginning of the Update Year.

- 14.1.9.1.53 Prior Year Scheduling, System Control and Dispatch shall equal the CCC, as defined in Attachment 1, for the prior calendar year.
- 14.1.9.1.54 Prior Year Billing Units shall equal the BU, as defined in Attachment 1, for the prior calendar year.
- 14.1.9.1.55 Prior Year Unit Rate shall equal the sum of RR, as defined in Attachment 1, for the most recently ended Prior Year Revenue Requirement and the Prior Year Scheduling, System Control and Dispatch divided by the Prior Year Billing Units.
- 14.1.9.1.56 Annual Update shall mean the calculation of the RR, CCC, and BU components with Data Inputs for an Update Year in accordance with Section 14.1.9.4.
- 14.1.9.1.57 Data Input shall mean any data required for the calculation of RR, CCC and BU, in accordance with the Formula Rate.
- 14.1.9.1.58 Formal Challenge shall mean a challenge presented in accordance with Section 14.1.9.4.3.2.
- 14.1.9.1.59 Informational Filing shall mean the filing that NMPC makes in accordance with Section 14.1.9.4 to establish the Annual Update for an Update Year.
- 14.1.9.1.60 Interested Party shall mean a person that is (i) a party to FERC Docket No. ER08-552, (ii) the New York State Public Service Commission; (iii) a transmission customer under this Tariff that pays charges based on the Formula Rate during the calendar year prior to the submission of the Informational Filing; or (iv) a state regulatory authority having jurisdiction over the retail electric rates of such a transmission customer, provided that such regulatory authority or such

customer notifies NMPC of that fact no later than 30 days prior to the Publication Date. An Interested Person includes employees of or consultants to such person.

14.1.9.1.61 Material Accounting Change shall mean an accounting policy or practice, including, but not limited to, a policy or practice affecting the allocation of costs or revenues, employed by NMPC during an Update Year that differs from the corresponding policy or practice in effect during any of the three previous calendar years which change affects any Data Input for the Update Year by \$1.0 million or more, as compared to the previous calendar year.

14.1.9.1.62 Preliminary Challenge shall mean a challenge presented by an Interested Party in accordance with Section 14.1.9.4.2.1.

14.1.9.1.63 Publication Date shall be the date of an Informational Filing for an Update Year.

14.1.9.1.64 Review Period shall be the period ending one-hundred and fifty (150) days after the Publication Date, unless extended in accordance with Section 14.1.9.4.2.1.

14.1.9.1.65 Formula Rate shall be the formulas set forth in Attachment 1.

14.1.9.1.66 Update Year shall be the period from July 1 of a given calendar year through June 30 of the subsequent calendar year for a particular Annual Update.

14.1.9.1.67 Transmission Support Payments shall be expenses accepted by FERC for inclusion in the Historical Transmission Revenue Requirement pursuant to agreements entered into with generators or other similar resources for the purpose of supporting transmission reliability that have been submitted to FERC for review. Pursuant to the settlement agreement accepted by FERC in Docket No.

ER14-543, Transmission Support Payments shall include the costs incurred by Niagara Mohawk pursuant to the reliability support services agreements entered into between Niagara Mohawk and Dunkirk Power, LLC on July 12, 2012 and March 4, 2013, including the costs of extending the March 4, 2013 agreement through the end of 2015, less a sum total of \$35 million.

All references to FERC accounts in the above definitions are references to 18 C.F.R. Part 101, unless specifically noted otherwise. In the event that the above-referenced FERC accounts are renumbered, renamed, or otherwise modified, the above sections shall be deemed amended to incorporate such renumbered, renamed, modified or additional accounts.

#### **14.1.9.2 Calculation of RR**

The RR component shall equal the (a) Historical Transmission Revenue Requirement, plus (b) the Forecasted Transmission Revenue Requirement which shall exclude the impact of any Transmission Support Payments, plus (c) the Annual True-Up, determined in accordance with the Formula Rate.

#### **14.1.9.3 Fixed Formula Inputs**

Formula Rate inputs for (i) the authorized return on common equity (“ROE”), (ii) any cap on the common equity component of the capital structure, (iii) amount and amortization period of extraordinary property losses, (iv) depreciation and/or amortization rates, (v) PBOP expenses, and (vi) the electric wages and salaries allocation factor and transmission wages and salaries allocation factor shall be stated values until changed by the FERC pursuant to Section 205 or Section 206 of the Federal Power Act. An application under Section 205 or 206 or a proceeding initiated by FERC sua sponte under Section 206 to modify any of these stated values under the

Formula Rate other than the ROE, the cap on the common equity component of the capital structure or the allocation factors in (vi) shall not be deemed to open for review other components of the Formula Rate.

#### **14.1.9.4 Annual Update Process**

##### **14.1.9.4.1 Annual Updates**

14.1.9.4.1.1 On or before June 14th of each year, NMPC shall recalculate its RR, CCC, and BU components, applying the Data Inputs called for in the Formula Rate to produce the Annual Update for the upcoming Update Year, and:

14.1.9.4.1.1.1 shall post such Annual Update and a “workable” excel file containing that year’s Annual Update on the NYISO’s Internet website;

14.1.9.4.1.1.2 shall file such Annual Update with the FERC as the Informational Filing. The submission of such Informational Filing with FERC shall not require any action by the agency; and

14.1.9.4.1.1.3 shall serve the Annual Update electronically on all Interested Parties.

14.1.9.4.1.2 If the date for making the Informational Filing should fall on a weekend or a holiday recognized by the FERC, then the posting/filing shall coincide with the NYISO posting requirement for July rates.

14.1.9.4.1.3 The Annual Update for the Update Year:

14.1.9.4.1.3.1 shall use the Data Inputs specified in NMPC’s Formula Rate, and therefore, to the extent specified in NMPC’s Formula Rate, be based upon NMPC’s FERC Form No. 1 data for the most recent calendar year; to the extent specified in NMPC’s Formula Rate, be based upon the books and records of



NMPC consistent with FERC accounting policies, and, to the extent specified in NMPC's Formula Rate, be based on projections for the upcoming calendar year;

14.1.9.4.1.3.2 shall provide supporting documentation for Data Inputs in the form of the data provided in Attachment C to the Offer of Settlement dated April 6, 2009, in Docket No. ER08-552; and, with respect to Billing Units, shall include monthly documents in PDF format with redacted names and revised reference numbers for each entity to protect confidentiality, showing the Billing Units for each month of the most recently completed calendar billing year (the six-month updated BUs), including NMPC's Transmission Owner Load ("TOL"), consisting of metered loads for the December through November timeframe showing the calendar billing year BUs reported to the NYISO by NMPC. The total MWh of generation (including load modifiers) and net interchange for each NMPC transmission zone will be displayed. National Grid will also provide a document as a "workable" Excel file summarizing the TOL for disputed station service, High Load Factor Fitzpatrick and any other entity excluded from the Billing Units calculation in Attachment 1, Schedule 6.12, of the Formula Rate. The summary will be labeled to show the reason for exclusion, consistent with the definition of Billing Units and will reconcile to the totals shown on Attachment 1, Schedule 6.12.

14.1.9.4.1.3.3 shall provide notice of and describe all Material Accounting Changes, which description shall include an explanation of the purpose for and the circumstances giving rise to the Material Accounting Change, including references to any relevant orders, policies or notices of the Securities and

Exchange Commission, the FERC or a retail regulator, which explanation may incorporate by reference any applicable disclosure statements filed with any such agency;

14.1.9.4.1.3.4 shall provide notice of the date and location of the meeting to be held in accordance with Section 14.1.9.4.2.2;

14.1.9.4.1.3.5 shall be subject to challenge and review only in accordance with the procedures set forth in this Section 14.1.9.4, provided that such procedures shall not preclude investigation of the Annual Update by FERC, including through hearing procedures;

14.1.9.4.1.3.6 shall not seek to modify NMPC's Formula Rate and shall not be subject to challenge by an Interested Party seeking to modify NMPC's Formula Rate (i.e., all such modifications to the Formula Rate will require, as applicable, a Federal Power Act Section 205 or Section 206 proceeding), provided that an Interested Party may propose for consideration a change to the Formula Rate, as provided in Section 14.1.9.4.3.5;

14.1.9.4.1.3.7 shall include a list of the email addresses of Interested Parties upon which the Annual Update was served; and

14.1.9.4.1.3.8 shall provide a description of, and workpapers for, any correction of an error discovered by NMPC that affects the calculation of any charges under the Formula Rate during a prior year within the period applicable under Section 14.1.9.4.4.

14.1.9.4.1.4 The fixed Formula Rate inputs set forth in Section 14.1.9.3 shall not be subject to adjustment in an Annual Update.

#### **14.1.9.4.2 Annual Review Procedures**

Each Annual Update shall be subject to the following review procedures:

14.1.9.4.2.1 Any Interested Party shall have up to one hundred fifty (150) days after the Publication Date (unless such period is extended with the written consent of NMPC) to review the calculations and to notify NMPC in writing of any specific challenges to the accuracy of any Data Input in the Annual Update or the conformance of any such Data Input with the requirements of the Formula Rate (“Preliminary Challenge”); provided, however, that each Interested Party shall make a good faith effort to submit Preliminary Challenges at the earliest practicable date so that they may be resolved as soon as possible, and provide NMPC with a non-binding list of potential Preliminary Challenges it may present, based on its review of the Annual Update and on responses to information requests provided to that point, within ninety (90) days of the Publication Date. Any Preliminary Challenge shall be posted on the NYISO’s internet website and served by electronic service on all Interested Parties by the next business day following the date it is provided to NMPC.

14.1.9.4.2.2 Within thirty (30) days of the Publication Date, NMPC shall hold a meeting open to all Interested Parties, at which meeting: (a) NMPC shall present and explain the Annual Update; (b) NMPC shall respond to questions from Interested Parties, to the extent such questions can be answered immediately; and (c) Interested Parties shall identify any areas of potential Preliminary Challenges, to the extent they have identified them at the time of the meeting.

14.1.9.4.2.3 Interested Parties shall have up to one hundred thirty (130) days after each annual Publication Date (unless such period is extended with the written consent

of NMPC) to serve reasonable information requests on NMPC; provided, however, that the Interested Parties shall make a good faith effort to submit consolidated sets of information requests that limit the number and overlap of questions to the extent practicable. Such information requests may be directed to matters relevant to the accuracy of the Data Inputs included in the Annual Update and the conformance of those Data Inputs with the requirements of the corresponding provisions of the Formula Rate, including: (a) the reasons for any change in a Data Input from the corresponding Data Input in an earlier Annual Update; (b) the reasons for any change in a Data Input based on actual costs from the corresponding Data Input based on a cost projection in an earlier Annual Update; (c) any reports or other materials provided to fulfill the requirements of a state or federal regulatory agency that explain the basis for projected or actual costs reflected in a Data Input; and (d) the impact of any Material Accounting Change identified in the Annual Update on the charges produced by the Formula Rate.

14.1.9.4.2.4 NMPC shall make a good faith effort to respond to information requests pertaining to the Annual Update within ten (10) business days of receipt of such requests. NMPC may give reasonable priority to responding to requests that satisfy the practicable coordination and consolidation provision of Section 14.1.9.4.2.3, above. NMPC's responses to information requests shall not be entitled to protection as privileged settlement communications; provided, however, that: (a) any communications between NMPC and any Interested Party in connection with efforts to negotiate a resolution of a Preliminary Challenge or

Formal Challenge shall be entitled to such protection; (b) if NMPC's response to an information request contains proprietary or trade secret information or critical energy infrastructure information, NMPC and the Interested Party or Parties receiving such information shall enter into a confidentiality agreement materially similar to the model protective order used by the FERC to protect the confidentiality of such information; and (c) nothing herein shall require NMPC to provide information that is protected by the attorney-client privilege, the attorney work product doctrine, or any other legally recognized privilege.

#### **14.1.9.4.3 Resolution of Challenges**

14.1.9.4.3.1 NMPC and the Interested Parties shall negotiate in good faith throughout the Review Period to attempt to resolve any Preliminary Challenges.

14.1.9.4.3.2 If NMPC and any Interested Party or Parties have not resolved any Preliminary Challenge to the Annual Update within the Review Period, an Interested Party shall have an additional twenty-one (21) days (unless such period is extended with the written consent of NMPC to continue efforts to resolve a Preliminary Challenge) to present the subject matter of the Preliminary Challenge to the FERC as a Formal Challenge, which shall be served on NMPC and all other Interested Parties by electronic service on the date of such filing and posted on the NYISO's internet website, however, there shall be no need to make a Formal Challenge or to await conclusion of the time periods in Section 14.1.9.4.2 if the FERC already has initiated a proceeding to investigate the Annual Update. By no later than five (5) business days after the end of the Review Period, NMPC shall apprise Interested Parties of the resolution of all Preliminary Challenges that have

been resolved and of the impact of the resolution of all such Preliminary Challenges on the Annual Update. Within an additional fifteen (15) business days, NMPC shall submit a supplement to its Informational Filing to the FERC, with electronic service upon the Interested Parties, reflecting the impact of all successfully resolved Preliminary Challenges.

14.1.9.4.3.3 Any response by NMPC to a Formal Challenge must be submitted to the FERC within twenty-one (21) days of the date of the filing of the Formal Challenge, and shall be posted on the NYISO's Internet website and served on all Interested Parties by electronic service on the date of such filing.

14.1.9.4.3.4 In any proceeding initiated by the FERC concerning the Annual Update or in response to a Formal Challenge, NMPC shall bear the burden of proving that the Data Inputs in that year's Annual Update are correct and conform to the terms of the Formula Rate and refunds or adjustments may be made, in either case with interest, to charges collected under the Formula Rate if the FERC concludes that the Data Inputs are incorrect or do not conform to the terms of the Formula Rate. In all other respects, any such proceeding shall be governed by the rules and requirements applicable to proceedings under Section 206 of the Federal Power Act.

14.1.9.4.3.5 An Interested Party may propose that resolution of a Preliminary Challenge or Formal Challenge concerning a Material Accounting Change necessitates changes to the Formula Rate to ensure that the resulting charges, including the effect of the Material Accounting Change, are just and reasonable. If NMPC agrees to such a proposed change to the Formula Rate to resolve a

Preliminary Challenge, NMPC shall file the change to the Formula Rate with the FERC for approval pursuant to Section 205 of the Federal Power Act. If NMPC does not agree to such a proposed change, the Interested Party may file the proposed change with the FERC for approval pursuant to Section 206 of the Federal Power Act concurrent with its submission of a Formal Challenge; provided that if FERC approves the proposed change, the change to the Formula Rate shall take effect as of the beginning of the Update Year during which the Section 206 filing is made, and refunds or surcharges shall be made, in either case with interest, to charges under the Formula Rate after the beginning of such Update Year to reflect the proposed change.

14.1.9.4.3.6 Nothing herein shall be deemed to limit in any way the right of NMPC to file unilaterally, pursuant to Section 205 of the Federal Power Act and the regulations thereunder, changes to NMPC's Formula Rate (including changes in connection with any incentive mechanism) or any of its Data Inputs (including, but not limited to, any fixed Data Inputs) or the right of any other party to file for such changes pursuant to Section 206 of the Federal Power Act and the regulations thereunder. All parties reserve all rights to challenge, or take any position in response to, any such filing by any other party.

#### **14.1.9.4.4 Changes to Data Inputs**

14.1.9.4.4.1 Any changes to the Data Inputs for an Annual Update, including but not limited to revisions resulting from any FERC proceeding to consider the Annual Update, or as a result of the procedures set forth herein, shall take effect as of the beginning of the Update Year and the impact of such changes shall be

incorporated into the charges produced by the Formula Rate (with interest determined in accordance with 18 C.F.R. § 35.19(a)) in the Annual Update for the next effective Update Year. This mechanism shall apply in lieu of mid-Update Year adjustments and any refunds or surcharges, except that, if an error in a Data Input is discovered and agreed upon within the Review Period, the impact of such change shall be incorporated prospectively into the charges produced by the Formula Rate during the remainder of the year preceding the next effective Update Year, in which case the impact reflected in subsequent charges shall be reduced accordingly.

14.1.9.4.4.2 The impact of an error affecting a Data Input on charges collected during the Formula Rate during the five (5) years prior to the Update Year in which the error was first discovered shall be corrected by incorporating the impact of the error on the charges produced by the Formula Rate during the five-year period into the charges produced by the Formula Rate (with interest determined in accordance with 18 C.F.R. § 35.19(a)) in the Annual Update for the next effective Update Year. Charges collected before the five-year period shall not be subject to correction.



## **14.2 Attachment 1 to Attachment H**

### **14.2.1 Schedules**

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Other	Schedule 10
System Dispatch Expense - Component CCC	Schedule 11
Billing Units - Component BU	Schedule 12
Forecasted Accumulated Deferred Income Taxes (FADIT)	Schedule 13

	Year
--	------

**Calculation of RR**

14.1.9.2 The RR component shall equal the (a) Historical Transmission Revenue Requirement plus (b) the Forecasted Transmission Revenue Requirement plus (c) the Annual True-Up, determined in accordance with the formula below.

**Historical Transmission Revenue Requirement (Historical TRR)**

Line No.

1	<b><u>Historical Transmission Revenue Requirement (Historical TRR)</u></b>			
2				
3	14.1.9.2 (a)	Historical TRR shall equal the sum of NMPC's (A) Return and Associated Income Taxes, (B) Transmission Related Depreciation Expense, (C)		
4		Transmission Related Real Estate Tax Expense, (D) Transmission Related Amortization of Investment Tax Credits,		
5		(E) Transmission Operation and Maintenance Expense, (F) Transmission Related Administrative and General Expenses, (G) Transmission		
6		Related Payroll Tax Expense, (H) Billing Adjustments, and (I) Transmission Related Bad Debt Expense less		
7		(J) Revenue Credits, and (K) Transmission Rents, all determined for the most recently ended calendar year as of the beginning of the update year.		
8		Reference		
9		<u>Section:</u>	<b>0</b>	
10		Return and Associated Income Taxes (A)	#DIV/0!	Schedule 8, Line 64
11		Transmission-Related Depreciation Expense (B)	#DIV/0!	Schedule 9, Line 6, column 5
12		Transmission-Related Real Estate Taxes (C)	#DIV/0!	Schedule 9, Line 12, column 5
13		Transmission - Related Investment Tax Credit (D)	#DIV/0!	Schedule 9, Line 16, column 5 times minus 1
14		Transmission Operation & Maintenance Expense (E)	\$0	Schedule 9, Line 23, column 5
15		Transmission Related Administrative & General Expense (F)	#DIV/0!	Schedule 9, Line 38, column 5
16		Transmission Related Payroll Tax Expense (G)	\$0	Schedule 9, Line 44, column 5
17		Sub-Total (sum of Lines 10 - Line 16)	#DIV/0!	
18				
19		Billing Adjustments (H)	\$0	Schedule 10, Line 1
20		Bad Debt Expenses (I)	\$0	Schedule 10, Line 4
21		Revenue Credits (J)	\$0	Schedule 10, Line 7
22		Transmission Rents (K)	\$0	Schedule 10, Line 14
23				
24		Total Historical Transmission Revenue Requirement (Sum of Line 17 -		
25		Line 22)	#DIV/0!	

Niagara Mohawk Power Corporation  
Forecasted Transmission Revenue Requirement  
Attachment H, Section 14.1.9.2

Attachment 1  
Schedule 2

		Year	
Shading denotes an input			
Line No.			
1	14.1.9.2 FORECASTED TRANSMISSION REVENUE REQUIREMENTS		
	(b)		
2	Forecasted TRR shall equal (1) the Forecasted Transmission Plant Additions (FTPA) multiplied by the Adjusted Annual (AFTRRF), plus (2) Forecasted ADIT Adjustment (FADITA), plus (3) the Mid-Year Trend		
3	Adjustment (MYTA), less (4) Transmission Support Payments (TSP), plus (5) the Tax Rate Adjustment (TRA), less (6) Other Billing Adjustments (OBA) as shown in the following formula:		
4			
5	Forecasted TRR = (FTPA * AFTRRF) + FADITA + MYTA - TSP + TRA - OBA		
6			
7		<u>Period</u>	<u>Reference</u>
8			<u>Source</u>
9			
10	(1) FORECASTED TRANSMISSION PLANT ADDITIONS (FTPA)	\$0	Workpaper 8, Section I, Line 16
11	Adjusted Annual Transmission Revenue Requirement Factor (AFTRRF)	#DIV/0!	Line 78
12	Sub-Total (Lines 10*11)	#DIV/0!	
13			
14	(2) FORECASTED ADIT ADJUSTMENT (FADITA)		
15	The Forecasted ADIT Adjustment (FADITA) shall equal the Forecasted ADIT (FADIT)		
16	multiplied by the Cost of Capital Rate, where:		
17			
18	Forecasted ADIT(FADIT) shall equal the projected change in Accumulated Deferred Income Taxes from the most recently concluded calendar year related to accelerated depreciation and associated with Transmission Plant for the		
19	Forecasted Period calculated in accordance with Treasury regulation Section 1.167(1)-1(h)(6).		
20			
21			
22	Forecasted ADIT (FADIT)	#DIV/0!	Schedule 13, Line 24
23	Cost of Capital Rate	#DIV/0!	Schedule 8, Line 62
24	Forecasted ADIT Adjustment (FADITA)	#DIV/0!	Line 22 * Line 23
25			
26	(3) MID YEAR TREND ADJUSTMENT (MYTA)		
27	The Mid-Year Trend Adjustment shall be the difference, whether positive or negative, between		
28	(i) the Historical TRR Component (E) excluding Transmission Support Payments, based on actual data for the first three months of the Forecast Period,		
29	and (ii) the Historical TRR Component (E) excluding Transmission		

30	Support Payments, based on data for the first three months of the year prior to the Forecast Period.		
31	Plus Mid-Year Trend Adjustment (MYTA)	\$0	Workpaper 9, line 32, variance column
32			
33	(4) TRANSMISSION SUPPORT PAYMENTS (TSP)		
34	Less Impact of Transmission Support Payments on Historical Transmission Revenue Requirement	\$0	Worpaper 9A
35	Less: Other Billing Adjustments - Dunkirk Settlement ER14-543-000	\$0	Schedule 10
36			
37	(5) TAX RATE ADJUSTMENT (TRA)		
38	The Tax Rate Adjustment shall be the amount, if any, required to adjust Historical TRR Component (A) for any change in the Federal Income Tax Rate		
39	and/or the State Income Tax Rate that takes effect during the first five months of the Forecast Period.		
40			
41	Tax Rate Adjustment (TRA)	\$0	
42			
43	(6) OTHER BILLING ADJUSTMENTS (OBA)		
44	Other Billing Adjustments shall equal any amounts related to the HTRR calculation that are		
45	required to be adjusted in the current year's FTRR to remove the impact on the Update Year		
46			
47	Other Billing Adjustments (OBA)	\$0	Schedule 10, Line 1
48			
49	Forecasted Transmission Revenue Requirement (Line 12 + Line 24 + Line 31 – Line 34 – Line 35 + Line 41-Line 47)	#DIV/0!	
50			
51	14.1.9.2(c) <b><u>ANNUAL FORECAST TRANSMISSION REVENUE REQUIREMENT FACTOR</u></b>		
52			
53	Adjusted Annual Forecast Transmission Revenue Requirement Factor (AFTRRF) shall equal the difference between the Annual Forecast		
54	Transmission Revenue Requirement Factor (FTRRF) and the quotient of (1) Cost of Capital Rate multiplied by the Transmission Related		
55	Accumulated Deferred Taxes less Accumulated Deferred Inv. Tax Cr (255) for the most recently concluded calendar year,		
56	and (ii) the year-end Transmission Plant in Service determined in accordance with Section 14.1.9.2 (a), component (A)1(a).		
57			
58	The Annual Forecast Transmission Revenue Requirement Factor (Annual FTRRF) shall equal the sum of Historical TRR components (A) through (C),		
59	divided by the year-end balance of Transmission Plant in Service determined in accordance with Section 14.1.9.2 (a), component (A)1(a).		
60			
61	Derivation of Annual Forecast Transmission Revenue Requirement Factor (FTRRF)		
62	Investment Return and Income Taxes (A)	#DIV/0!	Schedule 1, Line 10
63	Depreciation Expense (B)	#DIV/0!	Schedule 1, Line 11

64	Property Tax Expense	(C)	#DIV/0!	Schedule 1, Line 12
65	Total Expenses (Lines 62 thru 64)		#DIV/0!	
66	Transmission Plant	(a)	#DIV/0!	Schedule 6, Page 1, Line 12
67	Annual Forecast Transmission Revenue Requirement Factor (Lines 65/ Line 66)		#DIV/0!	
68				
69	Adjustment to FTRRF to reflect removal of ADIT that is subject to normalization			
70	Transmission Related ADIT Balance at year-end		#DIV/0!	Schedule 7, Line 6, Column L
71	Less: Accumulated Deferred Inv. Tax Cr (255)		#DIV/0!	Schedule 7, Line 5, Column L
72	Net Transmission ADIT Balance at year-end		#DIV/0!	Line 70 - Line 71
73	Cost of Capital Rate		#DIV/0!	Schedule 8, Line 62
74	Total Return and Income Taxes Associated with ADIT Balance at year-end		#DIV/0!	Line 72 * Line 73
75				
76	Annual Forecast Transmission Revenue Requirement Factor (FTRRF)		#DIV/0!	Line 67
77	Less: Incremental Annual Forecast Transmission Revenue Requirement Factor Adjustment for ADIT		#DIV/0!	Line 74 / Line 66
78	Adjusted Annual Forecast Transmission Revenue Requirement Factor (AFTRRF)		#DIV/0!	Line 76 - Line 77

## Attachment H Section 14.1.9.2 (c)

Line No.

Year

Source:

1								
2	14.1.9.2(d)	The Annual True-Up (ATU) shall equal (1) the difference between the Actual Transmission Revenue Requirement and the Prior Year						
3		Transmission Revenue Requirement, plus (2) the difference between the Actual Scheduling, System Control and Dispatch costs						
4		and Prior Year Scheduling, System Control and Dispatch costs, plus (3) the difference between the Prior Year Billing Units and the Actual Year						
5		Billing Units multiplied by the Prior Year Unit Rate, plus (4) Interest on the net differences.						
6								
7	(1)	Revenue Requirement (RR) of rate effective July 1 of prior year			\$0		Schedule 4, Line 1, Col (d)	
8		Less: Annual True-up (ATU) from rate effective July 1 of prior year			\$0		Schedule 4, Line 1, Col (c)	
9		Prior Year Transmission Revenue Requirement			\$0		Line 7 - Line 8	
10								
11		Actual Transmission Revenue Requirement			#DIV/0!		Schedule 4, Line 2, Col (a)	
12		Difference			#DIV/0!		Line 11 - Line 9	
13								
14	(2)	Prior Year Scheduling, System Control and Dispatch costs (CCC)			\$0		Schedule 4, Line 1, Col (e)	
15		Actual Scheduling, System Control and Dispatch costs (CCC)			\$0		Schedule 4, Line 2, Col (e)	
16		Difference			\$0		Line 15 - Line 14	
17								
18	(3)	Prior Year Billing Units (MWH)			\$0		Schedule 4, Line 1, Col (f)	
19		Actual Billing Units			-		Schedule 4, Line 2, Col (f)	
20		Difference			-		Line 18 - Line 19	
21		Prior Year Indicative Rate			#DIV/0!		Schedule 4, Line 1, Col (g)	
22		Billing Unit True-Up			#DIV/0!		Line 20 * Line 21	
23								
24		Total Annual True-Up before Interest			#DIV/0!		(Line 12 + Line 16 + Line 22)	
25								
26	(4)	Interest			#DIV/0!		Line 57, Column 9	
27								
28		Annual True-up RR Component			#DIV/0!		(Line 24 + Line 26)	
29								

## Interest Calculation per 18 CFR § 35.19a

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Quarters	Annual Interest Rate (a)	Accrued Prin & Int. @ Beg Of Period	Monthly (Over)/Under Recovery	Days in Period (b)	Period Days	Multiplier	Accrued Prin & Int. @ End Of Period	Accrued Int. @ End Of Period
3rd QTR		0		92	92	1.0000	\$0	\$0
July	0.00%		#DIV/0!	31	92	1.0000	#DIV/0!	#DIV/0!
August	0.00%		#DIV/0!	31	61	1.0000	#DIV/0!	#DIV/0!
September	0.00%		#DIV/0!	30	30	1.0000	#DIV/0!	#DIV/0!

41	4th QTR		#DIV/0!		92	92	1.0000	#DIV/0!	#DIV/0!
42	October	0.00%		#DIV/0!	31	92	1.0000	#DIV/0!	#DIV/0!
43	November	0.00%		#DIV/0!	30	61	1.0000	#DIV/0!	#DIV/0!
44	December	0.00%		#DIV/0!	31	31	1.0000	#DIV/0!	#DIV/0!
45									
46	1st QTR		#DIV/0!		91	91	1.0000	#DIV/0!	#DIV/0!
47	January	0.00%		#DIV/0!	31	91	1.0000	#DIV/0!	#DIV/0!
48	February	0.00%		#DIV/0!	28	60	1.0000	#DIV/0!	#DIV/0!
49	March	0.00%		#DIV/0!	31	31	1.0000	#DIV/0!	#DIV/0!
50									
51	2nd QTR		#DIV/0!		91	91	1.0000	#DIV/0!	#DIV/0!
52	April	0.00%		#DIV/0!	30	91	1.0000	#DIV/0!	#DIV/0!
53	May	0.00%		#DIV/0!	31	61	1.0000	#DIV/0!	#DIV/0!
54	June	0.00%		#DIV/0!	30	30	1.0000	#DIV/0!	#DIV/0!
55									
56									
57	Total (over)/under Recovery			#DIV/0!	(line 24)	#DIV/0!			#DIV/0!

(a) Interest rates shall be the interest rates as reported on the FERC Website <http://www.ferc.gov/legal/acct-matts/interest-rates.asp>

(b) For leap years use 29 days in the month of February

Niagara Mohawk Power Corporation

Wholesale TSC Calculation Information

Line No.		(a)	(b)	(c)	(d)	(e)	(f)	(g)
		Historical Transmission Revenue Requirement (Historical TRR)	Forecasted Transmission Revenue Requirement	Annual True Up	Revenue Requirement (RR)	Scheduling System Control and Dispatch Costs (CCC)	Annual Billing Units (BU) MWh	Rate \$/MWh (*)
1	Prior Year Rates Effective _____	-	-	-	-	-	-	#DIV/0!
	Current Year Rates Effective July 1,							
2	_____	#DIV/0!	#DIV/0!		#DIV/0!	-	-	#DIV/0!
3	Increase/(Decrease)							#DIV/0!
4	Percentage Increase/(Decrease)							#DIV/0!
1.)	Information directly from Niagara Mohawk Prior Year Informational Filing							
2.)								
(a)	Schedule 1, Line 24							
(b)	Schedule 2, Line 49							
(c)	Schedule 3, Line 28							
(d)	Attachment H, Section 14.1.9.2 The RR Component shall equal Col (a) Historical Transmission Revenue Requirement plus Col (b) the Forecasted Transmission Revenue Requirement which shall exclude Transmission Support Payments, plus Col (c) the Annual True-Up plus Col (c) the Annual True-Up							
(e)	Schedule 11, Line 21 - Annual Scheduling, System Control and Dispatch Costs. (i.e. the Transmission Component of control center costs) as recorded in FERC Account 561 and its associated sub-accounts from the prior calendar year excluding any NY Independent System Operator (NYISO) system control and load dispatch expenses already recovered under Schedule 1 of the NYISO Tariff.							
(f)	Schedule 12, line 17 - Billing Units shall be the total Niagara Mohawk load as reported to the NYISO for the calendar year prior to the Forecast Period, including the load for customers taking service under Niagara Mohawk's TSC rate. The total Niagara Mohawk load will be adjusted to exclude (i) load associated with wholesale transactions being revenue credited through the WR, CRR, SR, ECR, and Reserved components of Attachment H of the NYISO TSC rate including Niagara Mohawk's external sales, load associated with grandfathered OATT agreements, and any load related to pre-OATT grandfathered agreements; (ii) load associated with transactions being revenue credited under Historical TRR Component J; and (iii) load associated with netted station service.							
(g)	(Col (d) + Col (e)) / Col (f)							

(\*) The rate column represents the unit rate prior to adjustments; the actual rate will be determined pursuant to the applicable TSC formula rate.



Niagara Mohawk Power Corporation  
Allocation Factors - As calculated pursuant to Section 14.1.9.1

Attachment 1  
Schedule 5

Year

Shading denotes an input

Line  
No.

	Description	Amount	Source	Definition
1	14.1.9.1 1. <u>Electric Wages and Salaries Factor</u>	83.5000%		Fixed per settlement Docket ER08-552
2				
3	14.1.9.1 3. <u>Transmission Wages and Salaries Allocation Factor</u>	13.0000%		Fixed per settlement Docket ER08-552
4				
5				
6				
7				
8	14.1.9.1 2. <u>Gross Transmission Plant Allocation Factor</u>			
9	Transmission Plant in Service	#DIV/0!	Schedule 6, Page 2, Line 3, Col 5	Gross Transmission Plant Allocation Factor shall equal the total investment in Transmission Plant in Service, Transmission Related Electric General Plant, Transmission Related Common Plant and Transmission Related Intangible Plant divided by Gross Electric Plant.
10	Plus: Transmission Related General	\$0	Schedule 6, Page 2, Line 5, Col 5	
11	Plus: Transmission Related Common	\$0	Schedule 6, Page 2, Line 10, Col 5	
12	Plus: Transmission Related Intangible Plant	\$0	Schedule 6, Page 2, Line 15, Col 5	
13	Gross Transmission Investment	#DIV/0!	Sum of Lines 9 - 13	
14				
15	Total Electric Plant		FF1 207.104g	
16	Plus: Electric Common	\$0	Schedule 6, Page 2, Line 10, Col 3	
17	Gross Electric Plant in Service	\$0	Line 15 + Line 16	
18				
19	<b>Percent Allocation</b>	<b>#DIV/0!</b>	Line 13 / Line 17	
20				
21	14.1.9.1 4. <u>Gross Electric Plant Allocation Factor</u>			
22				
23	Total Electric Plant in Service	\$0	Line 15	Gross Electric Plant Allocation Factor shall equal Gross Electric Plant divided by the sum of Total Gas Plant, Total Electric Plant, and Total Common Plant
24	Plus: Electric Common Plant	\$0	Schedule 6, Page 2, Line 10, Col 3	
25	Gross Electric Plant in Service	\$0	Line 23 + Line 24	
26				
27	Total Gas Plant in Service		FF1 201.8d	
28	Total Electric Plant in Service	\$0	Line 15	
29	Total Common Plant in Service	\$0	Schedule 6, Page 2, Line 10, Col 1	

30	Gross Plant in Service (Gas & Electric)	-	Sum of Lines 27-Lines 29
31			
32	<b>Percent Allocation</b>	<b><u>#DIV/0!</u></b>	Line 25 / Line 30

Niagara Mohawk Power Corporation  
Annual Revenue Requirements of Transmission Facilities  
Transmission Investment Base (Part 1 of 2)  
Attachment H, section 14.1.9.2

Line No.

1 14.1.9.2 (a) Transmission Investment Base

2  
3 A.1. Transmission Investment Base shall be defined as (a) Transmission Plant in Service, plus (b) Transmission Related Electric General Plant, plus  
4 (c) Transmission Related Common Plant, plus (d) Transmission Related Intangible Plant, plus (e) Transmission Related Plant Held for Future Use, less  
5 (f) Transmission Related Depreciation Reserve, less (g) Transmission Related Accumulated Deferred Taxes, plus (h) Transmission Related  
6 Regulatory Assets net of Regulatory Liabilities, plus (i) Transmission Related Prepayments, plus (j) Transmission Related Materials and Supplies,  
7 plus (k) Transmission Related Cash Working Capital.  
8  
9

Description	Reference	Year	Reference
<i>Section:</i>			
Transmission Plant in Service	(a)	#DIV/0!	Schedule 6, page 2, line 3, column 5
General Plant	(b)	\$0	Schedule 6, page 2, line 5, column 5
Common Plant	(c)	\$0	Schedule 6, page 2, line 10, column 5
Intangible Plant	(d)	\$0	Schedule 6, page 2, line 15, column 5
Plant Held For Future Use	(e)	\$0	Schedule 6, page 2, line 19, column 5
Total Plant (Sum of Line 12 - Line 16)		#DIV/0!	
Accumulated Depreciation	(f)	#DIV/0!	Schedule 6, page 2, line 29, column 5
Accumulated Deferred Income Taxes	(g)	#DIV/0!	Schedule 7, line 6, column 5
Other Regulatory Assets	(h)	#DIV/0!	Schedule 7, line 11, column 5
Net Investment (Sum of Line 17 -Line 21)		#DIV/0!	
Prepayments	(i)	#DIV/0!	Schedule 7, line 15, column 5
Materials & Supplies	(j)	#DIV/0!	Schedule 7, line 21, column 5
Cash Working Capital	(k)	\$0	Schedule 7, line 28, column 5
Total Investment Base (Sum of Line 22 - Line 26)		#DIV/0!	

Niagara Mohawk Power Corporation  
Annual Revenue Requirements of Transmission Facilities  
Transmission Investment Base (Part 1 of 2)

Attachment H Section 14.1. 9.2 (a) A. 1.

Attachment 1  
Schedule 6  
Page 2 of 2

Year

Shading denotes an input

Line	(1)	(2)	(3) = (1)*(2)	(4)	(5) = (3)*(4)	FERC Form 1/PSC Report Reference for col (1)	Definition
No.	Total	Allocation Factor	Electric Allocated	Allocation Factor	Transmission Allocated		
1	<u>Transmission Plant</u>					FF1 207.58g	14.1.9.2(a)A.1.(a)
2	Wholesale Meter Plant				#DIV/0!	Workpaper 1	
3	Total Transmission Plant in Service (Line 1+ Line 2)				#DIV/0!		
4							
5	<u>General Plant</u>	100.00%	\$0	13.00%	(c) \$0	FF1 207.99g	14.1.9.2(a)A.1.(b)
6							
7							
8							
9							
10	<u>Common Plant</u>	83.50%	(a) \$0	13.00%	(c) \$0	FF1 201. 8h	14.1.9.2(a)A.1.(c)
11							
12							
13							
14							
15	<u>Intangible Plant</u>	100.00%	-	13.00%	(c) \$0	FF1 205.5g	14.1.9.2(a)A.1.(d)
16							
17							

[illegible]

Niagara Mohawk Power Corporation  
Annual Revenue Requirements of Transmission Facilities  
Transmission Investment Base ( Part 2 of 2)

Attachment 1  
Schedule 7

Attachment H Section 14.1.9.2 (a) A. 1.

Shading denotes an input

		Year								
			(2)	(3) = (1)*(2)	(4)	(5) = (3)*(4)	FERC Form 1/PSC Report			
Line No.		(1) <u>Total</u>	Allocation <u>Factor</u>	Electric <u>Allocated</u>	Allocation <u>Factor</u>	Transmissio n <u>Allocated</u>	<u>Reference for col (1)</u>		<u>Definition</u>	
1	<u>Transmission Accumulated Deferred Taxes</u>									
2	Accumulated Deferred Taxes (281-282)		100.00%	\$0	#DIV/0!	(d)	#DIV/0!	FF1 275.2k	14.1.9.2(a)A.1.(g)	Transmission Related Accumulated Deferred Income Taxes
3	Accumulated Deferred Taxes (283)	\$0	100.00%	\$0	#DIV/0!	(d)	#DIV/0!	Workpaper 2, Line 5		shall equal the electric balance of Total Accumulated Deferred
4	Accumulated Deferred Taxes (190)		100.00%	\$0	#DIV/0!	(d)	#DIV/0!	FF1 234.8c		Income Taxes (FERC Accounts 190, 55,281, 282, and 283 net of
5	Accumulated Deferred Inv. Tax Cr (255)		100.00%	\$0	#DIV/0!	(d)	#DIV/0!	FF1 267.8h		stranded costs), multiplied by the Gross Transmission Plant
6	Total (Sum of Line 2 - Line 5)			<u>\$0</u>			<u>#DIV/0!</u>			Allocation Factor.
7										
8	<u>Other Regulatory Assets</u>									
9	FAS 109 (Asset Account 182.3)		100.00%	\$0	#DIV/0!	(d)	#DIV/0!	FF1 232 lines 2,20,25,31	14.1.9.2(a)A.1.(h)	Transmission Related Regulatory Assets shall be Regulatory
10	FAS 109 ( Liability Account 254 )		100.00%	\$0	#DIV/0!	(d)	#DIV/0!	FF1 278lines 1& 29(f)		Assets net of Regulatory Liabilities multiplied by the Gross
11	Total (Line 9 + Line 10)	<u>\$0</u>		<u>\$0</u>			<u>#DIV/0!</u>			Transmission Plant Allocation Factor.
12										
13	<u>Transmission Prepayments</u>							FF1 111.57c	14.1.9.2(a)A.1.(i)	Transmission Related Prepayments shall be the product of
14	Less: Prepaid State and Federal Income Tax							FF1 263 lines 2 &7 (h)		Prepayments excluding Federal and State taxes multiplied by
15	Total Prepayments (Line 13 + Line 14)	<u>\$0</u>	#DIV/0! (b)	<u>#DIV/0!</u>	#DIV/0!	(d)	<u>#DIV/0!</u>			the Gross Electric Plant Allocation Factor and further
16										multiplied by the Gross Transmission Plant Allocation Factor.
17										
18	<u>Transmission Material and Supplies</u>								14.1.9.2(a)A.1.(j)	Transmission Related Materials and Supplies shall equal: (i)
19	Trans. Specific O&M Materials and Supplies						\$0	FF1 227.8c		the balance of Materials and Supplies assigned to
20	Construction Materials and Supplies		#DIV/0! (b)	#DIV/0!	#DIV/0!	(d)	#DIV/0!	FF1 227.5c		Transmission plus (ii) the product of Material and Supplies

21	Total (Line 19 + Line 20)	<u>#DIV/0!</u>		assigned to Construction multiplied by the Gross Electric
22				Plant Allocation Factor and further multiplied by Gross
23				Transmission Plant Allocation Factor.
24				
25	<u>Cash Working Capital</u>		14.1.9.2(a)A.1.(k)	Transmission Related Cash Working Capital shall be an
26	Operation & Maintenance Expense	\$0	Schedule 9, Line 23	allowance equal to the product of: (i) 12.5% (45 days/ 360
27		0.1250	x 45 / 360	days = 12.5%)
28	Total (Line 26 * Line 27)	<u>\$0</u>		multiplied by (ii) Transmission Operation and Maintenance
29				Expense.
30				
	Allocation Factor Reference			
	(a) Schedule 5, line 1 - not used on this			
	Schedule			
	(b) Schedule 5, line 32			
	(c) Schedule 5, line 3 - not used on this			
	Schedule			
	(d) Schedule 5, line 19			

**Attachment 1**  
**Schedule 8**

Year

26 14.1.9.2.2.(b) Federal Income = ( A + [ B / C ] X Federal Income )



$$\text{Tax shall equal} \quad \frac{\text{Tax Rate}}{\text{Federal Income Tax Rate}}$$

where A is the sum of the preferred stock component and the return on equity component, each as determined in Sections (a)(ii) and for the ROE set forth in (a)(iii) above, B is the Equity AFUDC component of Depreciation Expense for Transmission Plant in Service as defined at Section 14.1.9.1.16 (FF1 117.38c), and C is the Transmission Investment Base as shown at Schedule 6, Page 1 of 2, Line 28.

$$= \frac{(\frac{\#DIV/0!}{1} + (\$0) / \frac{\#DIV/0!}{-0}) \times \text{Federal Income Tax Rate}}{\#DIV/0!}$$

$$\text{14.1.9.2.2.(c) State Income Tax shall equal} = \frac{(\frac{A + [B / C] + \text{Federal Income Tax Rate}}{1 - \text{State Income Tax Rate}}) \times \text{State Income Tax Rate}}{\text{State Income Tax Rate}}$$

where A is the sum of the preferred stock component and the return on equity component as determined in (a)(ii) and (a)(iii) above, B is the Equity AFUDC component of Depreciation Expense for Transmission Plant in Service as defined at Section 14.1.9.1.16 above, and C is the Transmission Investment Base as shown at Schedule 6, Page 1 of 2, Line 28.

$$= \frac{(\frac{\#DIV/0!}{1} + (\$0) / \frac{\#DIV/0!}{-0}) + \frac{\#DIV/0!}{0} \times \text{Federal Income Tax Rate}}{\#DIV/0!}$$

$$\text{(a)+(b)+(c) Cost of Capital Rate} = \frac{\#DIV/0!}{\#DIV/0!}$$

**14.1.9.2(a) A. Return and Associated Income Taxes shall equal the product of the Transmission Investment Base and the Cost of Capital Rate**

59

Transmission  
Investment

60 Base                      #DIV/0!                      Schedule 6, page 1 of 2, Line 28

61

Cost of Capital

62 Rate                      #DIV/0!                      Line 53

63

= Investment Return

64 and Income Taxes                      #DIV/0!                      Line 60 X Line 62

Niagara Mohawk Power Corporation  
Annual Revenue Requirements of Transmission Facilities  
Transmission Expenses

Attachment 1  
Schedule 9

Attachment H Section 14.1.9.2

Year

Shading denotes an input

Line No.	(1) Total	(2) Allocation Factor	(3) = (1)*(2) <u>Electric</u> <u>Allocated</u>	(4) Allocation Factor	(5) = (3)*(4) Transmission <u>Allocated</u>	FERC Form 1/ PSC Report Reference for col (1)	Definition
<u>Depreciation Expense</u>							
1					\$0	FF1 336.7f	14.1.9.2.B. Transmission Related Depreciation Expense shall equal the sum of: (i) Depreciation Expense for Transmission Plant in Service, plus (ii) the product of Electric General Plant Depreciation Expense multiplied by the Transmission Wages and Salaries Allocation Factor plus (iii) Common Plant Depreciation Expense multiplied by the Electric Wages and Salaries Allocation Factor, further multiplied by the Transmission Wages and Salaries Allocation Factor plus (iv) Intangible Electric Plant Depreciation Expense multiplied by the Transmission Wages and Salaries Factor plus (v) depreciation expense associated with the Wholesale Metering Investment.
2		100.0000%	\$0	13.0000% (c)	\$0	FF1 336.10f	
3		83.5000% (a)	\$0	13.0000% (c)	\$0	FF1 356.1	
4		100.0000%	\$0	13.0000% (c)	\$0	FF1 336.1f	
5					#DIV/0!	Workpaper 1	
6					#DIV/0!		
7							
8							
9							
10							
11							
12		100.0000%	\$0	#DIV/0! (d)	#DIV/0!	FF1 263.25i	14.1.9.2.C. Transmission Related Real Estate Tax Expense shall equal the electric Real Estate Tax Expenses multiplied by the Gross Transmission Plant Allocation Factor.
13							
14							
15							
16		#DIV/0! (b)	#DIV/0!	#DIV/0! (d)	#DIV/0!	FF1 117.58c	14.1.9.2.D. Transmission Related Amortization of Investment Tax Credits shall
17							equal the product of Amortization of Investment Tax Credits multiplied
18							by the Gross Electric Plant Allocation Factor and further multiplied by
19							the Gross Transmission Plant Allocation Factor.
20							
21					\$0	FF1 321.112b	14.1.9.2.E. Transmission Operation and Maintenance Expense shall equal the sum of electric expenses as recorded in FERC Account Nos. 560, 562-574.
22					\$0	FF1 321.84-92b	
23					\$0		
24							
25							14.1.9.2.F. Transmission Related Administrative and General Expenses shall
26						FF1 323.197b	equal the product of electric Administrative and General Expenses,
27						FF1 323.185b	excluding the sum of Electric Property Insurance, Electric Research and
28						FF1 323.187b	Development Expense and Electric Environmental Remediation

29	less: Research and Development Expenses (#930)	\$0					Workpaper 12
30	Less: 50% of NY PSC Regulatory Expense						50% of Workpaper 15
31	Less: 18a Charges (Temporary Assessment)						Workpaper 15
32	less: Environmental Remediation Expense	\$0					Workpaper 11
33	Subtotal (Line 26-27-28-29-30-31-32)	\$0	100.0000 %	\$0	13.0000% (c)	\$0	
34	PLUS Property Insurance alloc. using Plant Allocation	\$0	100.0000 %	\$0	#DIV/0! (d)	#DIV/0!	Line 27
35	PLUS Pensions and Benefits	\$88,644,000	100.0000 %	\$88,644,000	13.0000% (c)	\$11,523,720	Workpaper 3
36	PLUS Transmission-related research and development	\$0				\$0	Workpaper 12
37	PLUS Transmission-related Environmental Expense	\$0				\$0	Workpaper 11
38	Total A&G (Line 33+34+35+36+37)	\$88,644,000		\$88,644,000		#DIV/0!	
39							
40	<u>Payroll Tax Expense</u>						
41	Federal Unemployment						FF1 263.4i
42	FICA						FF1 263.3i
43	State Unemployment						FF1 263.9i
44	Total (Line 41+42+43)	\$0	100.0000 %	\$0	13.0000% (b)	\$0	

Allocation Factor Reference  
(a) Schedule 5, line 1  
(b) Schedule 5, line 32  
(c) Schedule 5, line 3  
(d) Schedule 5, line 19

Expense,  
and 50% of the NYPSC Regulatory Expense multiplied by the Transmission Wages and Salaries Allocation Factor,  
plus the sum of Electric Property Insurance multiplied by the Gross Transmission Plant Allocation Factor, plus transmission-specific Electric  
Research and Development Expense, and transmission-specific Electric Environmental Remediation Expense. In addition, Administrative  
and General Expenses shall exclude the actual Post-Employment Benefits Other than Pensions ("PBOP") included in FERC Account 926,  
and shall add back in the amounts shown on Workpaper 3, page 1,  
or other amount subsequently approved by FERC under Section 205 or 206.  
14.1.9.2.G. Transmission Related Payroll Tax Expense shall equal the product of  
electric Payroll Taxes multiplied by the Transmission Wages and Salaries Allocation Factor.

Niagara Mohawk Power Corporation  
Annual Revenue Requirements of Transmission Facilities  
Billing Adjustments, Revenue Credits, Rental Income

Attachment 1  
Schedule 10

Year

Attachment H Section  
14.1.9.2 (a)

Shading denotes an input

Line No.	Description	(1) Total	Source	Definition
1	Billing Adjustments			14.1.9.2.H. Billing Adjustments shall be any adjustments made in accordance with Section 14.1.9.4.4 below.
2				( ) indicates a refund or a reduction to the revenue requirement on Schedule 1.
3				
4	Bad Debt Expense	\$0	Workpaper 4	14.1.9.2.I. Transmission Related Bad Debt Expense shall equal
5				Bad Debt Expense as reported in Account 904 related to NMPC's wholesale transmission billing.
6				
7	Revenue Credits	\$0	Workpaper 5	14.1.9.2.J. Revenue Credits shall equal all Transmission revenue recorded in FERC account 456
8				excluding (a) any NMPC revenues already reflected in the WR, CRR, SR, ECR and Reserved
9				components in Attachment H of the NYISO TSC rate; (b) any revenues associated
10				with expenses that have been excluded from NMPC's revenue requirement; and (c) any
11				revenues associated with transmission service provided under this TSC rate, for which the
12				load is reflected in the calculation of BU.
13				
14	Transmission Rents	\$0	Workpaper 7	14.1.9.2.K. Transmission Rents shall equal all Transmission-related rental income recorded in FERC
15				account 454.615
16				
17				14.1.9.4(d)
18				1 Any changes to the Data Inputs for an Annual Update, including but not limited to
19				revisions resulting from any FERC proceeding to consider the Annual Update, or
20				as a result of the procedures set forth herein, shall take effect as of the beginning
21				of the Update Year and the impact of such changes shall be incorporated into the
22				charges produced by the Formula Rate (with interest determined in accordance
23				with 18 C.F.R. § 38.19(a)) in the Annual Update for the next effective Update
24				Year. This mechanism shall apply in lieu of mid-Update Year adjustments and
25				any refunds or surcharges, except that, if an error in a Data Input is discovered
26				and agreed upon within the Review Period, the impact of such change shall be
27				incorporated prospectively into the charges produced by the Formula Rate during
28				the remainder of the year preceding the next effective Update Year, in which case
29				the impact reflected in subsequent charges shall be reduced accordingly.
30				2 The impact of an error affecting a Data Input on charges collected during the
31				Formula Rate during the five (5) years prior to the Update Year in which the error
32				was first discovered shall be corrected by incorporating the impact of the error on

the charges produced by the Formula Rate during the five-year period into the charges produced by the Formula Rate (with interest determined in accordance with 18 C.F.R. § 38.19(a)) in the Annual Update for the next effective Update Year. Charges collected before the five-year period shall not be subject to correction.

33  
34  
35  
36

(b)	List of Items excluded from the Revenue Requirement	Reason
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Niagara Mohawk Power Corporation  
System, Control, and Load Dispatch Expenses (CCC)  
Attachment H, Section  
14.1.9.5

The CCC shall equal the annual Scheduling, System Control and Dispatch Costs (i.e., the transmission component of control center costs) as recorded in FERC Account 561 and its associated sub-accounts using information from the prior calendar year, excluding NYISO system control and load dispatch expense already recovered under Schedule 1 of the NYISO Tariff.

Line No.	<u>Scheduling and Dispatch Expenses</u>			<u>Year</u>	<u>Source</u>
1					
2					
3	Accounts	561	Load Dispatching		FF1 321.84b
4	Accounts	561.1	Reliability		FF1 321.85b
5	Accounts	561.2	Monitor and Operate Transmission System		FF1 321.86b
6	Accounts	561.3	Transmission Service and Schedule		FF1 321.87b
7	Accounts	561.4	Scheduling System Control and Dispatch		FF1 321.88b
8	Accounts	561.5	Reliability, Planning and Standards Development		FF1 321.89b
9	Accounts	561.6	Transmission Service Studies		FF1 321.90b
10	Accounts	561.7	Generation Interconnection Studies		FF1 321.91b
11	Accounts	561.8	Reliability, Planning and Standards Dev. Services		FF1 321.92b
12					
13	Total Load Dispatch Expenses (sum of Lines 3 - 11)				Sum of Lines 3 - 11
14					
15	Less Account 561 directly recovered under Schedule 1 of the NYISO Tariff				
16					
17	Accounts	561.4	Scheduling System Control and Dispatch		Line 7
18	Accounts	561.8	Reliability, Planning and Standards Dev. Services		Line 11
19	Total NYISO Schedule 1				Line 17 + Line 18
20					
21	Total CCC Component				Line 13 - Line 19

Niagara Mohawk Power Corporation

Billing Units - MWH

Attachment H, Section 14.1.9.6

BU shall be the total Niagara Mohawk load as reported to the NYISO for the calendar billing year prior to the Forecast Period, including the load for customers taking service under Niagara Mohawk's TSC Rate. The total Niagara Mohawk load will be adjusted to exclude (i) load associated with wholesale transactions being revenue credited through the WR, CRR, SR, ECR and Reserved components of Workpaper H of the NYISO TSC rate including Niagara Mohawk's external sales, load associated with grandfathered OATT agreements, and any load related to pre-OATT grandfathered agreements; (ii) load associated with transactions being revenue credited under Historical TRR Component J; and (iii) load associated with netted station service.

Line No.			<u>SOURCE</u>
1	Subzone 1		NIMO TOL (transmission owner load)
2	Subzone 2		NIMO TOL (transmission owner load)
3	Subzone 3		NIMO TOL (transmission owner load)
4	Subzone 4		NIMO TOL (transmission owner load)
5	Subzone 29		NIMO TOL (transmission owner load)
6	Subzone 31		NIMO TOL (transmission owner load)
7	Total NIMO Load report to NYISO	0.000	Sum of Lines 1-6
8	LESS: All non-retail transactions		
9	Watertown		FF1 page 329.10.j
10	Disputed Station Service		NIMO TOL (transmission owner load)
11	Other non-retail transactions		All other non-retail transactions (Sum of 300,000 series PTID's from TOL)
12	Total Deductions	0.000	Sum of Lines 9 - 11
13	PLUS: TSC Load		
14	NYMPA Muni's, Misc. Villages, Jamestown (X1)		FF1 page 329.17.j
15	NYPA Niagara Muni's (X2)		FF1 page 329.1.j
16	Total additions	0.000	Sum of Lines 14 -15
17	Total Billing Units	0.000	Line 7 - Line 12 + Line 16



**Niagara Mohawk Power Corporation**  
**Forecasted Accumulated Deferred Income Taxes (FADIT)**

**Attachment 1**  
**Schedule 13**  
**Page 1 of 1**

Shading denotes an input

Line No.	Description	Amount	
1	Transmission Related ADIT Balance at year-end		Schedule 7, Line 6, Column L
2	Less: Accumulated Deferred Inv. Tax Cr (255)		Schedule 7, Line 5, Column L
3	Net Transmission ADIT Balance at year-end (a)		Line 1 - Line 2
4			
5	Forecasted Transmission Related ADIT balance		Internal Records
6			
7	Change in ADIT		Line 5 - Line 3
8			
9	Monthly Change in ADIT		Line 7 / 12 Months
10			

	(A) Month	(B) Remaining Days	(C) = (B)/ Line 17 (B) IRS Proration %	(D) = Line 9 *(C) Prorated ADIT	
11	Month 1		100.00%	-	
12	Month 2		100.00%	-	
13	Month 3		100.00%	-	
14	Month 4		100.00%	-	
15	Month 5		100.00%	-	
16	Month 6		100.00%	-	
17	Month 7		#DIV/0! %	-	
18	Month 8		#DIV/0! %	-	
19	Month 9		#DIV/0! %	-	
20	Month 10		#DIV/0! %	-	
21	Month 11		#DIV/0! %	-	
22	Month 12		#DIV/0! %	-	
23					
24	Total Prorated ADIT Change (Sum of 12 through 23)			\$ -	to Schedule 2, Line 22
	(a) The balance in Line 1, Total Transmission ADIT Balance at year-end, shall equal such ADIT that is subject to the normalization rules prescribed			-	

by the IRS and the net of the amounts recorded in  
FERC Account Nos. 281-283 and 190.

## **14.2.2 NYPA Transmission Adjustment Charge (“NTAC”)**

### **14.2.2.1 Applicability of the NYPA Transmission Adjustment Charge**

Each Billing Period, the ISO shall charge, and each Transmission Customer shall pay, the applicable NYPA Transmission Adjustment Charge (“NTAC”) calculated in accordance with ~~Section 14.2.2.2.2 of this Attachment for the first two (2) months of LBMP and in accordance with~~ Section 14.2.2.2.1 of this Attachment ~~thereafter~~. The NTAC shall apply to Transmission Service:

14.2.2.1.1 from one or more Interconnection Points between the NYCA and another Control Area to one or more Interconnection Points between the NYCA and another Control Area (“Wheels Through”);<sup>1</sup> or

14.2.2.1.2 from the NYCA to one or more Interconnection Points between the NYCA and another Control Area, including transmission to deliver Energy purchased from the LBMP Market and delivered to such a Control Area Interconnection (“Exports”);~~3~~<sup>1</sup> or

14.2.2.1.3 to serve Load within the NYCA.

In summary, the NTAC will be applied to all Energy Transactions, including internal New York State Loads and Wheels Through and Exports out of the NYCA at a uniform, non-discountable rate.

---

<sup>1</sup> The NTAC shall not apply to Wheels Through or Exports scheduled with the ISO to destinations within the New England Control Area provided that the conditions listed in Section 2.7.2.1.4 of this Tariff are satisfied.

#### 14.2.2.2 NTAC Calculation

##### 14.2.2.2.1 NTAC Formula

~~Beginning with January 2001,~~ NYPA shall calculate the NTAC applicable to

Transmission Service to serve New York State Load, Wheels Through and Exports as follows:

$$\text{NTAC} = \{(\text{ATRR}_{\text{NTAC}} \div 12) - (\text{EA}) - (\text{IR} \div 12) - \text{SR} - \text{CRN} - \text{WR} - \text{ECR} - \text{NR} - \text{NT}\} / (\text{BU} \div 12)$$

Where:

$\text{ATRR}_{\text{NTAC}}$  = NYPA's Annual Transmission Revenue Requirement for costs not recoverable through project-specific transmission revenue requirements, which includes the Scheduling, System Control and Dispatch Costs of NYPA's control center, all as determined in accordance with the Formula Rate Template provided in Section 14.2.3.1 of this Attachment, and as reflected on SCH - Summary, line 11 of the Formula Rate Template;

EA = Monthly Net Revenues from Modified Wheeling Agreements, Facility Agreements and Third Party TWAs, and Deliveries to directly connected Transmission Customers;

$$\text{SR} = \text{SR}_1 + \text{SR}_2 + \text{SR}_3$$

$\text{SR}_1$  will equal the revenues from the Direct Sale by NYPA of Original Residual TCCs, and Grandfathered TCCs associated with ETAs, the expenses for which are included in NYPA's

$\text{ATRR}_{\text{NTAC}}$  where NYPA is the Primary ~~Owner~~ Holder of said TCCs. SR1 for a month in which a Direct Sale is applicable shall equal the total nominal revenue that NYPA will receive under each applicable TCC sold in a Direct Sale divided by the duration of that TCC (in months).

$\text{SR}_2$  will equal NYPA's revenues from the Centralized TCC Auctions and Reconfiguration Auctions allocated pursuant to Attachment ~~MAN~~ N; this includes revenues from: (a)

TCCs associated with Residual Transmission Capacity that are sold in the Centralized TCC Auctions and Reconfiguration Auctions; and (b) the sale of Grandfathered TCCs associated with ETAs, if the expenses for these ETAs are included in NYPA's  $ATTR_{NTAC}$ . The revenue that NYPA receives from a TCC sold in a Centralized Auction or Reconfiguration Auction will be divided equally among the month(s) for which the sold TCC is valid. For Balance of Period Auctions, the ISO shall provide NYPA information regarding its respective share of Net Auction Revenues for each month covered by each Balance-of-Period Auction.

Revenue from TCCs associated with Residual Transmission Capacity includes payments for Original Residual TCCs that the Transmission ~~Providers~~ Owners sell through the Centralized TCC Auctions and Reconfiguration Auctions and the allocation of revenue for other TCCs sold through the Centralized TCC Auctions and Reconfiguration Auctions (per the Facility Flow-Based Methodology described in Attachment N).

~~SR<sub>1</sub> shall be updated prior to the start of each month based on actual data for the calendar month prior to the month in which the adjustment is made (i.e., January actual data will be used in February to calculate the NTAC effective in March). SR<sub>1</sub> for a month in which a Direct Sale is applicable shall equal the total nominal revenue that NYPA will receive under each applicable TCC sold in a Direct Sale divided by the duration of the TCC (in months).~~

~~SR<sub>2</sub> shall equal the Transmission Owner's share of Net Auction Revenue for all rounds of a Centralized TCC Auction, as calculated pursuant to Attachment N, divided equally among the months covered by the Centralized TCC Auction. SR<sub>2</sub> shall be adjusted after each Centralized TCC Auction, and the revised SR<sub>2</sub> shall be effective at the start of each Capability Period;~~

SR<sub>3</sub> shall equal NYPA's share of revenues from the award and renewal of Historic Fixed Price TCCs, as determined pursuant to Section 20.4 of Attachment N. The share of revenues allocated to NYPA pursuant to Section 20.4 of Attachment N shall be adjusted after each Centralized TCC Auction and divided equally across the months for which the Historic Fixed Price TCCs that were awarded or renewed prior to the relevant Centralized TCC Auction are valid. Notwithstanding anything to the contrary herein, with respect to NYPA's share of any revenues for Historic Fixed Price TCCs that took effect on or before November 1, 2016, such revenues (or any portion thereof) shall be accounted for in SR<sub>3</sub> by dividing such revenues (or any portion thereof) equally across the six months of the first Capability Period following the effective date of this provision provided that the NYISO has informed NYPA of its respective share of such revenues (or any portion thereof) at least two weeks prior to the start of such Capability Period, otherwise such revenues (or any remaining portion thereof) shall be accounted for in SR<sub>3</sub> by dividing such revenues (or any remaining portion thereof) equally across the six months of the Capability Period that follows the first Capability Period following the effective date of this provision.

ECR = NYPA's share of Net Congestion Rents in a month, calculated pursuant to Attachment N. The computation of ECR is exclusive of any Congestion payments or Rents included in the CRN term;

CRN = Monthly Day-Ahead Congestion Rents in excess of those required to offset Congestion paid by NYPA's SENY governmental customers associated with the NYPA OATT Niagara/St. Lawrence Service reservations, net of the Initial Cost.

IR = A. The amount that NYPA will credit to its  $ATTR_{NTAC}$  assessed to the SENY Load on account of the foregoing NYPA Niagara/St. Lawrence OATT reservations for SENY governmental customers. Such annual revenues will be computed as the product (“Initial Cost”) of NYPA’s current OATT system rate of \$2.23 per kilowatt per month and the 600 MW of TCCs (or the amount of TCCs reduced by Paragraph C below). In the event NYPA sells these TCCs (or any part thereof), all revenues from these sales will offset the NTAC and the Initial Cost will be concomitantly reduced to reflect the net amount of Niagara/St. Lawrence OATT Reservations, if any, retained by NYPA for the SENY Load. The parties hereby agree that the revenue offset to NTAC will be the greater of the actual sale price obtained by NYPA for the TCCs sold or that computed at the applicable system rate in accordance with Paragraph B below;

B. The system rate of \$2.23 per kilowatt per month will be benchmarked to the  $ATTR_{NTAC}$  for NYPA transmission initially accepted by FERC (“Base Period  $ATTR_{NTAC}$ ”) for the purposes of computing the Initial Cost. Whenever an amendment to the  $ATTR_{NTAC}$  is accepted by FERC or the  $ATTR_{NTAC}$  is updated pursuant to the procedures set forth in Section 14.2.3.2 of this Attachment (“Amended  $ATTR_{NTAC}$ ”), the system rate for the purpose of computing the Initial Cost will be increased (or decreased) by the ratio of the Amended  $ATTR_{NTAC}$  to the Base Period  $ATTR_{NTAC}$  and the effect of Paragraph A on NTAC will be amended accordingly.

C. If prior to the Centralized TCC Auction all Grandfathered Transmission Service including NYPA's 600 MW Niagara/St. Lawrence OATT reservations held on behalf of its SENY governmental customers are found not to be feasible, then such OATT reservations will be reduced until feasibility is assured. A reduction, subject to a 200 MW cap on the total reduction as described in Attachment M, will be applied to the NYPA Niagara/St. Lawrence OATT reservations held on behalf of its SENY governmental customers.

WR = NYPA's revenues from external sales (Wheels Through and Exports) not associated with Existing Transmission Agreements in Attachment L, Tables 1 and 2 and Wheeling revenues from OATT reservations extending beyond the start-up of the ISO;

NR = NYPA Reserved1 + NYPA Reserved2

NYPA Reserved1 will equal NYPA's Congestion payments for a month received pursuant to Section 20.2.3 of Attachment N of this Tariff for NYPA's RCRR TCCs.

NYPA Reserved2 will equal the value that NYPA receives for the sale of RCRR TCCs in a month, with the value for each RCRR TCC sold divided equally over the month(s) ~~remaining until the expiration of~~ for which that sold RCRR TCC is valid.

NT = The amount of actual NYPA transmission revenues minus NYPA's monthly revenue requirement.

BU = Annual Billing Units are New York State Loads and Loads associated with Wheels Through and Exports in megawatt-hours ("MWh").



The  $ATTR_{NTAC}$  and SR will not include expenses for NYPA's purchase of TCCs or revenues from the sale of such purchased TCCs or from the collection of Congestion Rents for such TCCs.

The ECR, EA, [SR](#), CRN, WR, NR, and NT shall be updated prior to the start of each month based on actual data for the calendar month prior to the month in which the adjustment is made (i.e., January actual data will be used in February to calculate the NTAC effective in March).

The NTAC shall be calculated as a \$/MWh charge and shall be applied to Actual Energy Withdrawals, except for Wheels Through and Exports in which case the NTAC shall be applied to scheduled Energy quantities. The NTAC shall not apply to scheduled quantities that are Curtailed by the ISO.

#### ~~14.2.2.2.2 Implementation of NTAC~~

~~At the start of LBMP implementation certain variables of the NTAC equation will not be available. For the first and second months of LBMP implementation, the only terms in the NTAC equation that will be known by NYPA are its historical Annual Transmission Revenue Requirement ( $ATTR_{NTAC}$ ) and the historical Billing Units (BU), which have been approved by or filed with FERC. For these two months NYPA shall calculate the NTAC using the following equation:~~

$$NTAC = \{((ATTR_{NTAC} \div 12) - (EA) - (IR \div 12)) / (BU \div 12)\}$$

~~SR<sub>2</sub> shall not be available until after the first Centralized TCC Auction. For the third month of LBMP implementation until the second month of the Capability Period corresponding to the first Centralized TCC Auction, NYPA shall recalculate the NTAC using the following equation:~~

$$\text{NTAC} = \{(\text{ATTR}_{\text{NTAC}} \div 12) - (\text{EA}) - (\text{IR} \div 12) - \text{WR} - \text{CRN} - \text{SR}_4 - \text{ECR}\} / (\text{BU} \div 12)$$

~~Prior to and during implementation of LBMP those current NYPA transmission customers wishing to terminate their Third Party TWAs shall notify the ISO. The ISO shall duly inform NYPA of such conversion so that NYPA can calculate revenues (EA) to be derived from Existing Transmission Wheeling Agreements.~~

#### **14.2.2.2.3**

NYPA's recovery of capital expenditure pursuant to NTAC is subject to limitations set forth in Section 14.2.3.2.7 of this Attachment H. NYPA may also invest in transmission facilities outside the NTAC recovery mechanism. In that case, NYPA cannot recover any expenses or return associated with such additions under NTAC and any TCC or other revenues associated with such additions will not be considered NYPA transmission revenue for purposes of developing the NTAC nor be used as a credit in the allocation of NTAC to transmission system users.

#### **14.2.2.3 Filing and Posting of NTAC**

NYPA shall coordinate with the ISO to update certain components of the NTAC formula on a monthly or Capability Period basis. NYPA may update the NTAC calculation to change the  $\text{ATTR}_{\text{NTAC}}$ , initially approved by FERC, and such updates shall be submitted to FERC each year as part of NYPA's informational filing pursuant to Section 14.2.3.2.6 of this Attachment. An integral part of the agreement between the other Member Systems and NYPA is NYPA's consent to the submission of its  $\text{ATTR}_{\text{NTAC}}$  for FERC review and approval on the same basis and subject to the same standards as the Revenue Requirements of the Investor-Owned Transmission Owners. Each January, beginning with January 2001, the ISO shall inform NYPA of the prior year's actual New York internal Load requirements and the actual Wheels Through and Exports

and shall post this information on the OASIS. NYPA shall change the BU component of the NTAC formula to reflect the prior calendar year's information, with such change to take effect beginning with the March NTAC of the current year. NYPA will calculate the monthly NTAC and provide this information to the ISO by no later than the fourteenth day of each month, for posting on the OASIS to become effective on the first day of the next calendar month.

Beginning with LBMP implementation, the monthly NTAC shall be posted on the OASIS by the ISO no later than the fifteenth day of each month or as soon thereafter as is reasonably possible but in no event later than the 20th of the month to become effective on the first day of the next calendar month.

#### **14.2.2.4 NTAC Calculation Information**

NYPA's  $ATTR_{NTAC}$  for facilities owned as of January 31, 1997, and Annual Billing Units (BU) of the NTAC are:

$$ATTR_{NTAC} = \$165,449,297$$

$$BU = 133,386,541 \text{ MWh}$$

NYPA's  $ATTR_{NTAC}$  is subject to FERC review because it is collected through the ISO's jurisdictional rates, and will be filed, together with any project-specific revenue requirements, with the Commission each year for informational purposes pursuant to Section 14.2.3.2.6 of this Attachment.

#### **14.2.2.5 Billing**

The New York State Loads, Wheels Through, and Exports will be billed based on the product of: (i) the NTAC; and (ii) the Customer's billing units for the Billing Period. The billing units will be based on the metered energy for all Transactions to supply Load in the

NYCA during the Billing Period, and hourly Energy schedules for the Billing Period for all  
Wheels Through and Exports.

## **19.2 Award of TCCs Other Than Through TCC Auctions: Fixed Price TCCs and Incremental TCCs**

### **19.2.1 Converting Transmission Capacity Associated with Expired, Terminated, or Expiring ETAs Into Historic Fixed Price TCCs**

As each ETA in effect on November 19, 1999 that was listed in Table 1A of Attachment L to this OATT (as it may be amended), and that conferred transmission rights on an LSE, expires or terminates, the transmission Capacity associated with it may be used to create Historic Fixed Price TCCs, pursuant to Section 19.2.1 of this Attachment M. When any other ETA terminates, the Grandfathered Rights or Grandfathered TCCs associated with it shall be converted into Residual Transmission Capacity. The revenues associated with the sale or conversion of TCCs created from capacity associated with expired or terminated ETAs shall be allocated among the Transmission Owners as described in Attachment N. All references to “ETAs listed in Table 1A of Attachment L” in this Attachment M shall encompass both those agreements that were previously converted into Grandfathered TCCs and those that were not.

The ISO shall follow the procedures set forth in this Section 19.2.1 prior to the implementation of the End-State Auction process. For purposes of this Section 19.2.1, references to “expired” ETAs shall include ETAs that have been terminated. When determining the Points of Injection, Points of Withdrawal, and MW quantities associated with ETAs listed in Table 1A in effect on November 19, 1999, the ISO shall look to Attachment L of this OATT, as it may be amended, at the time of the conversion.

#### **19.2.1.1 Conversion Rules**

Any LSE that had transmission rights under an ETA in effect on November 19, 1999 that was listed in Table 1A of Attachment L to this OATT (as it may be amended), but has since

expired, shall have a right to obtain Historic Fixed Price TCCs with the same Point of Injection and Point of Withdrawal associated with that ETA.

Any LSE that currently has transmission rights under an ETA in effect on November 19, 1999 that was listed on Table 1A of Attachment L of the OATT (as it may be amended) but has not yet expired, shall likewise have a right to obtain Historic Fixed Price TCCs with the same Point of Injection and Point of Withdrawal as that ETA after its expiration.

LSEs that are eligible to obtain Historic Fixed Price TCCs shall be able to obtain them for a total duration of up to ten years, except as provided in the following paragraph. The ISO shall offer eligible LSEs Historic Fixed Price TCCs with the same Points of Injection and Points of Withdrawal as shown on Table 1A of Attachment L, as it may be amended, associated with their expired or expiring ETAs and a duration of five or ten years (at the LSE's option) at a price to be determined in accordance with Section 19.2.1.2 below. Prior to the expiration of Historic Fixed Price TCCs with a duration of five years that are created pursuant to the preceding sentence, the ISO shall offer those LSEs that hold such Historic Fixed Price TCCs an option to obtain new Historic Fixed Price TCCs with the same Points of Injection and Points of Withdrawal for one additional five-year term, effective upon the expiration of the original Historic Fixed Price TCCs' five year term, at a new price calculated in accordance with Section 19.2.1.2 below.

LSEs that certify to the ISO that they purchase Energy from the New York Power Authority ("NYPA") under agreements that will expire in 2025 and that have ETAs listed on Table 1A to Attachment L, as it may be amended, that will expire in 2013, which they will use to hedge the congestion costs associated with deliveries under their NYPA agreements, shall have the right to obtain Historic Fixed Price TCCs with the same Points of Injection and Points of Withdrawal as shown on Table 1A of Attachment L to the OATT, as it may be amended,

associated with the expiring ETA for a total duration of twelve years. The ISO shall offer Historic Fixed Price TCCs with a duration of five years to LSEs that make the required certification (provided for in this paragraph) at a price to be determined in accordance with Section 19.2.1.2 below. Prior to, but effective upon, the expiration of those Historic Fixed Price TCCs, the ISO shall offer the LSE an option to obtain new Historic Fixed Price TCCs with the same Points of Injection and Points of Withdrawal for one additional seven-year term, effective upon the expiration of the original Historic Fixed Price TCCs, at a new price calculated in accordance with Section 19.2.1.2 below.

To exercise this conversion right, an LSE must notify the ISO, and the Transmission Owner that was (or is) a party to the ETA, in writing, of its decision to obtain Historic Fixed Price TCCs under this provision. That notice must also specify the ETA's expiration or termination date. The LSE must provide this notice prior to a deadline to be established by the ISO. In the case of an ETA that has already expired or been terminated as of the effective date of this Section 19.2.1, or that will expire or be terminated prior to the end of the Winter 2008 Capability Period, the ISO shall set the deadline on a date prior to the beginning of the Autumn 2008 Centralized TCC Auction. In the case of an ETA that will expire or terminate after the end of the 2008 Winter Capability Period, the ISO shall set the deadline on a date prior to the beginning of the Centralized TCC Auction for the Capability Period in which the ETA expires or terminates. The specific deadlines shall be set forth in the ISO Procedures.

When an LSE elects to convert an ETA that: (i) has expired; (ii) is scheduled to expire, prior to November 1, 2008; or (iii) is scheduled to expire later but that is terminated before November 1, 2008, the term of the Historic Fixed Price TCCs that LSE obtains shall begin on November 1, 2008. When an LSE elects to convert any other ETA it may choose to have the

term of the Historic Fixed Price TCCs that it obtains begin either on the day after the ETA's expiration or termination, or at the start of the Capability Period following its expiration or termination. If the LSE chooses the latter option, the ISO shall make the transmission Capacity associated with the expired ETA available to support the sale of TCCs ~~with a duration of one month~~ in any Reconfiguration Auction(s) held for TCCs valid between the ETA's expiration and the start of the next Capability Period. Nothing in this Section 19.2.1 shall be construed as authorizing the early termination of ETAs before their scheduled expiration dates or as excusing the parties to ETAs of their obligations thereunder.

An LSE that exercises its conversion rights under this Section 19.2.1 may elect to receive a number of Historic Fixed Price TCCs up to one hundred percent of the MW quantity specified for the ETA in Table 1A of Attachment L as it may be amended. In the case of ETAs for which more than one MW quantity is listed in Attachment L, the LSE may elect to receive the higher quantity.

The LSE must submit a written certification to the ISO stating that it expects to: (i) be legally obligated to serve the Load that it historically served under the ETA (or a portion of that Load at least equal to the number of Historic Fixed Price TCCs that it plans to obtain under this Section 19.2.1); and (ii) need the transmission Capacity between the Point of Injection and Point of Withdrawal specified in the ETA to serve that Load. The LSE will not be allowed to obtain Historic Fixed Price TCCs under this Section to the extent that it cannot satisfy either or both of these requirements. That is, the LSE's conversion rights may be wholly or partially terminated to the extent that it anticipates losing all or part of the historic Load, or no longer needing all or part of the transmission Capacity associated with the expired ETA to serve it. Additional information regarding the ISO's certification process shall be set forth in the ISO Procedures.



In addition, if the ISO concludes that an LSE's requested conversion would make existing and valid TCCs infeasible, it will reduce the number of Historic Fixed Price TCCs that the LSE may obtain to the extent necessary to avoid the infeasibility. The reduction procedure will use the same optimization model as the Centralized TCC Auctions, except that the expired or expiring transmission rights subject to conversion will not be represented as fixed injections and withdrawals but will be represented by a bid curve. Additional details shall be specified in the ISO Procedures.

**19.2.1.1.1 Special Rules Applicable to LSEs That Were Eligible to Obtain Historic Fixed Price TCCs with a Duration Commencing on November 1, 2008**

LSEs that obtained Historic Fixed Price TCCs with a duration of five years commencing on November 1, 2008 shall have a one-time opportunity to elect to replace those Historic Fixed Price TCCs, at no additional cost, with Historic Fixed Price TCCs with a duration of ten years. The ten year duration shall be deemed to have commenced on November 1, 2008. LSEs that elect to replace Historic Fixed Price TCCs under this paragraph shall not be eligible to obtain additional Historic Fixed Price TCCs for an additional five year term at the time that their replacement Historic Fixed Price TCCs expire.

LSEs that were eligible to obtain Historic Fixed Price TCCs with a duration of five years commencing on November 1, 2008, but that opted not to obtain them, shall have a one-time opportunity to obtain Historic Fixed Price TCCs with a duration of ten years. If an LSE makes this election the duration of the Historic Fixed Price TCCs that it obtains will commence at the beginning of a subsequent Capability Period, as specified in the ISO Procedures. An LSE that elects to obtain Historic Fixed Price TCCs under this paragraph shall pay the same price that the ISO originally offered for the same Historic Fixed Price TCCs with a duration of five years, *i.e.*, the price that the ISO calculated under Section 19.2.1.2 for Historic Fixed Price TCCs

commencing on November 1, 2008 (including the original historic inflation adjustment) for the LSE in advance of the Autumn 2008 Centralized TCC Auction.

All elections under this Section 19.2.1.1.1 shall be made during an election period specified in the ISO Procedures and shall be subject to all of the notification, certification, feasibility and other requirements established under Section 19.2.1 and the ISO Procedures.

#### **19.2.1.2 Calculating Prices for Historic Fixed Price TCCs**

Except as is specifically noted in Section 19.2.1.2 (iii), if an LSE chooses to obtain Historic Fixed Price TCCs pursuant to this Section 19.2.1 it shall pay a base price per MW/year equal to the average of:

- (i) the average of the inflation-adjusted market-clearing prices calculated for TCCs with the POI and POW associated with the Historic Fixed Price TCC in the one-year Sub-Auction rounds of each of the four previous Centralized TCC Auctions. The average adjusted market-clearing price will be determined by first calculating the average market-clearing price in the one-year Sub-Auction rounds for each Centralized TCC Auction. One-year Sub-Auction-round market-clearing prices from Centralized TCC Auctions conducted before May 1, 2010 are those from the Stage 1 one-year rounds of the Centralized TCC Auctions. The average market-clearing price for the first, second, and third of the four previous Centralized TCC Auctions will then be adjusted for inflation between: (a) the date that TCCs sold in them went into effect, and (b) the start of the Capability Period during which the TCCs sold in the fourth Centralized Auction went into effect; and
- (ii) the inflation-adjusted average annual difference between the Day-Ahead Market Congestion Component at the POW and the POI associated with the TCCs,

summed over the hours of the four most recently concluded Capability Periods. The inflation-adjusted average annual difference for a given Historic Fixed Price TCC would be calculated by summing the Day-Ahead Market Congestion Component for the POW associated with that Historic Fixed Price TCC minus the Day-Ahead Market Congestion Component for the POI associated with that Historic Fixed Price TCC over the hours of each month of the four most recently concluded Capability Periods; adjusting each monthly total for inflation between the end of the month in question and the start of the most recently concluded Capability Period; summing those inflation-adjusted monthly totals over those four Capability Periods; and dividing by two.

All inflation calculations referenced in this Section 19.2.1.2 shall be made using the most recently published inflation rates specified in the Personal Consumption Expenditures Implicit Price Deflator published by the Bureau of Economic Analysis of the United States Department of Commerce. A Historic Fixed Price TCC shall not have a price of less than zero. To the extent that the formula in this Section 19.2.1.2 produces a price for a Historic Fixed Price TCC of less than zero, the price shall be zero.

- (iii) If an LSE chooses to obtain a Historic Fixed Price TCC with a POW at or inside of Load Zone K (Long Island) pursuant to this Section 19.2.1 and bidding to or from Load Zone K was not permitted in any of the one-year Sub-Auctions of the four previous Centralized TCC Auctions at the time of the price calculation, it shall pay a base price per MW/year equal to the value calculated pursuant to Section 19.2.1.2 (ii).

### **19.2.1.3 Payment**

An LSE that obtains Historic Fixed Price TCCs pursuant to Section 19.2.1 shall be required to pay the ISO the total amount specified in equal annual payments for each year of the Historic Fixed Price TCC's duration. Each annual payment shall entitle the LSE to extend the term of the Historic Fixed Price TCC for an additional year, subject to the provisions of Section 19.2.1.1. Billing for Historic Fixed Price TCCs shall be in accordance with ISO Procedures. To challenge settlement information contained in an invoice, a purchaser of Historic Fixed Price TCCs shall first make payment in full, including any amounts in dispute.

An LSE that obtains Fixed Price TCCs pursuant to this Section 19.2.1 shall be required to pay the ISO the total amount specified in this Section 19.2.1 in equal annual payments for each year of the Fixed Price TCC's duration. Each annual payment shall entitle the LSE to extend the term of the Fixed Price TCC for an additional year, subject to Section 19.2.1.1, above.

An LSE that fails to make any required annual payment for its Historic Fixed Price TCCs shall permanently surrender those Historic Fixed Price TCCs for that year and for all subsequent years (and shall not have a right to renew for additional term(s)), provided however that the ISO shall provide a one week cure period to an LSE that has failed to make the required annual payment for its Historic Fixed Price TCCs before the LSE has its Historic Fixed Priced TCCs permanently surrendered, pursuant to ISO Procedures.

## **19.2.2 Awards of Non-Historic Fixed Price TCCs**

### **19.2.2.1 Initial Purchase of Non-Historic Fixed Price TCCs**

LSEs may be eligible to purchase Non-Historic Fixed Price TCCs, at prices established pursuant to Section 19.2.2.3.1. below if, pursuant to ISO Procedures, they submit a completed Notice of Intent to Purchase specifying the quantity of Non-Historic Fixed Price TCCs they

intend to obtain under this Section 19.2.2.1 by Load Zone Point of Withdrawal. The LSE shall also indicate for each Load Zone potential Points of Injection for their Non-Historic Fixed Price TCCs. The LSE must provide its completed Notice of Intent to Purchase prior to the deadline established by the ISO. The LSE's completed Notice of Intent to Purchase shall also include a written certification. The written certification shall state that the LSE: (i) expects to be legally obligated to serve Load in each identified Load Zone in an amount and for a term that equals or exceeds the sum of the number of Non-Historic Fixed Price TCCs that it intends to obtain under this Section 19.2.2.1 with a Point of Withdrawal in that Load Zone and the number of Grandfathered TCCs, Grandfathered Rights and Historic Fixed Price TCCs, in effect for the same term, that are held by or on behalf of the LSE with Points of Withdrawal in that Load Zone; and (ii) has served Load in the identified Load Zone in the most recently concluded Capability Period. The LSE will not be allowed to obtain Non-Historic Fixed Price TCCs under this Section to the extent that it does not satisfy either or both of these requirements prior to the deadline established by the ISO for this submittal. Additional information regarding the Notice of Intent to Purchase, including the written certification included therein, shall be set forth in the ISO Procedures.

The NYISO shall notify each LSE requesting a Notice of Intent to Purchase of the number of Non-Historic Fixed Price TCCs which the LSE is eligible to purchase by Load Zone Point of Withdrawal.

#### **19.2.2.1.1 Availability**

A percentage of the transmission Capacity that is available, pursuant to Section 19.8.3 of this Attachment M, to support the purchase of TCCs in any Centralized TCC Auction during which Non-Historic Fixed Price TCCs may be obtained shall be available to support the purchase

of Non-Historic Fixed Price TCCs. The final decision concerning the percentage of the transmission Capacity that will be available to support the purchase of Non-Historic Fixed Price TCCs will be made by the ISO and shall not exceed five percent. The scaling factor for the allocation of Non-Historic Fixed Price TCCs during the period of any Centralized TCC Auction shall equal the percentage of available transmission Capacity that has not yet been made available to support the sale of TCCs in previous rounds of that Centralized TCC Auction, divided by the percentage of available transmission Capacity that will be made available to support Non-Historic Fixed Price TCCs that may be purchased during the period of the Centralized TCC Auction.

#### **19.2.2.1.2 Limits on Availability**

The ISO may limit the availability of Non-Historic Fixed Price TCCs for initial purchase, by Load Zone, based on each LSE's average hourly load in that Load Zone and number of Grandfathered Rights and TCCs, Historic Fixed Price TCCs and other Non-Historic Fixed Price TCCs with POWs in that Load Zone held by or on behalf of the LSE.

In no event shall an LSE be eligible to purchase new Non-Historic Fixed Price TCCs with a Point of Withdrawal in a Load Zone for which the number of Grandfathered TCCs, Grandfathered Rights, Non-Historic and Historic Fixed Price TCCs held by or on behalf of the LSE with a Point of Withdrawal in that Load Zone equals or exceeds the average hourly load of the LSE in that Load Zone. Additional details shall be specified in the ISO Procedures.

Non-Historic Fixed Price TCCs may be offered by the ISO periodically, but no less frequently than every other year. They will be offered, if at all, with an initial term of two years. Renewal terms for Non-Historic Fixed Price TCCs shall be one year.

#### **19.2.2.2 Renewal**

LSEs may be eligible to renew Non-Historic Fixed Price TCCs at a new price calculated in accordance with Section 19.2.2.3.1 below if, pursuant to ISO Procedures, they submit a completed Notice of Intent to Renew specifying the Non-Historic Fixed Price TCC they intend to renew (by Point of Injection, Point of Withdrawal and quantity). The LSE must provide this notice prior to a deadline to be established by the ISO. The LSE's Notice of Intent to Renew shall also include a written certification stating that the LSE: (i) expects to be legally obligated to serve Load in each identified Load Zone in an amount and for a term that equals or exceeds the number of Non-Historic Fixed Price TCCs that it intends to renew under this Section 19.2.2.2 with a Point of Withdrawal in that Load Zone given the number of Grandfathered TCCs, Grandfathered Rights and Historic Fixed Price TCCs, in effect for the same term, that are held by or on behalf of the LSE with Points of Withdrawal in that Load Zone; and (ii) needs the transmission Capacity between the Point of Injection and Point of Withdrawal specified in the Non-Historic Fixed Price TCC to serve its Load. In no event shall an LSE be eligible to renew Non-Historic Fixed Price TCCs with a Point of Withdrawal in a Load Zone if the number of these Non-Historic Fixed Price TCCs when added to the number of Grandfathered TCCs, Grandfathered Rights, Historic Fixed Price TCCs and Non-Historic Fixed Price TCCs held by or on behalf of the LSE with a Point of Withdrawal in that Load Zone equals or exceeds the average hourly load of the LSE in that Load Zone.

In no event shall the ISO offer renewals that would extend a Non-Historic Fixed Price TCC for a total term of more than ten years,

### **19.2.2.3 Provisions affecting the Initial Purchase and the Renewal of Non-Historic Fixed Price TCCs**

#### **19.2.2.3.1 Pricing**

Non-Historic Fixed Price TCCs intended to be purchased or renewed shall be priced for the initial or renewal term based on the market-clearing price calculated in the first round of the Sub-Auction of the Centralized TCC Auction conducted immediately subsequent to receipt of the completed Notice of Intent to Purchase or Notice of Intent to Renew in which TCCs with the same term as the Non-Historic Fixed Price TCCs being purchased or renewed were offered for sale, as established in ISO procedures. Such market-clearing prices shall have been calculated for a TCC with the same purchase or renewal term respectively (in years), and POI and POW, that is associated with the Non-Historic Fixed Price TCC. A Non-Historic Fixed Price TCC shall not have a purchase or renewal price of less than zero. To the extent that the formula in this Section 19.2.2.3.1 produces a purchase or renewal price for a Non-Historic Fixed Price TCC of less than zero, the price shall be zero.

#### **19.2.2.3.2 Purchase or Renewal**

The ISO shall provide to each LSE, that submitted a completed Notice of Intent to Purchase or a Notice of Intent to Renew, the purchase or renewal price of the Non-Historic Fixed Price TCCs identified in the LSE's completed Notice of Intent or Purchase or completed Notice of Intent to Renew, as appropriate. Within a period to be established by the ISO, following this notification, the purchasing or renewing LSE shall nominate the Non-Historic Fixed Price TCCs by Point of Injection and Point of Withdrawal that it has chosen to purchase or renew, provided that the availability of Non-Historic Fixed Price TCCs with a Point of Withdrawal in a Load Zone shall be limited by the lesser of the number of Non-Historic Fixed Price TCCs indicated as available by the ISO for that LSE with a Point of Withdrawal in that Load Zone or the number of



Non-Historic Fixed Price TCCs identified in the LSE's completed Notice of Intent to Purchase or Notice of Intent to Renew with a Point of Withdrawal in that Load Zone. The ISO may establish a deadline by which the ISO must receive the LSE's nominations of which Non-Historic Fixed Price TCCs it wishes to purchase or renew. An LSE that chooses not to renew its Non-Historic Fixed Price TCCs forfeits its entitlement to further renewals of that Non-Historic Fixed Price TCC.

If the ISO concludes that awarding the Non-Historic Fixed Price TCCs nominated by LSEs for purchase would make existing and valid TCCs infeasible, it will reduce the number of Non-Historic Fixed Price TCCs that an LSE can purchase to the extent necessary to avoid infeasibility. Such reduction shall use the same optimization model as the Centralized TCC Auctions, except that the nominated TCCs will not be represented as fixed injections and withdrawals but will be represented by a bid curve, pursuant to ISO Procedures.

Non-Historic Fixed Price TCCs shall become effective with the first day of the Capability Period immediately following their purchase or renewal.

#### **19.2.2.3.3 Payment**

An LSE that obtains Non-Historic Fixed Price TCCs pursuant to Section 19.2.2 shall be required to pay the ISO the total amount specified in annual payments for each year of the initial term of the Non-Historic Fixed Price TCC's and for each year of the renewal term of the Non-Historic Fixed Price TCC. Billing for Non-Historic Fixed Price TCCs shall be in accordance with ISO Procedures. To challenge settlement information contained in an invoice, a purchaser of Non-Historic Fixed Price TCCs shall first make payment in full, including any amounts in dispute.

An LSE that fails to make the required annual payment for the initial or any renewal term of its Non-Historic Fixed Price TCC shall, notwithstanding any provision in this OATT to the contrary, permanently surrender its right to future renewals of those Non-Historic Fixed Price TCCs and shall not have a right to renew for additional term(s), pursuant to ISO Procedures.

### **19.2.3 Miscellaneous Provisions Affecting Historic and Non-Historic Fixed Price TCCs**

The ISO shall post the following information promptly after awarding Fixed Price TCCs: (i) the quantity of TCCs awarded (in MW); (ii) the Point of Injection and Point of Withdrawal for each Fixed Price TCC awarded; and (iii) the price paid for each Fixed Price TCC.

If an LSE acquires Load from another LSE that holds Fixed Price TCCs, it may request that the Fixed Price TCCs be reassigned to follow the transferred Load. In such case, the quantity of the Fixed Price TCCs that transfers to the assignee shall be equal to: (i) the amount of transferred Load divided by total Load associated with those Fixed Price TCCs, (ii) multiplied by the quantity of the Fixed Price TCCs held by the LSE losing Load between the same Point of Injection and Point of Withdrawal; provided however, that no Fixed Price TCC will transfer under this paragraph if the calculation above indicates that less than one Fixed Price TCC will transfer. If at least one Fixed Price TCC would transfer pursuant to this paragraph, the quantity of reassigned Fixed Price TCCs shall be rounded down to the nearest whole number of Fixed Price TCCs. An LSE that is reassigned Fixed Price TCCs under this paragraph shall hold such Fixed Price TCCs for the remainder of their term, and have rights of renewal as provided in Sections 19.2.1 and 19.2.2, provided it makes all required payments.

An LSE that has met all required payment and collateral obligations for its Fixed Price TCC, including LSEs that have transferred Load to a new LSE, may reassign, reconfigure, or sell its Fixed Price TCCs for any period of time for which its Fixed Price TCC is valid. Such

assignment, reconfiguration, or sale shall not include renewal rights otherwise associated with the Fixed Price TCC, which renewal rights will remain with the LSE to which the Fixed Price TCCs were originally awarded, provided however that renewal rights associated with Fixed Price TCCs that are reassigned to follow the transferred Load shall be reassigned to follow the transferred Load. To the extent that Fixed Price TCCs are created pursuant to Section 19.2.1 or 19.2.2, the transmission Capacity that supports them shall not be available for sale in the Centralized TCC Auctions until those Fixed Price TCCs expire.

All rights and obligations that apply to an LSE in connection with obtaining and holding Fixed Price TCCs as provided for in Sections 19.2.1, 19.2.2 and 19.2.3, shall also be applicable to an ETA Agent, except as the context otherwise requires (for example, an ETA Agent cannot obtain Fixed Price TCCs on its own behalf).

The ISO shall establish a dispute period following the conclusion of the Centralized TCC Auction during the conduct of which Fixed Price TCCs are awarded, challenges to awards of Fixed Price TCCs may be made and mistakes in the calculation of Fixed Price TCC prices may be corrected. Notice of the dispute period established by the ISO and of procedures to be employed in bringing a dispute or correcting a Fixed Price TCC price shall be provided by the ISO on its OASIS.

Following the resolution of challenges, if any, to the award of Fixed Price TCCs, or mistakes in the calculation of Fixed Price TCC prices, raised during the dispute period, charges and payments for Fixed Price TCCs awarded shall be final as provided in the award notices provided by the ISO and shall not be subject to revision.

### **19.2.3.1 Responsibilities of LSEs that Obtain Fixed Price TCCs**

To obtain a Fixed Price TCC under Section 19.2.1 or 19.2.2 of this Attachment M an LSE must submit such information to the ISO regarding its creditworthiness as the ISO may require. Each such LSE must also: (i) comply with the applicable deadlines established by the ISO under Sections 19.2.1, 19.2.2 and 19.2.3; (ii) satisfy all ISO credit requirements; and (iii) pay the price determined pursuant to Section 19.2.1 or 19.2.2.3.1, as appropriate.

## **19.2.4 Awards of Incremental TCCs**

### **19.2.4.1 Overview**

The ISO shall follow the procedures set forth in this Section 19.2.4 to determine awards of Incremental TCCs to any person or entity that requests them in connection with the funding or construction of new transmission facilities or transmission facility improvements that increase the Transfer Capability of the New York State Transmission System.

These procedures shall only apply to requests for awards that are submitted on or after November 1, 2008 and not to: (i) requests for awards that are pending as of that date; (ii) or to Incremental TCC award determinations that were made by the ISO on or prior to that date; neither shall these procedures interfere with the completion of requests for awards that are pending as of that date or require that award determinations made by the ISO prior to that date be reopened. Award determinations that were made prior to November 1, 2008 or that were pending as of that date shall remain effective as described in the ISO's Automated Market System.

Throughout this Section 19.2.4: (i) any change to, reconfiguration of, and/or construction of new transmission facilities or other transmission facility improvements that are potentially eligible for an award of Incremental TCCs shall be referred to as an "Expansion;" and (ii) a

person or entity that is pursuing an Expansion and requesting Incremental TCCs shall be referred to as an “Expander.”

The ISO shall not award Incremental TCCs: (i) when the ISO cannot calculate the effect on Transfer Capability associated with an Expansion in the Day-Ahead Market with reasonable certainty; (ii) for Expansions that involve controllable transmission facilities that are under the operational control of a Control Area operator other than the ISO; or (iii) to the extent that an Expansion’s impact on Transfer Capability is solely dependent on a Generator’s operating state. Additional information concerning eligibility for Incremental TCC awards shall be set forth in the ISO Procedures. The ISO shall not award Incremental TCCs before the provisions of Section 19.2.4.5.2 have all been fulfilled.

The ISO shall also follow the procedures in this Section 19.2.4 to determine whether “Partial Outage Incremental TCCs” should be created in connection with final awards of Incremental TCCs.

#### **19.2.4.2 Requests for Incremental TCC Awards**

An Expander pursuing an Expansion and seeking an Incremental TCC award shall submit a request for an award to the ISO. A request for an Incremental TCC award must be submitted prior to the associated Expansion’s expected commercial operation date. A request for an Incremental TCC award shall not be deemed to be complete, and shall not be considered by the ISO, unless it includes all of the information and satisfies all of the technical requirements required by this Section 19.2.4 and by the ISO Procedures. Prior to submitting its request for a non-binding estimate, an Expander must have: (i) completed all of the engineering studies that are required under the ISO OATT, including Attachments X, S, and Z; and (ii) obtained all permits and regulatory approvals necessary to commence construction. If an Expansion is

subject to the Class Year study requirements under Attachment S of the ISO OATT then the Expander must have accepted its Class Year cost allocation and posted the security required under Attachment S.

As part of its request for an award, an Expander shall request that the ISO prepare one or more non-binding estimates of an Expansion's impact on Transfer Capability between one or more POI/POW combinations. The ISO shall be required to prepare up to three non-binding estimates with respect to an Expansion. Additional rules governing requests for non-binding estimates shall be set forth in the ISO Procedures.

An Expander that is not subject to Section 20.2.5 of Attachment N to the ISO OATT that requests an Incremental TCC award associated with an Expansion that will consist of multiple transmission facilities that might separately be taken out of service or derated in connection with the outage of an External transmission facility must provide additional information regarding partial outage states, as specified in the ISO Procedures, as part of its request. The ISO will use this information to analyze the creation of Partial Outage Incremental TCCs.

#### **19.2.4.3 Non-Binding Estimates**

The ISO shall provide non-binding estimates of Incremental TCCs that might be awarded between different POI/POW combinations that are identified in a complete request for a non-binding estimate. The ISO shall only prepare non-binding estimates if the associated Expansion is expected to enter commercial operation within the current or next like Capability Period.

The ISO shall estimate whether, and to what extent, Incremental TCCs may be created by analyzing whether an Expansion will actually increase Transfer Capability with respect to the entire set of POI/POW combinations included in a request for a non-binding estimate.

Incremental TCCs shall not be created for Transfer Capability that the ISO determines would

exist on the system even in the absence of an Expansion. The ISO shall make these determinations using an Optimal Power Flow model that is updated and modified as necessary to represent the state of the New York State Transmission system both with and without the Expansion associated with the request for a non-binding estimate. If an Expansion is intended to increase voltage or transient stability limits the ISO shall conduct transfer limit studies as necessary to confirm the Expansion's impact on interface limits as specified in the ISO Procedures. Additional detail concerning the Optimal Power Flow model to be used by the ISO shall be set forth in the ISO Procedures. The ISO shall not be bound by the findings of previous engineering studies, conducted under the ISO OATT or otherwise, regarding the impact of an Expansion on Transfer Capability when preparing non-binding estimates (or when determining awards under Section 19.2.4.5).

If the ISO estimates that Incremental TCCs would be created by an Expansion it shall separately estimate the quantity of Incremental TCCs that would be created for both the Summer and Winter Capability Periods.

#### **19.2.4.4 Partial Outage Incremental TCCs**

The ISO shall use the additional information submitted by certain Expanders regarding partial outage states pursuant to Section 19.2.4 to determine whether Partial Outage Incremental TCCs shall be created. Partial Outage Incremental TCCs shall not be awarded. They shall only be used to determine day-ahead outage charges, implemented through settlements for Day-Ahead Market Congestion Rents associated with Expansions that are partially out of service, or that are derated due to the outage of an External transmission facility, in connection with the calculation of outage charges under Section 19.2.4.9.

Partial Outage Incremental TCCs shall be created to the extent that the ISO finds, as part of its determination of final Incremental TCC awards pursuant to Section 19.2.4.5, that a revised set of Incremental TCCs would exist between a given POI/POW combination regardless of whether a portion of the associated Expansion is out of service or derated as a result of the outage of an External transmission facility. Partial Outage Incremental TCCs may be created between POI/POW combinations that differ from those for which the ISO may determine that Incremental TCCs would be available in a non-binding estimate or in any award of Incremental TCCs.

If the ISO determines that Partial Outage Incremental TCCs may be created as the result of an Expansion it shall separately calculate the number that would be created for the Summer and Winter Capability Periods.

#### **19.2.4.5 Incremental TCC Awards**

The ISO shall respond to complete requests for Incremental TCC awards by determining: (i) whether, and to what extent, Incremental TCCs should be awarded for the POI/POW combinations selected by the Expander; and (ii) whether, and to what extent, Partial Outage Incremental TCCs should be created. An Expander may select all of the POI/POW combinations that were analyzed in any one of the non-binding estimates prepared by the ISO under Section 19.2.4.3 to be included in the award determination. It may not select the POI/POW combinations from more than one non-binding estimate or select fewer than all of the POI/POW combinations that were analyzed in any one non-binding estimate.

The ISO shall determine both temporary and final awards using an Optimal Power Flow model that is updated and modified as necessary to represent the state of the New York State Transmission system both with and without the Expansion, and to represent any of the



Expansion's partial outage states, at the time that an award is determined. The ISO shall determine whether, and to what extent, Incremental TCCs shall be awarded by analyzing whether an Expansion will actually increase Transfer Capability with respect to the entire set of POI/POW combinations included in a request for an award. Incremental TCCs shall not be awarded for Transfer Capability that the ISO determines would exist on the system even in the absence of an Expansion. If an Expansion is intended to increase voltage or transient stability limits the ISO shall conduct transfer limit studies as necessary to confirm the Expansion's impact on interface limits as specified in the ISO Procedures. The ISO shall make separate determinations for temporary and final awards of Incremental TCCs.

The ISO shall only determine or make an Incremental TCC award if the associated Expansion is expected to enter commercial operation within the current or next like Capability Period.

The ISO shall only determine, award, or create Incremental TCCs (including, for purposes of this paragraph, Partial Outage Incremental TCCs) in whole number MW quantities. If the ISO determines that an Expansion will create one or more non-whole number quantity Incremental TCCs, the ISO shall round each non-whole number Incremental TCC to a whole number in a manner that minimizes the risk of infeasibility caused by rounding with respect to the entire Incremental TCC award.

If the ISO determines that Incremental TCCs should be awarded, it shall make separate awards for the Summer and Winter Capability Periods.

#### **19.2.4.5.1 Temporary Awards**

If the ISO determines that Incremental TCCs should be awarded in connection with an Expansion and the Expansion goes into commercial operation during a Capability Period, the

ISO shall make a temporary award of Incremental TCCs as soon as reasonably possible after notice that the Expansion has entered commercial operation has been provided in writing to the ISO pursuant to the ISO Procedures. Temporary awards of Incremental TCCs shall terminate at the end of the last day before a final award of Incremental TCCs becomes effective. In the case of an Expansion that enters commercial operation less than 90 days before the beginning of a Capability Period, the temporary award that is effective during the Summer Capability Period (or any portion thereof) may differ from the temporary award that is effective during the Winter Capability Period (or any portion thereof). The quantity of Incremental TCCs included in a temporary award may differ from the quantity included in any of the non-binding estimate(s) associated with the Expansion and/or in the final award.

#### **19.2.4.5.2 Final Awards**

Awards of Incremental TCCs shall be final on the date by which the following are fulfilled: (i) an Expansion has actually entered commercial operation; (ii) written notice has been provided to the ISO pursuant to the ISO Procedures; and (iii) the ISO has determined the final award using an Optimal Power Flow analysis that reflects the results of the most recently completed Centralized TCC Auction. The quantity of Incremental TCCs included in a final award may differ from the quantity included in the temporary award, or in the non-binding estimate(s), associated with the Expansion.

Incremental TCCs included in final awards shall become effective on the first day of the first Capability Period following the date that the award became final. If, however: (i) the associated Expansion enters commercial operation fewer than ninety days before the end of a Capability Period then the Incremental TCCs included in a final award shall become effective on the first day of the next like Capability Period after the associated Expansion enters commercial

operation; or (ii) the associated Expansion results in an increase to a limit that must be approved by the Operating Committee, and the Operating Committee's approval is granted fewer than ninety days before the end of a Capability Period, then the final award shall become effective on the first day of the next like Capability Period following the Operating Committee's approval.

If more than one Expansion enters commercial operation in the same Capability Period, the ISO shall make its final award determinations, and shall make final Incremental TCC awards, in the same order as the Expansions actually enter commercial operation.

#### **19.2.4.6 Acceptance of Incremental TCC Awards**

An Expander may elect to accept or reject a temporary or final award of Incremental TCCs in its entirety. Partial acceptances shall not be permitted. Deadlines for confirming the acceptance or rejection of an award shall be specified in the ISO Procedures.

An Expander that elects to accept a final award of Incremental TCCs shall inform the ISO, no later than the time that it accepts its final award, of the awarded Incremental TCCs' duration. Incremental TCCs shall have a duration of no less than twenty and no more than fifty years, starting on the date that the final award becomes effective, provided that their duration may not exceed the expected operating life of the associated Expansion. The ISO shall record the existence and duration of the Incremental TCCs in the Automated Market System.

If an Expander fails to accept a final award of Incremental TCCs and to specify the award's duration by the deadline established in the ISO Procedures it will forfeit its right to collect Day-Ahead Market Congestion Rent payments in connection with the Incremental TCCs until it confirms its acceptance in the manner specified in the ISO Procedures.

#### **19.2.4.7 Attributes of Incremental TCCs**

Incremental TCCs, but not partial outage Incremental TCCs, shall have the same attributes as other TCCs and shall be subject to the same rules under the ISO Tariffs, except as specifically provided in this Section 19.2.4.

#### **19.2.4.8 Restrictions on Transfers of Incremental TCCs**

##### **19.2.4.8.1 Secondary Market transfers of fewer than all of the Incremental TCCs**

associated with a given Expansion that were included in a final award shall not be allowed with the exception of allowable Secondary Market transfers as provided in Section 19.2.4.8.2; an Expander may only make Secondary Market transfers of all of the Incremental TCCs for all of the POI/POW combinations that were included in a final award for a given Expansion. This restriction shall not prohibit the sale of fewer than all of the Incremental TCCs included in a final award through a Centralized TCC Auction or a Reconfiguration Auction. Secondary Market transfers of Incremental TCCs shall be made pursuant to the provisions of OATT Section 19.6.2. Transferees of Incremental TCCs that choose to become Primary Holders shall be subject to all existing ISO credit requirements and may be subject to any future credit requirements that may be applied to TCCs with a duration longer than one year.

**19.2.4.8.2** An Expander may make a Secondary Market transfer pursuant to OATT Section 19.6.2 of fewer TCCs than all of the Incremental TCCs finally awarded for a given Expansion for which it is the Primary Holder provided that the Expander received a single final award of Incremental TCCs for the Expansion which award specified the same POI and the same POW combination. To comply

with the requirement of a single final award with the same POI and POW, POIs or POWs that represent individual units of a Generator comprised of a group of generating units shall be deemed the same POI or POW.

A Secondary Market transfer by an Expander of all or a portion of its Incremental TCCs awarded for a given Expansion, pursuant to Sections 19.2.4.8.2 and 19.6.2, that is an assignment of the Incremental TCCs shall also operate as an assignment of the annual option to terminate the assigned Incremental TCCs, available pursuant to Section 19.2.4.9.

Incremental TCCs that are awarded pursuant to a temporary award may not be sold or transferred through a Secondary Market transfer, through a Centralized TCC Auction, through a Reconfiguration Auction, or otherwise.

#### **19.2.4.9 Early Termination of Incremental TCCs**

An Expander or its assignee shall have an annual option to terminate Incremental TCCs for which it is the Primary Holder and which were finally awarded to the Expander for a given Expansion. This annual option extends only to the entire portfolio of Incremental TCCs held by the Expander or its assignee for a given Expansion; early termination of a partial award of Incremental TCCs for a given Expansion held by a Expander or its assignee shall not be permitted. The annual option to terminate Incremental TCCs shall expire: i) with the early termination of those Incremental TCCs pursuant to this paragraph; ii) with the Expander's assignment of those Incremental TCCs; or iii) with a Secondary Market transfer of all or a portion of those Incremental TCCs, which expiration would apply only to the transferred portion of the Incremental TCCs and only for the duration of the Secondary market transfer.

To terminate its Incremental TCCs, the Expander, or the Expander's assignee, shall provide a notice of early termination and a proposed expiration date by Certified, Return-Receipt U.S. Mail, or by a reputable commercial courier service employing a parcel tracking system to the ISO at least one year in advance of the proposed early termination date which notice shall be irrevocable. The termination date for Incremental TCCs that were subject to a notice of early termination shall be the last day of a Capability Period which date occurs no earlier than one year after the notice of proposed early termination has been received by the ISO.

19.2.4.9.1 Upon receiving the notice of an early termination, the ISO shall promptly notice the market of the effective date of the early termination. To ensure that Centralized TCC Auctions following a notice of early termination start with a simultaneously feasible security constrained Power Flow, the ISO may: i) update its ISO Procedures to include prohibited bid points or combinations of prohibited bid points at which TCCs with durations of longer than one year may not be available in a future Centralized TCC Auction or Reconfiguration Auction, as a result of the notice of early termination; and / or ii) rather than effectuate the termination date, require that the Incremental TCC award proposed for early termination be apportioned such that the Incremental TCCs terminate in portions over as many as 12 months, beginning with the initial termination date. To terminate Incremental TCCs in portions over as many as 12 months, the ISO shall establish up to two additional termination dates following the initial termination date, and assign Incremental TCCs to each termination date, which additional termination dates shall fall at the end of the Capability Period(s) that follow the initial termination date.

Any prohibition on bid points resulting from a notice of early termination of Incremental TCCs in order to avoid infeasibility shall expire as of the first Capability Period following the last termination date of the Incremental TCCs.

#### **19.2.4.10 Outage Charges**

Any person or entity that is not subject to Section 20.2.5 of Attachment N to the ISO OATT and that owns an Expansion (or a portion of an Expansion) associated with a temporary or final award of Incremental TCCs, or has been assigned Incremental TCCs by an Expander, shall pay an outage charge to the ISO for any hour in the Day-Ahead Market during which the Expansion associated with the Incremental TCCs is modeled to be wholly or partially out of service. All outage charges shall be implemented through the billing of Day-Ahead Market Congestion Rents to the person or entity responsible for paying the outage charge and, as such, will be credits to Day-Ahead Market Congestion Rents in the ISO settlement system.

Outage charges shall be determined as follows:

- If the entire Expansion is modeled as out of service in the Day-Ahead Market; the outage charge shall be equal to the Day-Ahead Market Congestion Rent payment for all of the Incremental TCCs associated with the entire Expansion.
- If one or more portions of an Expansion are modeled as out of service in the Day-Ahead Market, or derated by the outage of an External Transmission facility, and Partial Outage Incremental TCCs have not been created, the outage charge shall be equal to the Day-Ahead Market Congestion Rent payment for all of the Incremental TCCs associated with the entire Expansion.
- If one or more portions of an Expansion are modeled as out of service in the Day-Ahead Market or are caused to be out of service or derated by the outage of an External

transmission facility, and Partial Outage Incremental TCCs have been created for such an out-of-service state or derating, the outage charge shall be calculated as follows:

$$\text{Outage charge} = A - B$$

where:

- “A” is the sum, over all different POI and POW combinations associated with the Incremental TCCs for an Expansion, of the product of (i) the Congestion Component at the POW minus the Congestion Component at the POI; and (ii) the number of Incremental TCCs between that POI and POW associated with the Expansion, and
- “B” is the sum, over all different POI and POW combinations associated with the Partial Outage Incremental TCCs for that out-of-service state or derating of the Expansion, of the product of: (i) the Congestion Component at the POW minus the Congestion Component at the POI; and (ii) the number of Partial Outage Incremental TCCs between that POI and POW associated with that out-of-service state or derating of the Expansion.



## **19.6 Direct Sale of TCCs by Transmission Owners directly over the OASIS (“Direct Sale”)**

### **19.6.1 Direct Sales**

Transmission Owners may sell their Original Residual TCCs, ETCNL, and Grandfathered TCCs directly to buyers through a Direct Sale. Sellers and potential buyers shall communicate all offers to sell and buy TCCs, through a Direct Sale, solely over the ISO’s OASIS. Buyers and Sellers of TCCs by Direct Sale will have the responsibility to report their TCC transactions to the ISO, whereupon the ISO will post them on the OASIS. Provisions governing Primary Holder status and responsibilities otherwise applicable to TCCs shall be applicable to TCCs acquired through a Direct Sale.

During the Direct Sale process, the Transmission Owner electing to use Direct Sale shall have the sole discretion to accept or reject an offer to purchase TCCs. Each Transmission Owner shall develop and apply a non-discriminatory method for choosing the winning offers consistent with FERC Order No. 889, et seq., and may establish eligibility requirements that shall be no more stringent than those set forth in Section 2.14 of this Tariff. The Transmission Owner shall post information regarding the results of the Direct Sale on the ISO’s OASIS promptly after the Direct Sale is completed. The information shall include: (i) the amount of TCCs sold (in MW); (ii) the Point of Injection and Point of Withdrawal for each TCC sold; and (iii) the price paid for each TCC.

Each Transmission Owner may retain its Grandfathered TCCs. If it sells Grandfathered TCCs, a Transmission Owner shall do so through Direct Sales or through Centralized TCC Auctions or Reconfiguration Auctions for periods not extending beyond the termination date of those TCCs. Payment for TCCs purchased in a Direct Sale shall be in accordance with the terms and conditions of the agreement between the buyer and seller.

### **19.6.2 Secondary Market for TCCs**

After the conclusion of each Auction, all Primary Holders may sell their TCCs in the Secondary Markets, unless otherwise provided in this Attachment M. However, the ISO shall make all Settlements with Primary Holders. Buyers in a Secondary Market that elect to become Primary Holders must meet the eligibility criteria in Section 19.7 of this Attachment M. Buyers and Sellers of TCCs in the Secondary Market will have the responsibility to report their TCC transactions to the ISO, whereupon the ISO will post them on the OASIS.

## **19.7 Primary Holders**

Parties that purchase TCCs at the close of the Centralized TCC Auction [or Reconfiguration Auction](#), that convert their ETAs to Historic Fixed Price TCCs, buyers of Non-Historic Fixed Price TCCs, buyers in the Secondary Market that meet the eligibility criteria listed herein, and Expanders (as defined in Section 19.2.4.1) accepting a Temporary or Final Award of Incremental TCCs become Primary Holders of those TCCs. The ISO shall make all TCC settlements with Primary Holders. When selling TCCs, Transmission Owners are considered Primary Holders of those TCCs. A Primary Holder of a TCC which sells that TCC through a Direct Sale continues to be the Primary Holder of that TCC unless the buyer elects to become the Primary Holder of that TCC.

Primary Holders must meet the following eligibility criteria; (i) register as Transmission Customers and otherwise comply with all applicable registration requirements established in ISO Procedures; (ii) comply with all applicable credit requirements as set forth in Attachment K of the ISO Services tariff; and (iii) submit a statement signed by the buyer, representing that the buyer is financially able and willing to pay for the TCCs it proposes to purchase as well as all other obligations associated with the purchase of such TCCs, including without limitation, Congestion Rent due pursuant to this Tariff.

Where a buyer electing to become a Primary Holder fails to meet the eligibility criteria or the above financial criteria (as determined by the ISO), or fails to provide information required by the ISO, the seller of the TCCs in a ~~-~~Direct Sale shall be the Primary Holder with respect to those TCCs.

## **19.8 Auctions for TCCs**

### **19.8.1 Overview**

The ISO will conduct Centralized TCC Auctions before each Capability Period. Winning bidders in each such auction will purchase TCCs that will be valid for one or more Capability Periods, beginning with the first Capability Period that begins after the conclusion of the auction. The ISO will also conduct Reconfiguration Auctions each month. Winning bidders in each such auction will purchase TCCs ~~that will be~~ valid for ~~the~~one or more calendar months ~~that follows the conclusion of the auction~~within the same Capability Period, beginning with the calendar month that begins after the conclusion of the auction.

### **19.8.2 Description of the Reduction Process For Reducible ETCNL/GFTCCs**

Before each Centralized TCC Auction, the ISO shall ensure that all of the following correspond to a simultaneously feasible security constrained Power Flow: (i) existing TCCs and Grandfathered Rights that are valid for any part of the duration of any TCCs to be sold in the Centralized TCC Auction, including but not limited to Fixed Price TCCs that were created pursuant to Section 19.2.1 or 19.2.2. of this Attachment M and Incremental TCCs awarded pursuant to Section 19.2.4 of this Attachment M; Grandfathered TCCs not subject to reduction and Original Residual TCCs to the extent not previously used to support the purchase of TCCs that are valid for any part of the duration of any TCCs to be sold in the Centralized TCC Auction (henceforth “TCCs and Grandfathered Rights listed in Section 19.8.2 (i)”; and (ii) ETCNL (to the extent not previously used to support the purchase of TCCs that are valid for any part of the duration of any TCCs to be sold in the Centralized TCC Auction) and Grandfathered TCCs subject to reduction as listed in Table 1 of this Attachment M (henceforth “Table 1 ETCNL/TCCs”). In some cases, the total set of all the TCCs, Grandfathered Rights, and Table 1

ETCNL/TCCs listed in (i) through (ii) above may not correspond to a simultaneously feasible Power Flow in some period of time. In such cases, Table 1 ETCNL/TCCs, will be reduced for that period in order to make the total set of TCCs and Grandfathered Rights listed in Section 19.8.2 (i), and Table 1 ETCNL/TCCs remaining after reduction correspond to a simultaneously feasible Power Flow.

This reduction procedure will use the same optimization model that will be used in the Centralized TCC Auction to determine the amount by which Table 1 ETCNL/TCCs will be reduced. Each of the TCCs and Grandfathered Rights listed in Section 19.8.2 (i) above will be represented in the Centralized TCC Auction model by a fixed injection of 1 MW at its Point of Injection, and a fixed withdrawal of 1 MW at its Point of Withdrawal. In addition, Table 1 ETCNL/TCCs will be represented in the model, but they will be represented in such a way as to allow their reduction. To do so, bids for each Table 1 ETCNL/TCC will consist of a line which intersects the y-axis at \$1/TCC (or any other value selected by the ISO, so long as that value is constant for each bid curve for all of these Table 1 ETCNL/TCCs) and which intersects the x-axis at 1 MW. An example of the bid curve  $B_j$  for a representative Table 1 ETCNL/TCC is illustrated in the diagram below.

The TCC auction software will determine the amount of each Table 1 ETCNL/TCC that will remain after reduction, which is designated as  $A_j$  in the diagram. The objective function that the TCC auction software will use to determine these coefficients  $A_j$  will be to maximize:

$$\sum_{j \in N} \int_0^{A_j} B_j$$

Where:

$N$  = The set of Table 1 ETCNL/TCCs

$j$  = Any individual Table 1 ETCNL/TCC

$A_j$  = Any amount of each Table 1 ETCNL/TCC( $j$ ) remaining

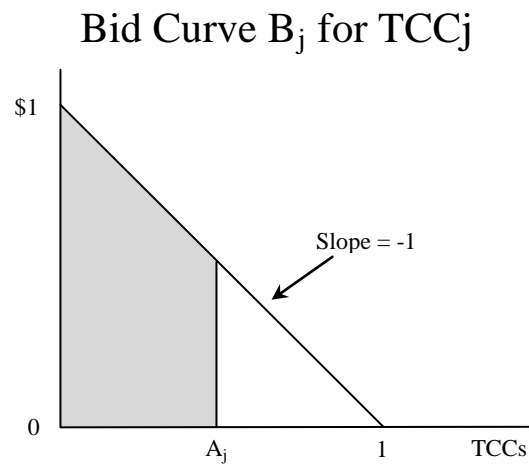
$B_j$  = As defined by the diagram

subject to the constraint that injections and withdrawals corresponding to the TCCs and

Grandfathered Rights listed in Section 19.8.2(i) -and Table 1 ETCNL/TCCs remaining after reduction

must be simultaneously feasible in a Power Flow.

As a result, the objective function will maximize the area under the bid curve for each Table 1 ETCNL/TCC that remains after reduction, summed over all Table 1 ETCNL/TCCs, subject to the simultaneous feasibility constraint. This area for one Table 1 ETCNL/TCC is illustrated in the following diagram:



The ISO shall apply this methodology as follows:

19.8.2.1 first, on the Table 1 ETCNL/TCCs (prior to the conversion of any ETCNL to ETCNL TCCs), and

19.8.2.2 second, on the Table 1 ETCNL/TCCs remaining after conversion into ETCNL TCCs of ETCNL included in such Table 1 ETCNL/TCCs.

For purpose of the second reduction, a holder of ETCNL may elect to disaggregate the ETCNL in accordance with ISO Procedures prior to conducting the reduction process. If a [Transmission Owner](#) elects to have its ETCNL disaggregated, the number of MW of ETCNL allocated to that [Transmission Owner](#) specifying each Load Zone as its POW shall be replaced by the same number of MW of ETCNL, specifying the same POI as the original ETCNL, but specifying various buses within that Load Zone as the POWs, as determined in accordance with ISO Procedures.

To the extent more than one model is used in a given Centralized TCC Auction (*e.g.*, to reflect different summer / winter ratings), the ISO shall retest the Table 1 ETCNL/TCCs remaining after reduction so as to avoid reducing the Table 1 ETCNL/TCCs more than is necessary to prevent infeasibility in a given Sub-Auction. However, any Table 1 ETCNL/TCC that is deemed infeasible in one Centralized TCC Auction may be deemed reduced and not eligible for retesting in a subsequent Centralized TCC Auction.

### **19.8.3 Transmission Capacity Sold in Centralized Auctions for TCCs**

Transmission Owners with ETCNL will release that transmission Capacity to support the sale of TCCs in each Centralized TCC Auction, unless the Transmission Owner has converted the ETCNL into ETCNL TCCs pursuant to Section 19.4 of this Attachment M. Transmission Owners which have not sold their Original Residual TCCs through a Direct Sale on the OASIS prior to the Centralized TCC Auction, shall sell them through the Centralized TCC Auction. Transmission Owners may retain their Grandfathered TCCs. If it sells Grandfathered TCCs, a Transmission Owner shall do so either through Direct Sales or through Centralized TCC Auctions or Reconfiguration Auctions.

Capacity associated with the termination of ETAs in effect on November 19, 1999, listed in Table 1A of Attachment L to this OATT (as it may be amended), that conferred transmission rights on an LSE and is not used to create [Historic](#) Fixed Price TCCs, pursuant to Section 19.2.1 of this Attachment M shall be converted into Residual Transmission Capacity.

In each Centralized TCC Auction, the following transmission Capacity not required to support already-outstanding TCCs or Grandfathered Rights and not withheld pursuant to Section 19.1.1 of this Attachment M shall be available to support TCCs that can be purchased in that Centralized TCC Auction:

19.8.3.1 following any reduction pursuant to Section 19.8.2 of this Attachment M, all of the transmission Capacity associated with ETCNL (a) that the Transmission Owners do not sell through a Direct Sale in advance of the [Centralized TCC](#) Auction, (b) that the Transmission Owners do not convert to ETCNL TCCs, and (c) that has not been used to support the sale of existing TCCs that are valid for any part of the duration of any TCCs sold in the Centralized TCC Auction;

19.8.3.2 all of the transmission Capacity associated with Original Residual TCCs, that the Transmission Owners do not sell through a Direct Sale in advance of the [Centralized TCC](#) Auction and that has not been used to support the sale of existing TCCs that are valid for any part of the duration of any TCCs sold in the Centralized TCC Auction;

19.8.3.3 all of the transmission Capacity associated with TCCs offered for sale by TCC Primary Holders; and

19.8.3.4 any Residual Transmission Capacity.



#### 19.8.4 Centralized TCC Auctions

TCCs with durations of 6 months and 1 year shall be available in each Centralized TCC Auction. TCCs with durations of 2 years, 3 years, 4 years, or 5 years may also be available in ~~this~~ [the Centralized TCC](#) Auction, at the ISO's discretion.

The final decision concerning the percentage of the transmission Capacity that will be available in the Centralized TCC Auction to support TCCs of different durations will be made by the ISO. The ISO will conduct a polling process to assess the market demand for TCCs with different durations, which it will take into consideration when making this determination. The ISO may elect not to sell any TCCs with one or more of the above durations. However, all transmission Capacity not associated with ETAs or outstanding TCCs or not reserved through conversion of ETCNL to ETCNL TCCs or RCRRs to RCRR TCCs must be available to support TCCs of some duration sold in the Centralized TCC Auction.

The Centralized TCC Auction will consist of a series of Sub-Auctions, which will be conducted consecutively. In each Sub-Auction, TCCs of a single duration will be available (*e.g.*, only TCCs with a five-year duration might be available in one Sub-Auction). Sub-Auctions will be conducted in decreasing order of the length of the period for which TCCs sold in the Sub-Auction are valid. Therefore, if the ISO were to determine that five years would be the maximum length of TCCs available in the Centralized TCC Auction, then the Sub-Auction for TCCs with a duration of five years would be held first. All TCCs sold in the 5-year TCC Sub-Auction (other than those offered for sale in the next Sub-Auction, as described in Section 19.9.1) would then be modeled as fixed injections and withdrawals in the next Sub-Auction, in which TCCs of the next longest duration, as determined by the ISO (*e.g.*, four years), would be available for purchase. Following that Sub-Auction, TCCs sold in either of the first two Sub-Auction (other than those offered for sale in the next Sub-Auction) would then be

modeled as fixed injections and withdrawals in the third Sub-Auction (*e.g.*, a Sub-Auction for TCCs with a duration of three years), etc.

Each Sub-Auction shall normally consist of at least four rounds unless the Transmission Owners that are subject to Attachment N of this Tariff unanimously consent to fewer rounds. The ISO shall have the authority to determine the percentage of the available transmission Capacity that will be available to support TCCs sold in each round of each Sub-Auction such that all of the transmission Capacity offered for sale in that Sub-Auction shall be offered by the last round of that Sub-Auction. The ISO shall announce these percentages before the Sub-Auctions. The “scaling factor” for each round shall equal the percentage of available transmission Capacity that has not yet been made available to support the sale of TCCs in previous rounds, divided by the percentage of available transmission Capacity that will be made available to support the sale of TCCs in that round.

The ISO shall also determine the maximum duration of TCCs sold in the Centralized TCC Auction, and whether the TCCs sold in the Centralized TCC Auction shall be separately available for purchase as on-peak and off-peak TCCs. (For purposes of this Attachment, the on-peak period will include the hours from 7 a.m. to 11 p.m. Prevailing Eastern Time Monday through Friday. The remaining hours in each week will be included in the off-peak period.)

#### **19.8.5 Reconfiguration Auctions**

A Reconfiguration Auction is an auction in which ~~monthly~~-TCCs with a duration of one or more months within the same Capability Period may be offered and purchased. This will allow Market Participants to purchase and sell short-term TCCs. Reconfiguration Auctions will also capture short-term changes in transmission Capacity. The ISO will conduct Reconfiguration Auctions monthly and TCCs purchased in Reconfiguration Auctions will be valid for the

applicable month or months following the Reconfiguration Auction. A Reconfiguration Auction will consist of a single round. Any Primary Holder of a TCC that is valid for ~~the~~a month in which TCCs are being sold in the Reconfiguration Auction, including a purchaser of a TCC in a Centralized TCC Auction that has not sold that TCC and a Transmission Owner that is the Primary ~~Owner~~Holder of an ETCNL TCC or a Member System that is the Primary Holder of a RCRR TCC, may offer that TCC for sale in a Reconfiguration Auction; provided however that the sale of TCCs in a Reconfiguration Auction shall be subject to the limitations and prohibitions set forth in this ISO OATT including the limitation on the sale or transfer of Fixed Price TCCs and the limitation on the sale or other transfer of Incremental TCCs. The transmission Capacity used to support these TCCs, as well as any other transmission Capacity not required to support already-outstanding TCCs or Grandfathered Rights, will be available to support TCCs purchased in the Reconfiguration Auction.

Transmission Capacity made available for transmission rights in durations of no more than one month pursuant to Section 19.1.1 shall be released in Reconfiguration Auctions.

## **19.9 Procedures for Sales of TCCs in Each Auction**

### **19.9.1 Auction Structure**

~~Participation in a Sub-Auction~~ TCCs may be offered for sale in each Sub-Auction round of the Centralized TCC Auction.

TCCs purchased in any round of any Sub-Auction may be resold in a subsequent round of that ~~Sub-Auction~~ Centralized TCC Auction. For example, the purchaser of a 5-year TCC purchased in the 5 year Sub-Auction may release a 4-year TCC with the same Point of Injections and Point of Withdrawal for sale in the 4-year Sub-Auction. Similarly, that purchaser could instead release a corresponding 3-year TCC for sale in the 3-year Sub-Auction.

The following holders of TCCs may offer to sell TCCs in any round of a Sub-Auction appropriate to their duration (i) Primary Holders who did not sell those TCCs in a Direct Sale or in a previous round of the Centralized TCC Auction ; (ii) purchasers of TCCs in previous rounds of that Centralized TCC Auction or in previous ~~A~~auctions who have not subsequently sold those TCCs through an ~~A~~auction; and (iii) purchasers of TCCs through a Direct Sale who qualify to become Primary Holders and have not already sold those TCCs through an ~~A~~auction or through a Direct Sale, provided however that the sale of TCCs shall be subject to the limitations and prohibitions set forth in this ISO OATT including the limitation on the sale or transfer of Fixed Price TCCs and the limitation on the sale or other transfer of Incremental TCCs.

#### **19.9.1.1 Bid Requirements**

Bidders shall submit Bids into the Centralized TCC Auction in accordance with this Attachment M and ISO Procedures. Bidders shall submit Bids such that the sum of the value of its Bids ~~(excluding Bids for TCCs already held by that bidder)~~ shall not exceed that bidder's ability to pay for TCCs, as determined by ISO Procedures.

### **19.9.1.2 Bidding Rounds**

Bidders shall be awarded TCCs in each round of the Centralized TCC Auction and shall be charged the market-clearing price for that round, as ~~defined in this~~ determined by the ISO in accordance with Section 19.9.5 of this Attachment M, for all TCCs they purchase.

### **19.9.1.3 Reconfiguration Auctions**

All rules stated in this Section 19.9 for the auction rounds of a Centralized TCC Auction shall also apply to Reconfiguration Auctions unless otherwise stated or the context otherwise requires it. The scaling factor for the single round of a Reconfiguration Auction shall be one.

## **19.9.2 Responsibilities of the ISO**

The ISO shall establish the ~~A~~auction rules and procedures consistent with this Tariff. The ISO shall conduct the Optimal Power Flows in each round of the Centralized TCC Auction. The ISO will verify that the Optimal Power Flows calculated in each round of the Centralized TCC Auction corresponds to a simultaneously feasible Power Flow as described in Section 19.9.7 of this Attachment M. The ISO shall notify the Transmission Owners if: (1) the Optimal Power Flow results calculated are inaccurate; or (2) the Optimal Power Flow is not calculated in accordance with the correct procedure.

Additionally, the ISO will determine the information pertaining to the ~~A~~auction to be made available to Centralized TCC Auction participants over the OASIS and publish information on its OASIS accordingly. The ISO may develop a list of POIs and POWs between which TCCs may not be purchased and shall post such list on its OASIS. The ISO will identify the details to be included in development of the ~~A~~auction software and arrange for development of the software.

The ISO will apply the credit requirements established in this ISO OATT and Attachment K of the [NYISO Services](#) ~~t~~[Tariff](#) to Primary Holders of TCCs and to bidders in the Centralized TCC Auctions and Reconfiguration Auctions.

The ISO shall not reveal the Bid Prices submitted by any bidder in the [Centralized TCC Auction](#) until three months after the Bids were submitted. When these Bid Prices are posted, the names of the bidders shall not be publicly revealed, but the data shall be posted in a way that permits third parties to track each individual bidder's Bids over time.

The ISO will settle all Centralized TCC Auctions and Reconfiguration Auctions, and will settle all Congestion settlements related to the Day-Ahead Market, pursuant to Attachment N.

### **19.9.3 Additional Responsibilities of the ISO**

The ISO shall be capable of completing the Centralized TCC Auction within the time frame specified in this Attachment M.

The ISO will establish an auditable information system to facilitate analysis and acceptance or rejection of Bids, and to provide a record of all Bids and the award of Fixed Price TCCs. The ISO shall also provide all necessary assistance in the resolution of disputes that arise from questions regarding the acceptance, rejection, award and recording of Bids, or the award of Fixed Price TCCs, pursuant to Sections 19.2.1 or 19.2.2.above. The ISO will establish a system to communicate ~~A~~[a](#)uction-related information to all ~~A~~[a](#)uction participants between rounds of the [Centralized TCC Auction](#). (This last requirement will not apply to single-round ~~A~~[a](#)uctions.)

The ISO will receive Bids to buy TCCs from any entity that meets the eligibility criteria established in this ISO OATT and will implement the ~~A~~[a](#)uction bidding rules previously established by the ISO. In accordance with ISO Procedures, the ISO shall unbundle TCCs in accordance with a request made by a Transmission Customer awarded a TCC. Unbundling

TCCs shall consist of replacing that TCC with an equivalent set of TCCs. In all cases, the amount payable to (or by) the Primary Holder of such a set of TCCs will be equal to the amount payable to (or by) the Primary Holder of the original TCC.

The ISO will be required to solve Optimum Power Flows for the NYS Transmission System; properly utilize an Optimum Power Flow program to determine the set of winning Bids for each round of the Centralized TCC Auction; and calculate the market-clearing price of all TCCs at the conclusion of each round of the Centralized TCC Auction, in the manner described in this Attachment M.

#### **19.9.4 Responsibilities of each Bidder**

To qualify to submit Bids and offers in a Centralized TCC Auction, a party shall register as a Customer or Transmission Customer and shall otherwise comply with all applicable registration requirements established in ISO Procedures. All Customers and Transmission Customers seeking to submit Bids and ~~O~~offers in a Centralized TCC Auction shall comply with all applicable credit requirements as set forth in Attachment K of the [NYISO Services](#) ~~t~~Tariff.

Each bidder shall submit Bids to purchase and sell TCCs into the Centralized TCC Auction in accordance with this Attachment M and ISO Procedures. Each bidder shall submit the following information with its Bids to purchase TCCs: (i) the number of TCCs for which an offer to purchase is made, (ii) the Bid Price (in \$/TCC) which represents the maximum amount the bidder is willing to pay for the TCC (Bid Prices may be negative, indicating that a bidder would have to be paid in order to accept a TCC); (iii) the location of the Point of Injection and the Point of Withdrawal for the TCC to which the Bid applies (these locations may be any locations for which the ISO calculates an LBMP and which is otherwise available as a TCC POI or POW); and (iv) if the ~~A~~auction is a ~~Centralized TCC Auction~~[Balance-of-Period](#), the ~~duration~~

~~in multiples of Capability Periods of the TCC~~ month(s) for which the bidder is bidding.

Additionally, if the ISO offers TCCs for sale that are valid in sub-periods (e.g., on-peak or off-peak TCCs), this information must also be provided by the Bidder.

Each bidder must submit such information to the ISO regarding the bidder's or LSE's creditworthiness as the ISO may require, along with a statement signed by the bidder, or LSE representing that the bidder or LSE is financially able and willing to pay for the TCCs for which it is bidding ~~or converting~~. The aggregate value of the Bids submitted by any bidder into the Centralized TCC Auction shall not exceed that bidder's ability to pay or the maximum value of Bids that bidder is permitted to place, as determined by the ISO (based on an analysis of that bidder's creditworthiness).

#### **19.9.5 Selection of Winning Bids and Determination of the Market Clearing Price**

The ISO shall determine the winning set of Bids in each round of the Centralized TCC Auction as follows: (i) the ISO shall use an Optimal Power Flow program with the initial assumptions identified by the ISO; (ii) the Optimal Power Flow shall use the same Reference Bus and system security constraints assumptions as used by the ISO subject to ISO Procedures; (iii) the ISO shall select the set of Bids that maximizes the value of the TCCs awarded to the winning bidders; (iv) the aggregate market value of the TCCs awarded to each bidder shall not exceed that bidder's ability to pay, since each bidder is not allowed to Bid more than its ability to pay as determined by the ISO; and (v) the selected set of Bids must be simultaneously feasible as described in this Attachment M.

In the Centralized TCC Auction, if the ISO elects to perform separate ~~A~~auctions for on-peak and off-peak TCCs, the procedure used to select winning Bids in an on-peak ~~A~~auction will not depend on winning Bids selected in an off-peak ~~A~~auction; nor shall the procedure used to



select winning Bids in an off-peak ~~A~~auction depend on winning Bids selected in an on-peak ~~A~~auction.

The market clearing price for each TCC in each round of a Centralized TCC Auction shall be determined using a similar algorithm to that used to determine LBMPs (refer to Attachment J and ISO Procedures). ~~The market-clearing price for each TCC shall be based on the lowest winning Bid made in that round for that TCC (or for other TCCs if injections and withdrawals corresponding to those TCCs would have the same impact on flows over congested Interfaces as injections and withdrawals corresponding to that TCC)~~For a Balance-of-Period Auction, if an awarded TCC has a duration of more than one month, the market-clearing price for such multi-month TCC will equal the sum of the market-clearing prices for one-month TCCs with the same Point of Injection and Point of Withdrawal, which in aggregate cover the same period for which the multi-month TCC is valid.

#### **19.9.6 Settlements, Billing, Payment, and Disputes**

Each bidder must pay the market-~~=~~clearing price for each TCC it is awarded in the Centralized TCC Auction.

Charges for TCCs awarded in ~~the Centralized TCC~~an Auction, shall be billed upon completion of the Centralized TCC Auction or Reconfiguration Auction process through the delivery of an award notice by the ISO. The ISO shall establish a dispute period ~~following~~which follows the conclusion of the Centralized TCC Auction or Reconfiguration Auction during which challenges to awards may be made and mistakes in the calculation of market clearing prices may be corrected. Notice of the dispute period established by the ISO and of procedures to be employed in bringing a dispute or correcting a market clearing price shall be provided by the ISO on its OASIS.

Following the resolution of challenges, if any, to Centralized TCC Auction or Reconfiguration Auction awards, or mistakes in the calculation of market-clearing prices, raised during the dispute period, charges and payments for TCCs awarded or sold in the Centralized TCC Auction and Reconfiguration Auction shall be final as provided in the award notices provided by the ISO and shall not be subject to revision.

#### **19.9.7 Simultaneous Feasibility**

The set of winning Bids selected in each round of a Sub-Auction shall correspond to a simultaneously feasible Power Flow.

The Power Flow must be able to accommodate in each round injections and withdrawals corresponding to each of the following TCCs and Grandfathered Rights: (i) TCCs not offered for sale in that round, including Grandfathered TCCs, Original Residual TCCs, or any other existing TCCs whether purchased in a previous Auction, an earlier round of the current Centralized TCC Auction or otherwise acquired that are valid for any part of the duration of any TCCs to be sold in that round (or in the case of a Balance-of-Period Auction are valid for the relevant month at issue), as well as TCCs offered for sale in that round but not awarded that are valid for any part of the duration of any TCCs to be sold in that round (or in the case of a Balance-of-Period Auction are valid for the relevant month at issue); (ii) Grandfathered Rights; and (iii) TCCs awarded in the current round. Each injection and withdrawal associated with Bids for TCCs ~~and Grandfathered Rights~~ will be multiplied by a scaling factor which apportions the transmission Capacity available among each of the rounds.

A set of injections and withdrawals shall be judged simultaneously feasible if it would not cause any thermal, voltage, or stability violations within the NYCA for base case conditions or any monitored contingencies.

When performing Power Flows for the purpose of determining simultaneous feasibility, injections for TCCs that specify a Load Zone as the Point of Injection will be modeled as a set of injections at each Load bus in the Load Zone containing the Point of Injection equal to the product of the number of TCCs and the ratio of Load served at each bus to Load served in the Load Zone, based on the bus Loads used in calculating zonal LBMPs.

When performing the above Power Flows, withdrawals for TCCs that specify a Load Zone as the Point of Withdrawal will be modeled as a set of withdrawals at each Load bus in the Load Zone containing the Point of Withdrawal equal to the product of the number of TCCs and the ratio of the Load served at each bus to the total Load served in the Load Zone based on the ISO's estimate of the bus Loads used in calculating the Zonal LBMPs.

The Power Flow simulations shall take into consideration the effects of parallel flows on the transmission Capacity of the NYS Transmission System when determining which sets of injections and withdrawals are simultaneously feasible.

#### **19.9.8 Information to be Made Available to Bidders**

The ISO shall provide over the ISO's OASIS the expected non-simultaneous Total Transfer Capability for each Interface (as displayed on the OASIS).

The ISO shall make the following information available before each Centralized TCC [Auction](#) or Reconfiguration Auction:

- 19.9.8.1 for each Generator bus, external bus and Load Zone for the previous ten (10) Capability Periods, if available, (a) the [monthly](#) average Congestion Component of the [Day-Ahead](#) LBMP, relative to the Reference Bus, and (b) the [monthly](#) average Marginal Losses Component of the [Day-Ahead](#) LBMP, relative to the Reference Bus;

19.9.8.2 for the previous two Capability Periods, ~~(a)~~ data from which the following can be determined: ~~(a) historical~~ the flow for each of the closed Interfaces in the Day-Ahead Market, and (b) ~~historically~~, the number of hours that the most limiting facilities were physically constrained in the Day-Ahead;

19.9.8.3 ~~S~~subject to a Transmission Customer's completion of a non-disclosure agreement in the form required by ISO procedures: (a) Power Flow data to be used as the starting point for the Centralized TCC Auction or Reconfiguration Auction, including all assumptions, (b) all limits associated with transmission facilities, contingencies, thermal, voltage and stability to be monitored as constraints in the Optimum Power Flow determination;

19.9.8.4 (a) assumptions made by the ISO relating to transmission maintenance outage schedules, and (b) the ISO summer and winter operating study results (non-simultaneous Interface Transfer Capabilities); and

19.9.8.5 on its website no fewer than five (5) business days prior to the date on which a Centralized TCC Auction will begin, the number of megawatts of each set of ETCNL that each Transmission Owner has elected to convert to ETCNL TCCs for the Centralized TCC Auction and the RCRRs that each Member System has elected to convert to RCRR TCCs for the Centralized TCC Auction~~;~~

The ISO shall make the following information available with respect to each Centralized TCC Auction or Reconfiguration Auction:

19.9.8.6 between each round of bidding during the Centralized TCC Auction, for all bidders bidding in subsequent rounds, the ~~M~~market-~~C~~clearing ~~P~~price, stated

relative to the Reference Bus for each Generator bus, External bus and Load Zone; and

19.9.8.7 for each TCC awarded in each round; (a) the number of TCCs awarded, (b) the Point of Injection and Point of Withdrawal for that TCC, (c) the market clearing price for the TCC, ~~and~~ (d) the ~~A~~ auction participant awarded the TCC, and (e) if the auction is a Balance-of-Period Auction, the month(s) for which the awarded TCCs are valid.

Items 19.9.8.1, 19.9.8.2, 19.9.8.3, 19.9.8.4(b), and 19.9.8.6 above shall be made available separately for on-peak and off-peak periods, if on-peak and off-peak TCCs will be separately available for purchase in the upcoming ~~A~~ auction.

If the auction is a Balance-of-Period Auction, items 19.9.8.4(a) and 19.9.8.6 above shall be made available separately for each month covered by the auction.

The ISO will make available information about Secondary Market transactions, and all sales of TCCs by Direct Sale, to the extent received by the ISO.

## 19.10 End-State Auctions for TCCs

Upon the completion of more sophisticated Auction software, the ISO will perform an End-State [Centralized TCC](#) Auction, which will permit the Bids submitted by Auction participants to determine the lengths of the TCCs sold in the [End-State Centralized TCC](#) Auction. The End-State [Centralized TCC](#) Auction will be held annually. The date for the first End-State [Centralized TCC](#) Auction shall be determined by the ISO. The period during which each TCC sold in an End-State [Centralized TCC](#) Auction is valid shall begin on the beginning date of a Capability Period, and shall conclude on the ending date of a Capability Period.

The ISO will determine the maximum duration and minimum duration of the TCCs available in the End-State [Centralized TCC](#) Auctions. The ISO shall have the authority to determine the percentage of the available transmission Capacity that will be sold in each round of the [End-State Centralized TCC](#) Auction. The ISO shall announce these percentages before the [End-State Centralized TCC](#) Auction. The ISO shall also determine the periods for which TCCs will be sold in End-State [Centralized TCC](#) Auctions (*e.g.*, TCCs valid during on-peak and off-peak periods, or TCCs valid during Winter and Summer Capability Periods). The ISO may elect to vary the duration or the periods for which TCCs will be available from one End-State [Centralized TCC](#) Auction to the next End-State [Centralized TCC](#) Auction.

The End-State [Centralized TCC](#) Auction will not include separate Sub-Auctions for TCCs of different durations. Instead, TCCs of each permitted duration will be allocated as the result of the operation of a single Auction. If, [for example](#), a Market Participant wishes to purchase a TCC beginning in the Summer Capability Period of 2003, and ending in the Winter Capability Period of 2004-2005, it would submit a single Bid for this TCC. If that Bid is a winning Bid, the bidder would be awarded a TCC valid for the entire two year-long period; if the

Bid is a losing Bid, the bidder would not receive the TCC for any portion of this period. The ISO will not specify in advance the portion of system transmission Capacity that will be used to create TCCs of differing durations. Rather, the durations of TCCs awarded will be determined as part of the objective of the [End-State Centralized TCC](#) Auction, and will depend on the Bids submitted by participants in the [End-State Centralized TCC](#) Auction.

In a given round of the End-State [Centralized TCC](#) Auction, the ~~M~~market-~~C~~clearing ~~P~~price determined for a TCC that is valid for multiple Capability Periods will equal the sum of the ~~M~~market-~~C~~clearing ~~P~~prices for shorter-term TCCs with the same Point of Injection and Point of Withdrawal, which in aggregate cover the same period for which the longer-term TCC is valid. (For example, the price of a TCC that is valid from May 2001 through April 2003 would equal the sum of the prices in that round for (1) TCCs valid from May 2001 through April 2002 and (2) TCCs valid from May 2002 through April 2003.)

The End-State [Centralized TCC](#) Auction will include multiple rounds of bidding, as described elsewhere in this Attachment [M](#).

Transmission Capacity that can be used to support TCCs sold in End-State [Centralized TCC](#) Auctions shall include all transmission Capacity except that necessary to support the following: Original Residual TCCs that the Transmission Owners sell directly in advance of the [End-State Centralized TCC](#) Auction; any TCCs previously allocated (either in an ~~A~~auction or through other means) that have not been offered for sale in ~~this~~the [End-State Centralized TCC](#) Auction; and transmission Capacity needed to support Grandfathered Rights.

The End-State [Centralized TCC](#) Auction will allow reconfiguration of the TCCs sold in the previous ~~A~~auctions. An entity holding a five-year TCC, for example, may release a TCC for some or all of the period for which that TCC is valid for sale in the End-State [Centralized TCC](#)

Auction.

If necessary, the ISO may elect to conduct a semi-annual ~~A~~auction to sell six-month TCCs between annual End-State Centralized TCC Auctions. The transmission Capacity that can be used to support TCCs purchased in this semi-annual ~~A~~auction shall include the portion of the transmission Capacity sold in the previous End-State Centralized TCC Auction as six-month TCCs, as well as any other outstanding TCC whose Primary Holder elects to release it for sale in this semi-annual ~~A~~auction.



**Table 1 - TCC Reservations Subject to MW Reduction**

					Sum	Win	Interface Allocations _ Summer Period									
	Reservation Holder	Name	From	To	MW	MW	DE	WC	VE	MoS	TE	US	UC	MS	DS	CE_LI
1	Con Edison	Bowline	Bowline	Con Edison	801	801							801	768	584	
2	Con Edison	ST4 HQ	–Pleasant Valley	Con Edison	400	208							400	384	292	
3	Con Edison	Gilboa	Pleasant Valley	Con Edison	125	125							125	120	91	
4	Con Edison	Roseton	Roseton_GN1	Con Edison	480	480							480	461	351	
5	Con Edison	Corinth	–Pleasant Valley	Con Edison	134	134							134	129	98	
6	Con Edison	Sithe	–Pleasant Valley	Con Edison	837	837							837	803	611	
7	Con Edison	Selkirk	Pleasant Valley	Con Edison	265	265							265	254	193	
8	Con Edison	IP2	Indian Pt 2	Con Edison	893	893								893	679	
9	Con Edison	IP3	Indian Pt 3	Con Edison	108	108								108	82	
10	Con Edison	IP Gas Turbine	IP GT_Buchanan	Con Edison	48	48								48	36	
11	NMPC	NMP1	NMP1	NMPC _ East	610	610			610		610					
12	NMPC	NMP2	NMP2	NMPC _ East	460	460			460		460					
13	NMPC	Hydro North	Colton	NMPC _ East	110	110					110					
14	NYSEG	Homer City	PJM Proxy Generator Bus	NYSEG _ Cent.	863	863	863	863								
15	NYSEG	Homer City	PJM Proxy Generator Bus	NYSEG _ West	100	100										
16	NYSEG	Allegheny 8&9	PJM Proxy Generator Bus	NYSEG _ Cent.	37	37	37	37								
17	NYSEG	BCLP	PJM Proxy Generator Bus	NYSEG _ Cent.	80	80	80	80								
18	NYSEG	LEA (Lockport)	Gardenville	NYSEG _ Cent.	100	100	100	100								
19	NYSEG	Gilboa	Gilboa	NYSEG _ Mech	99	99										
20	SENY (2) (4)	Niagara OATT Reservation	Niagara	Con Edison	422	422	422 (3)	422 (3)	422 (3)		422 (3)	422 (3)	422 (3)	422 (3)	422 (3)	
21	SENY (2) (4)	St. Lawrence OATT Reserv.	St. Lawrence	Con Edison	178	178				178 (3)	178 (3)	178 (3)	178 (3)	178 (3)	178 (3)	

Notes: 1. Interface Designations: DE - Dysinger East WC - West Central VE - Volney East  
MoS - Moses South US - UPNY/SENY  
UC - UPNY/Con Ed MS - Millwood South DS - Dunwoodie South  
CE-LI - Con Ed/LILCO

- Subject to NYPA's obtaining non-discriminatory long term firm reservation through 2017 under their -OATT.
- NYPA's TCCs allocated to their SENY Governmental Load Customers, across UPNY/Con Ed, Millwood South and Dunwoodie South will be up to 600 MW, or amounts otherwise available -to NYPA pursuant to the grandfathered rights applicable under the Planning & Supply and Delivery Services Agreement between NYPA and Con Edison dated March 1989.
- NYPA's TCCs allocated to their SENY Governmental Load Customers will terminate on the earlier of December 31, 2017 or when NYPA no longer has an obligation to serve any SENY Loads or the retirement or sale of both IP#3 and Poletti.

**TABLE 2- ETCNL Data for Converting ETCNL to ETCNL TCCs**

	Holder of ETCNL	Name of Set of ETCNL	Point of Injection	Point of Withdrawal	Transmission Capacity (MW)
1.	Con Edison	Native Load-Bowline	Bowline <a href="#">#1/Bowline #2</a>	Millwood Zone	<del>33</del> 16 (Bowline #1)/17 (Bowline #2)
2.	Con Edison	Native Load-Bowline	Bowline <a href="#">#1/Bowline #2</a>	Dunwoodie Zone	<del>184</del> 92 (Bowline #1)/92 (Bowline #2)
3.	Con Edison	Native Load-Bowline	Bowline <a href="#">#1/Bowline #2</a>	NYC Zone	<del>584</del> 292 (Bowline #1)/292 (Bowline #2)
4.	Con Edison	Native Load- HQ Capacity Purchase	Pleasant Valley	Millwood Zone	16 (summer)/8 (winter)
5.	Con Edison	Native Load- HQ Capacity Purchase	Pleasant Valley	Dunwoodie Zone	92 (summer)/48 (winter)
6.	Con Edison	Native Load- HQ Capacity Purchase	Pleasant Valley	NYC Zone	292 (summer)/152 (winter)
7.	Con Edison	Native Load - Gilboa	Pleasant Valley	Millwood Zone	5
8.	Con Edison	Native Load - Gilboa	Pleasant Valley	Dunwoodie Zone	29
9.	Con Edison	Native Load - Gilboa	Pleasant Valley	NYC Zone	91
10.	Con Edison	Native Load - Roseton	Roseton- <a href="#">#1/Roseton #2</a>	Millwood Zone	<del>49</del> 9 (Roseton #1)/10 (Roseton #2)
11.	Con Edison	Native Load - Roseton	Roseton- <a href="#">#1/Roseton #2</a>	Dunwoodie Zone	<del>140</del> 55 (Roseton #1)/55 (Roseton #2)
12.	Con Edison	Native Load - Roseton	Roseton- <a href="#">#1/Roseton #2</a>	NYC Zone	<del>354</del> 175 (Roseton #1)/176 (Roseton #2)
13.	Con Edison	Native Load - Corinth	Pleasant Valley	Millwood Zone	5
14.	Con Edison	Native Load - Corinth	Pleasant Valley	Dunwoodie Zone	31
15.	Con Edison	Native Load - Corinth	Pleasant Valley	NYC Zone	98
16.	Con Edison	Native Load - Sithe	Pleasant Valley	Millwood Zone	34
17.	Con Edison	Native Load - Sithe	Pleasant Valley	Dunwoodie Zone	192
18.	Con Edison	Native Load - Sithe	Pleasant Valley	NYC Zone	611
19.	Con Edison	Native Load - Selkirk	Pleasant Valley	Millwood Zone	11
20.	Con Edison	Native Load - Selkirk	Pleasant Valley	Dunwoodie Zone	61
21.	Con Edison	Native Load - Selkirk	Pleasant Valley	NYC Zone	193
22.	Con Edison	Native Load - IP2	Indian Pt 2	Dunwoodie Zone	214
23.	Con Edison	Native Load - IP2	Indian Pt 2	NYC Zone	679
24.	Con Edison	Native Load - IP3	Indian Pt 3	Dunwoodie Zone	26
25.	Con Edison	Native Load - IP3	Indian Pt 3	NYC Zone	82
26.	Con Edison	Native Load - IP Gas Turbine	Indian Pt.-GT Buchanan	Dunwoodie Zone	12
27.	Con Edison	Native Load - IP Gas Turbine	Indian Pt.-GT Buchanan	NYC Zone	36
28.	NMPC	Native Load - NMP1	Nine Mile Pt. #1	Capital Zone	610
29.	NMPC	Native Load - NMP2	Nine Mile Pt. #2	Capital Zone	460
30.	NMPC	Native Load - Hydro North	Colton Hydro	Capital Zone	110
31.	NYSEG	Native Load - Homer City	PJM Proxy Bus	Central Zone	863
32.	NYSEG	Native Load - Homer City	PJM Proxy Bus	West Zone	100
33.	NYSEG	Native Load - Allegheny 8&9	PJM Proxy Bus	Central Zone	37
34.	NYSEG	Native Load - BCLP	PJM Proxy Bus	Central Zone	80
35.	NYSEG	Native Load - LEA (Lockport)	Gardenville	Central Zone	100
36.	NYSEG	Native Load - Gilboa	Gilboa	Capital Zone	99

Notes: —1.—Where two different amounts of transmission Capacity are separated by a “/”, the first number shall indicate the transmission Capacity available for conversion to ETCNL TCCs in a Centralized TCC Auction held for a Summer Capability Period, and the second number shall indicate the transmission Capacity available for conversion to ETCNL TCCs in a Centralized TCC Auction held for a Winter Capability Period.

TABLE 3- LIST OF ORIGINAL RESIDUAL TCCS			
Primary Holder of Original Residual TCCs	Point of Injection	Point of Withdrawal	Number of Original Residual TCCs
NYSEG	West	Genesee	16
NMPC	West	Genesee	23
NYPA	West	Genesee	28
RG&E	West	Genesee	3

## **20.1 Overview and Definitions**

### **20.1.1 Overview**

This Attachment N describes the Congestion settlements related to the Day-Ahead Market and the settlements related to Centralized TCC Auctions and Reconfiguration Auctions. Congestion Rent settlements for Real-Time Market Energy Transactions or Bilateral Transactions scheduled in the Real-Time Market are not addressed in this Attachment N.

Section 20.2 addresses the Congestion settlements related to each hour of the Day-Ahead Market. These settlements include, as applicable pursuant to this Attachment N, charges or payments for Congestion Rents for Energy Transactions in the Day-Ahead Market and for Bilateral Transactions scheduled in the Day-Ahead Market, and settlements with Primary Holders of TCCs. In addition, these settlements include, as applicable pursuant to this Attachment N, O/R-t-S Congestion Rent Shortfall Charges, U/D Congestion Rent Shortfall Charges, O/R-t-S Congestion Rent Surplus Payments, and U/D Congestion Rent Surplus Payments. The ISO shall allocate to Transmission Owners the net of all of these settlements as Net Congestion Rents as described in this Attachment N.

Section 20.3 addresses the settlements in each round of each Centralized TCC Auction and in each Reconfiguration Auction. These settlements include, as applicable pursuant to this Attachment N, charges or payments to purchasers of TCCs, charges or payments to Primary

Holders selling TCCs, payments to Transmission Owners in a Centralized TCC Auction for ETCNL released into the Centralized TCC Auction, and payments to Transmission Owners for Original Residual TCCs that are released into the Centralized TCC Auction. In addition, these settlements include, as applicable pursuant to this Attachment N, O/R-t-S Auction Revenue Shortfall Charges, U/D Auction Revenue Shortfall Charges, O/R-t-S Auction Revenue Surplus

Payments, and U/D Auction Revenue Surplus Payments. The ISO shall allocate to Transmission Owners the net of all of these settlements as Net Auction Revenue as described in this Attachment N.

Section 20.4 addresses the allocation of revenue from the initial award and annual renewals of Historic Fixed Price TCCs. The ISO shall allocate such revenues to Transmission Owners as described in this Attachment N.

Provisions of this Attachment N applicable to a transmission facility outage or return-to-service shall not apply to a transmission facility derating or uprating. Charges and payments under this Attachment N shall be made to a Transmission Owner for a transmission facility derating or uprating only as specified in Sections 20.2.4.3 and 20.3.6.3.

This Attachment N shall not apply to the obligation to pay an outage charge which obligation attaches to persons or entities not otherwise subject to Section 20.2.5 of this Attachment N that own an Expansion (or a portion of an Expansion) associated with a temporary or final award of Incremental TCCs or which has been assigned Incremental TCCs related to an Expansion which Expansion is modeled as wholly or partially out of service for any hour in the Day-Ahead Market which obligation to pay to the ISO an outage charge shall be determined pursuant to Attachment M to the [ISO](#) OATT.

Unless expressly provided for otherwise in the ISO Tariffs, such as in a rate schedule, this Attachment N shall apply to the Member Systems. This Attachment N shall only apply to Transmission Owners other than the Member Systems to the extent that the ISO Tariffs, such as in a rate schedule, do not provide otherwise.

#### **20.1.2 Defined Terms Used in Attachment N**

Capitalized terms used in this Attachment N shall have the meaning specified below in

this Section 20.1.2, and capitalized terms used in this Attachment N but not defined below shall have the meaning given to them in Section 1 of the [ISO OATT](#):

**Actual Qualifying Auction Derating:** As defined in Section 20.3.6.3.1.

**Actual Qualifying Auction Outage:** As defined in Section 20.3.6.2.1.

**Actual Qualifying Auction Return-to-Service:** As defined in Section 20.3.6.2.1.

**Actual Qualifying Auction Up-rating:** As defined in Section 20.3.6.3.1.

**Actual Qualifying DAM Derating:** As defined in Section 20.2.4.3.1.

**Actual Qualifying DAM Outage:** As defined in Section 20.2.4.2.1.

**Actual Qualifying DAM Return-to-Service:** As defined in Section 20.2.4.2.1.

**Actual Qualifying DAM Up-rating:** As defined in Section 20.2.4.3.1.

**Auction Constraint Residual:** The dollar value associated with a Constraint that is binding for a round of a 6-month Sub-Auction of a Centralized TCC Auction or a given month covered by a Reconfiguration Auction, which is calculated pursuant to Section 20.3.6.1.

**Auction Status Change:** Any of the following: Qualifying Auction Outage, Qualifying Auction Derating, Qualifying Auction Return-to-Service, or Qualifying Auction Up-rating.

**Centralized TCC Auction Interface Uprate/Derate Table:** The interface derate table posted on the ISO website prior to a given Centralized TCC Auction specifying the impact on transfer limits of Qualifying DAM Outages and Qualifying DAM Returns-to-Service for a Sub-Auction of a Centralized TCC Auction.

**DAM Constraint Residual:** The dollar value associated with a Constraint that is binding for an hour of the Day-Ahead Market, which is calculated pursuant to Section 20.2.4.1.

**DAM Status Change:** Any of the following: Qualifying DAM Outage, Qualifying DAM Derating, Qualifying DAM Return-to-Service, or Qualifying DAM Up-rating.

**DCR Allocation Threshold:** Five thousand dollars (\$5,000), except that this amount shall be reduced for any given month to the extent necessary so that the sum of all DAM Constraint Residuals for the month (for all binding constraints and for all hours of the month) that are less than the DCR Allocation Threshold is not greater than either two hundred and fifty thousand dollars (\$250,000) or five percent (5%) of the sum of all DAM Constraint Residuals for the month (for all binding constraints and for all hours of the month) that would have been calculated if the DCR Allocation Threshold were set equal to zero.

**Deemed Qualifying Auction Derating:** As defined in Section 20.3.6.3.1.

**Deemed Qualifying Auction Outage:** As defined in Section 20.3.6.2.1.

**Deemed Qualifying Auction Return-to-Service:** As defined in Section 20.3.6.2.1.

**Deemed Qualifying Auction Upgrading:** As defined in Section 20.3.6.3.1.

**Deemed ISO-Directed Auction Status Change:** Any of the following: (1) an Actual Qualifying Auction Return-to-Service for a given month covered by a Reconfiguration Auction that occurs for a transmission facility that, in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month~~-corresponding to the relevant Reconfiguration Auction~~), was a Qualifying Auction Outage that qualified as an ISO-Directed Auction Status Change; (2) an Actual Qualifying Auction Upgrading for a given month covered by a Reconfiguration Auction that occurs as a result of an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service of a transmission facility that, in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month~~-corresponding to the relevant Reconfiguration Auction~~), qualified as a Qualifying Auction Outage or Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change; or (3) an Actual Qualifying Auction Derating for a given month covered by a Reconfiguration Auction that occurs as a result of an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service of a transmission facility that, in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month~~-corresponding to the relevant Reconfiguration Auction~~), qualified as an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change.

**Deemed ISO-Directed DAM Status Change:** Any of the following: (1) an Actual Qualifying DAM Return-to-Service for an hour of the Day-Ahead Market that occurs for a transmission facility that, for the month that contains the relevant hour in the last Reconfiguration Auction held for TCCs valid for the relevant hour (or if no Reconfiguration Auction was held for TCCs valid during the relevant hour, then the last 6-month Sub-Auction of a Centralized TCC Auction held for TCCs valid for the relevant hour), was an Actual Qualifying Auction Outage that qualified as an ISO-Directed Auction Status Change; (2) an Actual Qualifying DAM Upgrading for an hour of the Day-Ahead Market that occurs for a transmission facility that, for the month that contains the relevant hour in the last Reconfiguration Auction held for TCCs valid for the relevant hour (or if no Reconfiguration Auction was held for TCCs valid during the relevant hour, then the last 6-month Sub-Auction of a Centralized TCC Auction held for TCCs valid for the relevant hour), qualified as an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change; or (3) an Actual Qualifying DAM Derating for an hour of the Day-Ahead Market that occurs for a transmission facility that, for the month that contains the relevant hour in the last Reconfiguration Auction held for TCCs valid for the relevant hour (or if no Reconfiguration Auction was held for TCCs valid during the relevant hour, then the last 6-month Sub-Auction of a Centralized TCC Auction held for TCCs valid for the relevant hour), qualified as an Actual Qualifying Auction Outage or

an Actual Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change. (The terms "Actual Qualifying Auction Outage" and "ISO-Directed Auction Status Change" shall, if not defined in this Section 20.1.2, have the meaning given in the ISO's March 17, 2006, filing.)

**Deemed Qualifying DAM Derating:** As defined in Section 20.2.4.3.1.

**Deemed Qualifying DAM Outage:** As defined in Section 20.2.4.2.1.

**Deemed Qualifying DAM Return-to-Service:** As defined in Section 20.2.4.2.1.

**Deemed Qualifying DAM Upgrading:** As defined in Section 20.2.4.3.1.

**ISO-Directed Auction Status Change:** Either of the following: (1) an Actual Qualifying Auction Outage for a [given month covered by a](#) Reconfiguration Auction or a round of a Centralized TCC Auction that is directed by the ISO or results from an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service directed by the ISO; or (2) an Actual Qualifying Auction Derating or an Actual Qualifying Auction Upgrading for a [given month covered by a](#) Reconfiguration Auction or a round of a Centralized TCC Auction that results from an Actual Qualifying Auction Outage directed by the ISO.

**ISO-Directed DAM Status Change:** Either of the following: (1) an Actual Qualifying DAM Outage for an hour of the Day-Ahead Market that is directed by the ISO or results from an Actual Qualifying DAM Outage or an Actual Qualifying DAM Return-to-Service directed by the ISO; or (2) an Actual Qualifying DAM Derating or an Actual Qualifying DAM Upgrading for an hour of the Day-Ahead Market that results from an Actual Qualifying DAM Outage directed by the ISO.

**Normally Out-of-Service Equipment:** Transmission facilities that are normally operated as out-of-service by mutual agreement of the transmission facility owner and the ISO and that appear on the list of such equipment posted on the ISO website.

**Outage/Return-to-Service Auction Constraint Residual ("O/R-t-S Auction Constraint Residual"):** The portion of an Auction Constraint Residual that is deemed to be attributable to Qualifying Auction Outages or Qualifying Auction Returns-to-Service, which O/R-t-S Auction Constraint Residual shall be calculated pursuant to Section 20.3.6.1.

**Outage/Return-to-Service Auction Revenue Shortfall Charge ("O/R-t-S Auction Revenue Shortfall Charge"):** A charge to a Transmission Owner that is created as a result of the allocation of an O/R-t-S Auction Constraint Residual pursuant to Section 20.3.6.2.

**Outage/Return-to-Service Auction Revenue Surplus Payment ("O/R-t-S Auction Revenue Surplus Payment"):** A payment to a Transmission Owner that is created as a result of the allocation of an O/R-t-S Auction Constraint Residual pursuant to Section 20.3.6.2.

**Outage/Return-to-Service Congestion Rent Shortfall Charge ("O/R-t-S Congestion Rent Shortfall Charge"):** A charge to a Transmission Owner that is created as a result of the allocation of an O/R-t-S DAM Constraint Residual pursuant to Section 20.2.4.2.



**Outage/Return-to-Service Congestion Rent Surplus Payment (“O/R-t-S Congestion Rent Surplus Payment”):** A payment to a Transmission Owner that is created as a result of the allocation of an O/R-t-S DAM Constraint Residual pursuant to Section 20.2.4.2.

**Outage/Return-to-Service DAM Constraint Residual (“O/R-t-S DAM Constraint Residual”):** The portion of a DAM Constraint Residual that is deemed to be attributable to Qualifying DAM Outages or Qualifying DAM Returns-to-Service, which O/R-t-S DAM Constraint Residual shall be calculated pursuant to Section 20.2.4.1.

**Qualifying Auction Derating:** As defined in Section 20.3.6.3.1.

**Qualifying Auction Outage:** As defined in Section 20.3.6.2.1.

**Qualifying Auction Return-to-Service:** As defined in Section 20.3.6.2.1.

**Qualifying Auction Uprating:** As defined in Section 20.3.6.3.1.

**Qualifying DAM Derating:** As defined in Section 20.2.4.3.1.

**Qualifying DAM Outage:** As defined in Section 20.2.4.2.1.

**Qualifying DAM Return-to-Service:** As defined in Section 20.2.4.2.1.

**Qualifying DAM Uprating:** As defined in Section 20.2.4.3.1.

**Reconfiguration Auction Interface Uprate/Derate Table:** The interface derate table posted on the ISO website prior to a Reconfiguration Auction specifying the impact on transfer limits of Qualifying DAM Outages and Qualifying DAM Returns-to-Service for the [month\(s\) covered by the](#) Reconfiguration Auction.

**Uprate/Derate Auction Constraint Residual (“U/D Auction Constraint Residual”):** The portion of an Auction Constraint Residual that is deemed to be attributable to Qualifying Auction Deratings or Qualifying Auction Upratings, which U/D Auction Constraint Residual shall be calculated pursuant to Section 20.3.6.1.

**Uprate/Derate Auction Revenue Shortfall Charge (“U/D Auction Revenue Shortfall Charge”):** A charge to a Transmission Owner that is created as a result of the allocation of a U/D Auction Constraint Residual pursuant to Section 20.3.6.3.

**Uprate/Derate Auction Revenue Surplus Payment (“U/D Auction Revenue Surplus Payment”):** A payment to a Transmission Owner that is created as a result of the allocation of a U/D Auction Constraint Residual pursuant to Section 20.3.6.3.

**Uprate/Derate Congestion Rent Shortfall Charge (“U/D Congestion Rent Shortfall Charge”):** A charge to a Transmission Owner that is created as a result of the allocation of a U/D DAM Constraint Residual pursuant to Section 20.2.4.3.

**Uprate/Derate Congestion Rent Surplus Payment (“U/D Congestion Rent Surplus Payment”):** A payment to a Transmission Owner that is created as a result of the allocation of a U/D DAM Constraint Residual pursuant to Section 20.2.4.3.

**Uprate/Derate DAM Constraint Residual (“U/D DAM Constraint Residual”):** The portion of a DAM Constraint Residual that is deemed to be attributable to a Qualifying DAM Derating or a Qualifying DAM Upgrading, which U/D DAM Constraint Residual shall be calculated pursuant to Section 20.2.4.1.

For purposes of this Attachment N, the term “transmission facility” shall mean any transmission line, phase angle regulator, transformer, series reactor, circuit breaker, or other type of transmission equipment.

For the purposes of this Attachment N, a “constraint” shall refer to a monitored transmission facility and a transmission facility that is out of service in the contingency being evaluated (including the base case).

All references in this Attachment N to ~~S~~sections shall be construed to be references to a section of this Attachment N.

## **20.2 Congestion Settlements Related to the Day-Ahead Market**

### **20.2.1 Overview of Congestion Settlements Related to the Day-Ahead Market; Calculation of Net Congestion Rents**

*Overview of DAM Related Congestion Settlements.* For each hour  $h$  of the Day-Ahead Market, the ISO shall settle all Congestion settlements related to the Day-Ahead Market. These Congestion settlements include, as applicable pursuant to the provisions of this Attachment N:

(i) Congestion Rent charges or payments for Energy Transactions in the Day-Ahead Market and Bilateral Transactions scheduled in the Day-Ahead Market; (ii) Congestion payments or charges to Primary Holders of TCCs; (iii) O/R-t-S Congestion Rent Shortfall Charges and U/D Congestion Rent Shortfall Charges; and (iv) O/R-t-S Congestion Rent Surplus Payments and U/D Congestion Rent Surplus Payments. Each of these settlements is represented by a variable in Formula N-1.

*Calculation of Net Congestion Rents for an Hour.* In each hour  $h$  of the Day-Ahead Market, the ISO shall calculate Net Congestion Rents pursuant to Formula N-1.

#### **Formula N-1**

$$NetCongestionRents_h = (Congestion Rents_h - TCC Payments_h - O/R-t-S\&U/D\ CRSC\&CRSP_h)$$

Where,

$NetCongestionRents_h$  = The total Net Congestion Rents for hour  $h$  of the Day-Ahead Market

$h$  = An hour of the Day-Ahead Market

$Congestion Rents_h$  = The sum of Congestion Rents for (i) Energy Transactions scheduled in hour  $h$  of the Day-Ahead Market, and (ii) Bilateral Transactions scheduled in hour  $h$  of the Day-Ahead Market, each as calculated pursuant to Section 20.2.2

$TCC Payments_h$  = The sum for all TCCs of all payments and charges made pursuant to Section 20.2.3 to Primary Holders of TCCs in hour  $h$

$O/R-t-S \& U/D$   
 $CRSC \& CRSP_h$ 
= The sum of all O/R-t-S Congestion Rent Shortfall Charges ( $O/R-t-S CRSC_{a,t,h}$ ), U/D Congestion Rent Shortfall Charges ( $U/D CRSC_{a,t,h}$ ), O/R-t-S Congestion Rent Surplus Payments ( $O/R-t-S CRSP_{a,t,h}$ ), and U/D Congestion Rent Surplus Payments ( $U/D CRSP_{a,t,h}$ ) for all Transmission Owners  $t$  (which sum is calculated for each Transmission Owner as  $NetDAMAllocations_{t,h}$  pursuant to Formula N-14), reduced by any zeroing out of such charges or payments pursuant to Section 20.2.4.5

The ISO shall allocate the Net Congestion Rents calculated in each hour to Transmission Owners pursuant to Section 20.2.5.

## 20.2.2 Congestion Rents Charged in the Day-Ahead Market

In each hour of the Day-Ahead Market, the ISO shall collect or pay Congestion Rents through Energy Transactions in the Day-Ahead Market and through Bilateral Transactions scheduled in the Day-Ahead Market.

*Day-Ahead Market Energy Transactions.* The ISO shall charge or pay Congestion Rents as part of the Congestion Component of the LBMP applicable to Energy injections and withdrawals scheduled in the Day-Ahead Market, as described in Attachment J of this Tariff. The total Congestion Rents for all Energy Transactions scheduled in the Day-Ahead Market in hour  $h$  are calculated pursuant to Formula N-2.

### Formula N-2

$$\sum_W MWh_{W,h} * CCPOW_{W,h} - \sum_I MWh_{I,h} * CCPOI_{I,h}$$

Where,

$MWh_{W,h}$  = Energy, in MWh, scheduled to be withdrawn in hour  $h$  pursuant to Day-Ahead Market schedule  $W$   
 $CCPOW_{W,h}$  = Congestion Component, in \$/MWh, at the Point of Withdrawal for Energy withdrawn in hour  $h$  pursuant to schedule  $W$   
 $MWh_{I,h}$  = Energy, in MWh, scheduled to be injected in hour  $h$  pursuant to Day-Ahead Market schedule  $I$

$CCPOI_{I,h}$  = Congestion Component, in \$/MWh, at the Point of Injection for Energy injected in hour  $h$  pursuant to schedule  $I$ .

*Bilateral Transactions.* The ISO shall charge or pay Congestion Rents as part of the Transmission Usage Charge applied to Bilateral Transaction  $B$  scheduled in the Day-Ahead Market, as described in Section 2.7.2.2 of this Tariff. Total Congestion Rents for all Bilateral Transactions scheduled in the Day-Ahead Market in hour  $h$  are calculated pursuant to Formula N-3.

**Formula N-3**

$$\sum_B MWh_{B,h} * CCTUC_{B,h}$$

Where,

$MWh_{B,h}$  = Energy, in MWh, of Bilateral Transaction  $B$  scheduled in the Day-Ahead Market in hour  $h$

$CCTUC_{B,h}$  = Congestion Component of the TUC, in \$/MWh, for scheduled Bilateral Transaction  $B$ , in hour  $h$ , which is equal to  $CCPOW_{B,h}$  -  $CCPOI_{B,h}$ .

$CCPOW_{B,h}$  = Congestion Component, in \$/MWh, at the Point of Withdrawal for Energy withdrawn in hour  $h$  pursuant to Bilateral Transaction  $B$

$CCPOI_{B,h}$  = Congestion Component, in \$/MWh, at the Point of Injection for Energy injected in hour  $h$  pursuant to Bilateral Transaction  $B$ .

**20.2.3 Congestion Payments Made To Primary Holders**

For each hour  $h$  of the Day-Ahead Market, the ISO shall charge or pay Congestion payments to the Primary Holders, as follows:

**Formula N-4**

$$Congestion\ Payment\ (\$/hr) = (CCPOW - CCPOI) * TCCMW$$

Where,

$CCPOW$  = Congestion Component (\$/MWh) at the Point of Withdrawal (POW)

$CCPOI$  = Congestion Component (\$/MWh) at the Point of Injection (POI)

$TCCMW$  = The number of TCCs in MW from POI to POW.

(See Attachment J for the calculation of the Congestion Component of the LBMP price at either the POI or the POW.)

The ISO shall pay Primary Holders for the Congestion payments from revenues collected from: (i) Congestion Rents, (ii) O/R-t-S Congestion Rent Shortfall Charges and U/D Congestion Rent Shortfall Charges, and (iii) Net Congestion Rents in accordance with Section 20.2.5.

~~The ISO shall assess a “Shortfall Reimbursement Surcharge” each month on monthly net positive Congestion payments to Primary Holders of TCCs sold in or after the Autumn 2004 Centralized TCC Auction. The Shortfall Reimbursement Surcharge shall be 0.5% of Congestion payments associated with TCCs that have a Point of Withdrawal outside of Load Zone J and 2.5% of Congestion payments associated with TCCs that have a Point of Withdrawal at, or inside of, Load Zone J.~~

~~The Shortfall Reimbursement Surcharge shall not be assessed on Congestion payments to Primary Holders of TCCs that produce net negative Congestion payments, i.e., that oblige the Primary Holder to make payments, in a given month, on Congestion payments to Primary Holders of Grandfathered TCCs, or on Congestion payments to Primary Holders of ETCNL TCCs or RCRR TCCs. The Shortfall Reimbursement Surcharge also shall not be assessed on Congestion payments to Primary Holders of TCCs sold before the Autumn 2004 Centralized TCC Auction, except to the extent that such TCCs are unbundled or reconfigured at the request of a Primary Holder, and sold, in or after that auction, in which case the Congestion payments associated with them shall be subject to the Shortfall Reimbursement Surcharge.~~

~~The ISO shall cease to impose the Shortfall Reimbursement Surcharge when it has collected sufficient funds to: (i) pay refunds for all of the “Historic Shortfall” plus interest pursuant to Article III of the July 13, 2004 Settlement Agreement that was approved by the~~

~~Commission in Docket Nos. EL04-110, EL04-113, EL04-115, and ER04-983; and~~  
~~(ii) replenished the ISO Working Capital Fund pursuant to Article IV of that Settlement~~  
~~Agreement.~~

#### **20.2.4 Charges and Payments to Transmission Owners for DAM Outages and Returns-to-Service**

The ISO shall charge O/R-t-S Congestion Rent Shortfall Charges and U/D Congestion Rent Shortfall Charges and pay O/R-t-S Congestion Rent Surplus Payments and U/D Congestion Rent Surplus Payments pursuant to this Section 20.2.4. To do so, the ISO shall calculate the DAM Constraint Residual for each binding constraint for each hour of the Day-Ahead Market and then determine the amount of each DAM Constraint Residual that is O/R-t-S DAM Constraint Residual and the amount that is U/D DAM Constraint Residual, as specified in Section 20.2.4.1. The ISO shall use the O/R-t-S DAM Constraint Residual to allocate O/R-t-S Congestion Rent Shortfall Charges and O/R-t-S Congestion Rent Surplus Payments to Transmission Owners pursuant to Sections 20.2.4.2 and 20.2.4.4, each of which shall be subject to being reduced to zero pursuant to Section 20.2.4.5. The ISO shall use the U/D DAM Constraint Residual to allocate U/D Congestion Rent Shortfall Charges and U/D Congestion Rent Surplus Payments to Transmission Owners pursuant to Sections 20.2.4.3 and 20.2.4.4, each of which shall be subject to being reduced to zero pursuant to Section 20.2.4.5.

##### **20.2.4.1 Measuring the Impact of DAM Outages and Returns-to-Service: Calculation of DAM Constraint Residuals and Division of DAM Constraint Residuals into O/R-t-S DAM Constraint Residuals and U/D DAM Constraint Residuals**

For each hour  $h$  of the Day-Ahead Market, the ISO shall identify all constraints that are binding in the Power Flow solution for the final schedules for hour  $h$  of the Day-Ahead Market. For each binding constraint  $a$  identified for each hour  $h$ , the ISO shall calculate the DAM

Constraint Residual,  $DCR_{a,h}$ , using Formula N-5; *provided, however*, where  $DCR_{a,h}$  calculated using Formula N-5 is not greater than the DCR Allocation Threshold or less than the negative of the DCR Allocation Threshold, then  $DCR_{a,h}$  shall be set equal to zero.

**Formula N-5**

$$DCR_{a,h} = ShadowPrice_{a,h} * \left[ \begin{array}{l} (FLOW_{a,h,DAM} - FLOW_{a,h,TCCAuction}) \\ + (UprateDerate_{a,h} * SCUCSignChange_{a,h}) \\ + (UnsoldCapacity_{a,h,RA} * SCUCSignChange_{a,h}) \end{array} \right]$$

Where,

- $DCR_{a,h}$  = The DAM Constraint Residual, in dollars, for binding constraint  $a$  in hour  $h$  of the Day-Ahead Market
- $ShadowPrice_{a,h}$  = The Shadow Price, in dollars/MWh, of binding constraint  $a$  in hour  $h$  of the Day-Ahead Market, which Shadow Price is calculated in a manner so that if relaxation of constraint  $a$  would permit a reduction in the associated Bid Production Cost,  $ShadowPrice_{a,h}$  is negative
- $FLOW_{a,h,DAM}$  = The Energy flow, in MWh, on binding constraint  $a$  for hour  $h$  for a set of injections and withdrawals that corresponds<sup>1</sup> to the set of TCCs and Grandfathered Rights represented [for the month that contains hour  \$h\$](#)  in the solution to the most recent auction in which TCCs valid in hour  $h$  were sold (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in that auction), which Energy flow will be determined using Shift Factors produced in scheduling hour  $h$  of the Day-Ahead Market applied to these injections and withdrawals and the phase angle regulator schedules fixed [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$
- $FLOW_{a,h,TCC Auction}$  = The Energy flow, in MWh, on binding constraint  $a$  for hour  $h$  determined as described in the definition of  $FLOW_{a,h,DAM}$  above, except that the Shift Factors applied will be those produced in a simulated run of SCUC (run using the Transmission System model [for the month that contains hour  \$h\$](#)  used in the most recent auction in which TCCs valid in hour  $h$  were sold); *provided, however*, special rules (1) through (3) below shall instead be used to calculate  $FLOW_{a,h,TCC Auction}$  if they apply, and rule (4) below shall be used to calculate  $FLOW_{a,h,TCC Auction}$  if  $FLOW_{a,h,TCC Auction}$  cannot be calculated using any other rule set forth in this definition of  $FLOW_{a,h,TCC Auction}$  because a simulated run of SCUC does not produce

<sup>1</sup> A set of injections and withdrawals corresponds to a set of TCCs and Grandfathered Rights if the quantity of Energy injected at each location matches the number of TCCs and Grandfathered Rights specifying that location as a POI, and the quantity of Energy withdrawn at each location matches the number of TCCs and Grandfathered Rights specifying that location as a POW.



Shift Factors to calculate  $FLOW_{a,h,TCC \text{ Auction}}$ :

- (1) in the event that a maintenance contingency is binding in the Day-Ahead Market but was not applied [for the month that contains hour  \$h\$](#)  in the most recent auction in which TCCs valid in hour  $h$  were sold,  $FLOW_{a,h,TCC \text{ Auction}}$  shall be equal to the Energy flow in MWh on the monitored transmission facility of binding constraint  $a$  for the contingency resulting in the highest flows on constraint  $a$  [for the month that contains hour  \$h\$](#)  in the most recent auction in which TCCs valid in hour  $h$  were sold, which Energy flow shall be calculated using the set of injections and withdrawals that corresponds to the set of TCCs and Grandfathered Rights represented [for the month that contains hour  \$h\$](#)  in the solution to that auction (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in that auction) and using Shift Factors from a simulated run of SCUC as first set forth in this definition of  $FLOW_{a,h,TCC \text{ Auction}}$
- (2) in the event that the monitored transmission facility for constraint  $a$  was modeled as out-of-service [for the month that contains hour  \$h\$](#)  in the most recent auction in which TCCs valid in hour  $h$  were sold and that transmission facility returns to service for hour  $h$  of the Day-Ahead Market,  $FLOW_{a,h,TCC \text{ Auction}}$  shall be equal to:
  - (i) the rating limit, in MWh, for the monitored transmission facility of binding constraint  $a$  applicable in hour  $h$  of the Day-Ahead Market, multiplied by
  - (ii) negative  $SCUCSignChange_{a,h}$
- (3) in the event that the transmission facility that is the contingency element for constraint  $a$  was modeled as out-of-service [for the month that contains hour  \$h\$](#)  in the most recent auction in which TCCs valid in hour  $h$  were sold and that transmission facility returns to service for hour  $h$  of the Day-Ahead Market,

$FLOW_{a,h,TCC \text{ Auction}}$  shall be equal to the Energy flow, in MWh, on the monitored transmission facility of binding constraint  $a$  for the contingency resulting in the highest flows on the monitored transmission facility of constraint  $a$  for the month that contains hour  $h$  in the most recent auction in which TCCs valid in hour  $h$  were sold, which Energy flow shall be calculated using the set of injections and withdrawals that corresponds to the set of TCCs and Grandfathered Rights represented for the month that contains hour  $h$  in the solution to that auction (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in that auction) and using Shift Factors from a simulated run of SCUC as first set forth in this definition of  $FLOW_{a,h,TCC \text{ Auction}}$

- (4) in the event that a simulated run of SCUC does not produce Shift Factors to calculate  $FLOW_{a,h,TCC \text{ Auction}}$ ,  $FLOW_{a,h,TCC \text{ Auction}}$  shall be equal to:
- (i) the Energy flow on constraint  $a$  as determined for the month that contains hour  $h$  in the most recent auction in which TCCs valid in hour  $h$  were sold, multiplied by
  - (ii)  $OPF/SCUCAdjust_a$

$UprateDerate_{a,h}$  = Zero, except that in the event of a Qualifying DAM Up-rating or Qualifying DAM Derating for constraint  $a$  in hour  $h$  that is included for the month that contains hour  $h$  in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the last Reconfiguration Auction in which TCCs valid in hour  $h$  were sold (or if no Reconfiguration Auction was held for TCCs valid in hour  $h$ , then the Centralized TCC Auction Interface Uprate/Derate Table in effect for the last Centralized TCC Auction held for TCCs valid in hour  $h$ ),  $UprateDerate_{a,h}$  shall equal the interface uprating or derating impact reflected in such table. Notwithstanding the definition above,  $UprateDerate_{a,h}$  shall always equal zero in the event that the monitored transmission facility for binding constraint  $a$  in the Day-Ahead Market was modeled as out-of-service for the month that contains hour  $h$  in the most recent auction in which TCCs valid in hour  $h$  were sold and that transmission facility returns to service for hour  $h$ .

UnsoldCapacity<sub>a,h,RA</sub> = Zero, except that if ShadowPrice<sub>a,h</sub> \* [(FLOW<sub>a,h,DAM</sub> – FLOW<sub>a,h,TCCAuction</sub>) + (UprateDerate<sub>a,h</sub> \* SCUCSignChange<sub>a,h</sub>)] is less than zero, then UnsoldCapacity<sub>a,h,RA</sub> shall be equal to the lesser of (1) the amount of transmission Capacity for constraint *a* that was available for sale for the month that contains hour *h* in the most recent auction in which TCCs valid in hour *h* were sold but which transmission Capacity was not sold; or (2) the absolute value of (FLOW<sub>a,h,DAM</sub> – FLOW<sub>a,h,TCCAuction</sub>) + (UprateDerate<sub>a,h</sub> \* SCUCSignChange<sub>a,h</sub>).

SCUCSignChange<sub>a,h</sub> = 1 if ShadowPrice<sub>a,h</sub> is greater than zero; otherwise, -1.

OPF/SCUCAdjust<sub>a</sub> = 1 if the directional orientation of constraint *a* used by the ISO in SCUC is the same as that used by the ISO in the Optimal Power Flow program used to select winning Bids for the month that contains hour *h* in the most recent auction in which TCCs ~~auctions~~ valid in hour *h* were sold; otherwise, -1.

Following calculation of the DAM Constraint Residual for each constraint *a* for each hour *h*, the ISO shall calculate the amount of each O/R-t-S DAM Constraint Residual and the amount of each U/D DAM Constraint Residual for each constraint *a* for each hour *h*. The amount of each O/R-t-S DAM Constraint Residual for hour *h* and for constraint *a* shall be determined by applying Formula N-6. The amount of each U/D DAM Constraint Residual for hour *h* and for constraint *a* shall be determined by applying Formula N-7.

#### Formula N-6

$$O/R-t-S DCR_{a,h} = DCR_{a,h} * \left[ \frac{(FLOW_{a,h,DAM} - FLOW_{a,h,TCCAuction})}{(FLOW_{a,h,DAM} - FLOW_{a,h,TCCAuction}) + (UprateDerate_{a,h} * SCUCSignChange_{a,h})} \right]$$

Where,

O/R-t-S DCR<sub>a,h</sub> = The amount of the O/R-t-S DAM Constraint Residual, in dollars, for hour *h* and for constraint *a*

and each of the other variables are as defined in Formula N-5.

#### Formula N-7

$$U/D DCR_{a,h} = DCR_{a,h} * \left[ \frac{(UprateDerate_{a,h} * SCUCSignChange_{a,h})}{(FLOW_{a,h,DAM} - FLOW_{a,h,TCCAuction}) + (UprateDerate_{a,h} * SCUCSignChange_{a,h})} \right]$$

Where,

$U/D DCR_{a,h}$  = The amount of the U/D DAM Constraint Residual for hour  $h$  for constraint  $a$  and each of the other variables are as defined in Formula N-5.

#### **20.2.4.2 Charges and Payments for the Direct Impact of DAM Outages and Returns-to-Service**

The ISO shall use O/R-t-S DAM Constraint Residuals to allocate O/R-t-S Congestion Rent Shortfall Charges and O/R-t-S Congestion Rent Surplus Payments, as the case may be, among Transmission Owners pursuant to this Section 20.2.4.2. Each O/R-t-S Congestion Rent Shortfall Charge and each O/R-t-S Congestion Rent Surplus Payment allocated to a Transmission Owner pursuant to this Section 20.2.4.2 is subject to being set equal to zero pursuant to Section 20.2.4.5.

##### **20.2.4.2.1 Identification of Outages and Returns-to-Service Qualifying for Charges and Payments**

For each hour of the Day-Ahead Market, the ISO shall identify each Qualifying DAM Outage and each Qualifying DAM Return-to-Service, as described below. The Transmission Owner responsible, as determined pursuant to Section 20.2.4.4, for a Qualifying DAM Outage or Qualifying DAM Return-to-Service shall be allocated an O/R-t-S Congestion Rent Shortfall Charge or an O/R-t-S Congestion Rent Surplus Payment pursuant to Sections 20.2.4.2.2 or 20.2.4.2.3.

##### **20.2.4.2.1.1 Definition of Qualifying DAM Outage**

A “**Qualifying DAM Outage**” shall be defined to mean either an Actual Qualifying DAM Outage or a Deemed Qualifying DAM Outage. For purposes of this Attachment N, “*o*” shall refer to a single Qualifying DAM Outage.

An “**Actual Qualifying DAM Outage**” shall be defined as a transmission facility that, for a given hour  $h$  of the Day-Ahead Market, meets each of the following requirements:

- (i) the facility exists but is not modeled as in-service for the Day-Ahead Market for hour  $h$ ;
- (ii) the facility existed and was modeled as in-service [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$ ; and
- (iii) the facility was not Normally Out-of-Service Equipment [for the month that contains hour  \$h\$](#)  at the time of the last auction held for TCCs valid for hour  $h$ .

A “**Deemed Qualifying DAM Outage**” shall be defined as a transmission facility that, for a given hour  $h$  of the Day-Ahead Market, meets each of the following requirements:

- (i) the facility existed but was not modeled as in-service for [the month that contains hour  \$h\$  in](#) the last auction held for TCCs valid for hour  $h$ ;
- (ii) the facility existed but was not modeled as in-service in [the Day-Ahead Market in hour  \$h\$](#)  as a result of a DAM Status Change or external event described in Section 20.2.4.4.3 for which responsibility was assigned pursuant to Section 20.2.4.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 20.2.4.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as in-service for [the month that contains hour  \$h\$  in](#) the last auction held for TCCs valid for hour  $h$ ;
- (iii) the facility was not Normally Out-of-Service Equipment [for the month that contains hour  \$h\$](#)  at the time of the last auction held for TCCs valid for hour  $h$ .

A transmission facility shall not qualify as an Actual Qualifying DAM Outage if the facility is modeled as in-service for hour  $h$  of the Day-Ahead Market as a result of a Transmission Owner’s use of spare or alternative transmission equipment to bring the facility back in-service so long as the Transmission Owner has notified the ISO in advance of or

contemporaneously with the use of such spare or alternative equipment and the estimated duration of its use.

#### **20.2.4.2.1.2 Definition of Qualifying DAM Return-to-Service**

A “**Qualifying DAM Return-to-Service**” shall be defined to mean either an Actual Qualifying DAM Return-to-Service or a Deemed Qualifying DAM Return-to-Service. For purposes of this Attachment N, “*o*” shall refer to a single Qualifying DAM Return-to-Service.

An “**Actual Qualifying DAM Return-to-Service**” shall be defined as a transmission facility that, for a given hour *h* of the Day-Ahead Market, meets each of the following requirements:

- (i) the facility exists and is modeled as in-service in the Day-Ahead Market for hour *h*;
- (ii) the facility existed but was not modeled as in-service for [the month that contains hour \*h\* in](#) the last auction held for TCCs valid for hour *h*; and
- (iii) the facility was not Normally Out-of-Service Equipment [for the month that contains hour \*h\*](#) at the time of the last auction held for TCCs valid for hour *h*.

A “**Deemed Qualifying DAM Return-to-Service**” shall be defined as a transmission facility that, for a given hour *h* of the Day-Ahead Market, meets each of the following requirements:

- (i) the facility existed but was not modeled as in-service for [the month that contains hour \*h\* in](#) the last auction held for TCCs valid for hour *h*;
- (ii) the facility existed but was not modeled as in-service in the Day-Ahead Market for hour *h* as a result of a DAM Status Change or external event described in Section 20.2.4.4.3 for which responsibility is assigned pursuant to Section

20.2.4.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 20.2.4.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as in-service for [the month that contains hour  \$h\$  in](#) the last auction held for TCCs valid for hour  $h$ ; and

- (iii) the facility was not Normally Out-of-Service Equipment [for the month that contains hour  \$h\$](#)  at the time of the last auction held for TCCs valid for hour  $h$ .

#### **20.2.4.2.2 Allocation of an O/R-t-S DAM Constraint Residual When Only One Transmission Owner is Responsible for All of the Relevant Outages and Returns-to-Service**

This Section 20.2.4.2.2 describes the allocation of an O/R-t-S DAM Constraint Residual for a given hour and a given constraint when only one Transmission Owner is responsible, as determined pursuant to Section 20.2.4.4, for all of the Qualifying DAM Outages and all of the Qualifying DAM Returns-to-Service for that hour that contribute to that constraint.

If the same Transmission Owner is responsible, as determined pursuant to Section 20.2.4.4, for all of the Qualifying DAM Outages  $o$  and Qualifying DAM Returns-to-Service  $o$  for hour  $h$  that contribute to constraint  $a$ , then the ISO shall allocate the O/R-t-S DAM Constraint Residual for that hour and that constraint,  $\text{O/R-t-S DCR}_{a,h}$ , to that Transmission Owner in the form of either: (i) an O/R-t-S Congestion Rent Shortfall Charge in the amount of  $\text{O/R-t-S DCR}_{a,h}$  if  $\text{O/R-t-S DCR}_{a,h}$  is negative, or (ii) an O/R-t-S Congestion Rent Surplus Payment in the amount of  $\text{O/R-t-S DCR}_{a,h}$  if  $\text{O/R-t-S DCR}_{a,h}$  is positive.

#### **20.2.4.2.3 Allocation of an O/R-t-S DAM Constraint Residual When More Than One Transmission Owner is Responsible for the Relevant Outages and Returns-to-Service**

This Section 20.2.4.2.3 describes the allocation of an O/R-t-S DAM Constraint Residual

for a given hour and a given constraint when more than one Transmission Owner is responsible, as determined pursuant to Section 20.2.4.4, for the Qualifying DAM Outages and the Qualifying DAM Returns-to-Service for that hour that contribute to that constraint.

If more than one Transmission Owner is responsible, as determined pursuant to Section 20.2.4.4, for the Qualifying DAM Outages and the Qualifying DAM Returns-to-Service for hour  $h$  that contribute to constraint  $a$ , the ISO shall allocate the O/R-t-S DAM Constraint Residual for constraint  $a$  for hour  $h$ , O/R-t-S  $DCR_{a,h}$ , in the form of an O/R-t-S Congestion Rent Shortfall Charge or O/R-t-S Congestion Rent Surplus Payment to the Transmission Owners responsible for the Qualifying DAM Outages  $o$  and Qualifying DAM Returns-to-Service  $o$  for hour  $h$  by first determining the net total impact on the constraint for hour  $h$  of all Qualifying DAM Outages and Qualifying DAM Returns-to-Service for hour  $h$  with an impact on the Energy flow across that constraint of 1 MWh or more by applying Formula N-8, and then applying either Formula N-9 or Formula N-10, as specified herein, to assess O/R-t-S Congestion Rent Shortfall Charges and O/R-t-S Congestion Rent Surplus Payments.

#### **Formula N-8**

$$O/R-t-S \text{ NetDAMImpact}_{a,h} = \left( \sum_{\text{for all } o \in O_h} \text{FlowImpact}_{a,h,o} * \text{ShadowPrice}_{a,h} \right) * OPF/SCUCAdjust_a$$

Where,

O/R-t-S NetDAMImpact<sub>a,h</sub> = The net impact, in dollars, on constraint  $a$  in hour  $h$  of all Qualifying DAM Outages and Qualifying DAM Returns-to-Service for hour  $h$  having an impact of more than 1 MWh on Energy flow across constraint  $a$ ; *provided, however*, O/R-t-S NetDAMImpact<sub>a,h</sub> shall be subject to recalculation as specified in the paragraph immediately following this Formula N-8

FlowImpact<sub>a,h,o</sub> = The Energy flow impact of a Qualifying DAM Outage  $o$  or Qualifying DAM Return-to-Service  $o$ , in MWh, on binding constraint  $a$  determined for hour  $h$ , which shall either:

- (a) if Qualifying DAM Outage  $o$  is a Deemed Qualifying DAM Outage, be equal to



the negative of  $\text{FlowImpact}_{a,h,o}$  calculated for the corresponding Deemed Qualifying DAM Return-to-Service as described in part (b) of this definition of  $\text{FlowImpact}_{a,h,o}$ ; or

- (b) if Qualifying DAM Outage  $o$  or Qualifying DAM Return-to-Service  $o$  is an Actual Qualifying DAM Outage, an Actual Qualifying DAM Return-to-Service, or a Deemed Qualifying DAM Return-to-Service, be calculated pursuant to the following formula:

$$\text{FlowImpact}_{a,h,o} = \text{One-OffFlow}_{a,h,o} - \text{BaseCaseFlow}_{a,h}$$

Where,

$\text{BaseCaseFlow}_{a,h}$  = The Energy flow on binding constraint  $a$  resulting from a Power Flow or similar analysis using (1) the set of injections and withdrawals corresponding to the TCCs and Grandfathered Rights represented [for the month that contains hour  \$h\$](#)  in the solution to the most recent auction in which TCCs valid in hour  $h$  were sold (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in that auction); (2) the phase angle regulator schedules determined in the Optimal Power Flow solution [for the month that contains hour  \$h\$](#)  for the final round of the last auction held for TCCs valid in hour  $h$ ; and (3) the Transmission System model for [the month that contains hour  \$h\$  in](#) the last auction held for TCCs valid in hour  $h$ ;

$\text{One-OffFlow}_{a,h,o}$  = Either

- (1) if Qualifying DAM Outage  $o$  or Qualifying DAM Return-to-Service  $o$  is an Actual Qualifying DAM Outage or an Actual Qualifying DAM Return-to-Service, the Energy flow on binding constraint  $a$  resulting from a Power Flow or similar analysis using each element of the base case data set used in the calculation of  $\text{BaseCaseFlow}_{a,h}$  above (*provided, however, if a transmission facility was modeled as free-flowing in hour  $h$  of the Day-Ahead Market because of the outage of any transmission facility, the ISO shall appropriately adjust the phase angle regulator schedules* and related variables to model the transmission facility

as free flowing), but in each case with the Transmission System model modified so as to, as the case may be, either (i) model as out-of-service Actual Qualifying DAM Outage  $o$ , or (ii) model as in-service Actual Qualifying DAM Return-to-Service  $o$ ; or

- (2) if Qualifying DAM Return-to-Service  $o$  is a Deemed Qualifying DAM Return-to-Service, the Energy flow on binding constraint  $a$  resulting from a Power Flow or similar analysis using each element of the base case data set used in the calculation of  $\text{BaseCaseFlow}_{a,h}$  above (*provided, however*, if a transmission facility was modeled as free-flowing in hour  $h$  of the Day-Ahead Market because of the outage of any transmission facility, the ISO shall appropriately adjust the phase angle regulator schedules and related variables to model the transmission facility as free flowing), but with the Transmission System model modified so as to model as in-service the transmission facility that is Deemed Qualifying DAM Return-to-Service  $o$

*provided, however*, where the absolute value of  $\text{FlowImpact}_{a,h,o}$  calculated using the procedures set forth above is less than 1 MWh, then  $\text{FlowImpact}_{a,h,o}$  shall be set equal to zero;

*provided further*,  $\text{FlowImpact}_{a,h,o}$  shall be subject to being set equal to zero as specified in the paragraph immediately following this Formula N-8

$O_h$  = The set of all Qualifying DAM Outages  $o$  and Qualifying DAM Returns-to-Service  $o$  in hour  $h$

and the variables  $\text{ShadowPrice}_{a,h}$  and  $\text{OPF/SCUCA}_{\text{Adjust}_a}$  are defined as set forth in Formula N-5.

After calculating O/R-t-S  $\text{NetDAMImpact}_{a,h}$  pursuant to Formula N-8, the ISO shall determine whether O/R-t-S  $\text{NetDAMImpact}_{a,h}$  for constraint  $a$  in hour  $h$  has a different sign than O/R-t-S  $\text{DCR}_{a,h}$  for constraint  $a$  in hour  $h$ . If the sign is different, the ISO shall (i) recalculate

O/R-t-S NetDAMImpact<sub>a,h</sub> pursuant to Formula N-8 after setting equal to zero each FlowImpact<sub>a,h,o</sub> for which FlowImpact<sub>a,h,o</sub> \* ShadowPrice<sub>a,h</sub> \* OPF/SCUCAdjust<sub>a</sub> has a different sign than O/R-t-S DCR<sub>a,h</sub>, and then (ii) use this recalculated O/R-t-S NetDAMImpact<sub>a,h</sub> and reset value of FlowImpact<sub>a,h,o</sub> to allocate O/R-t-S Congestion Rent Shortfall Charges and O/R-t-S Congestion Rent Surplus Payments pursuant to Formula N-9 or Formula N-10, as specified below.

If the absolute value of the net impact (O/R-t-S NetDAMImpact<sub>a,h</sub>) on constraint *a* of all Qualifying DAM Outages and Qualifying DAM Returns-to-Service for hour *h* as calculated using Formula N-8 (or recalculated pursuant to Formula N-8 using a reset value of FlowImpact<sub>a,h,o</sub> as described in the prior paragraph) is greater than the absolute value of the O/R-t-S DAM Constraint Residual (O/R-t-S DCR<sub>a,h</sub>), in dollars, for constraint *a* in hour *h*, then the ISO shall allocate the O/R-t-S DAM Constraint Residual in the form of an O/R-t-S Congestion Rent Shortfall Charge, O/R-t-S CRSC<sub>a,t,h</sub>, or O/R-t-S Congestion Rent Surplus Payment, O/R-t-S CRSP<sub>a,t,h</sub>, by using Formula N-9. If the absolute value of the net impact (O/R-t-S NetDAMImpact<sub>a,h</sub>) on constraint *a* of all Qualifying DAM Outages and Qualifying DAM Returns-to-Service for hour *h* as calculated using Formula N-8 (or recalculated pursuant to Formula N-8 using a reset value of FlowImpact<sub>a,h,o</sub> as described in the prior paragraph) is less than or equal to the absolute value of the O/R-t-S DAM Constraint Residual (O/R-t-S DCR<sub>a,h</sub>), in dollars, for constraint *a* in hour *h*, then the ISO shall allocate the O/R-t-S DAM Constraint Residual in the form of an O/R-t-S Congestion Rent Shortfall Charge or O/R-t-S Congestion Rent Surplus Payment by using Formula N-10.

#### Formula N-9

$$O/R-t-S Allocation_{a,t,h} = \left( \frac{\sum_{\substack{o \in O_h \\ \text{and } q=t}} (FlowImpact_{a,h,o} * Responsibility_{h,q,o})}{\quad} \right) * O/R-t-S DCR_{a,h}$$

$$\sum_{\text{for all } o \in O_h} FlowImpact_{a,h,o}$$

Where,

O/R-t-S Allocation<sub>a,t,h</sub> = Either an O/R-t-S Congestion Rent Shortfall Charge or an O/R-t-S Congestion Rent Surplus Payment, as specified in (a) and (b) below:

(a) If O/R-t-S Allocation<sub>a,t,h</sub> is negative, then O/R-t-S Allocation<sub>a,t,h</sub> shall be an O/R-t-S Congestion Rent Shortfall Charge, O/R-t-S CRSC<sub>a,t,h</sub>, charged to Transmission Owner *t* for binding constraint *a* in hour *h* of the Day-Ahead Market; or

(b) If O/R-t-S Allocation<sub>a,t,h</sub> is positive, then O/R-t-S Allocation<sub>a,t,h</sub> shall be an O/R-t-S Congestion Rent Surplus Payment, O/R-t-S CRSP<sub>a,t,h</sub>, paid to Transmission Owner *t* for binding constraint *a* in hour *h* of the Day-Ahead Market

Responsibility<sub>h,q,o</sub> = The amount, as a percentage, of responsibility borne by Transmission Owner *q* (which shall include the ISO when it is deemed a Transmission Owner for the purpose of applying Sections 20.2.4.4.2, 20.2.4.4.3, or 20.2.4.4.4) for Qualifying DAM Outage *o* or Qualifying DAM Return-to-Service *o* in hour *h*, as determined pursuant to Section 20.2.4.4

and the variable O/R-t-S DCR<sub>a,h</sub> is defined as set forth in Formula N-6 and the variables

FlowImpact<sub>a,h,o</sub> and O<sub>h</sub> are defined as set forth in Formula N-8.

#### Formula N-10

$$O/R-t-S Allocation_{a,t,h} = \left( \sum_{\substack{o \in O_h \\ \text{and } q=t}} FlowImpact_{a,h,o} * ShadowPrice_{a,h} * Responsibility_{h,q,o} \right) * OPF/SCUCAdjust_a$$

Where,

the variables ShadowPrice<sub>a,h</sub> and OPF/SCUCAdjust<sub>a</sub> are defined as set forth in Formula

N-5, the variables O/R-t-S Allocation<sub>a,t,h</sub> and Responsibility<sub>h,q,o</sub> are defined as set forth in

Formula N-9, and the variables FlowImpact<sub>a,h,o</sub> and O<sub>h</sub> are defined as set forth in Formula N-8.

### **20.2.4.3 Charges and Payments for the Secondary Impact of DAM Outages and Returns-to-Service**

The ISO shall use U/D DAM Constraint Residuals to allocate U/D Congestion Rent Shortfall Charges and U/D Congestion Rent Surplus Payments, as the case may be, among Transmission Owners pursuant to this Section 20.2.4.3. Each U/D Congestion Rent Shortfall Charge and each U/D Congestion Rent Surplus Payment allocated to a Transmission Owner pursuant to this Section 20.2.4.3 is subject to being set equal to zero pursuant to Section 20.2.4.5.

#### **20.2.4.3.1 Identification of Upratings and Deratings Qualifying for Charges and Payments**

For each hour of the Day-Ahead Market and for each constraint, the ISO shall identify each Qualifying DAM Derating and each Qualifying DAM Uprating, as described below. The Transmission Owner responsible, as determined pursuant to Section 20.2.4.4, for the Qualifying DAM Derating shall be allocated a U/D Congestion Rent Shortfall Charge and the Transmission Owner responsible, as determined pursuant to Section 20.2.4.4, for the Qualifying DAM Uprating shall be allocated a U/D Congestion Rent Surplus Payment pursuant to Section 20.2.4.3.2.

##### **20.2.4.3.1.1 Definition of Qualifying DAM Derating**

A “**Qualifying DAM Derating**” shall be defined to mean either an Actual Qualifying DAM Derating or a Deemed Qualifying DAM Derating. For purposes of this Attachment N, “*r*” shall refer to a single Qualifying DAM Derating.

An “**Actual Qualifying DAM Derating**” shall be defined as a change in the rating of a constraint that, for a given constraint *a* and hour *h* of the Day-Ahead Market, meets each of the following requirements:

- (i) the constraint has a lower rating in hour *h* than it would have if all transmission

facilities were modeled as in-service in hour  $h$ ;

- (ii) this lower rating is in whole or in part the result of an Actual Qualifying DAM Outage  $o$  or an Actual Qualifying DAM Return-to-Service  $o$  for hour  $h$ ;
- (iii) this lower rating resulting from Actual Qualifying DAM Outage  $o$  or Actual Qualifying DAM Return-to-Service  $o$  for hour  $h$  was not modeled [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$ ;
- (iv) this lower rating is included [for the month that contains hour  \$h\$](#)  in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the last Reconfiguration Auction in which TCCs valid in hour  $h$  were sold (or if no Reconfiguration Auction was held for TCCs valid in hour  $h$ , then the Centralized TCC Auction Interface Uprate/Derate Table in effect for the last Centralized TCC Auction held for TCCs valid in hour  $h$ ); and
- (v) the constraint is binding in the Day-Ahead Market for hour  $h$ .

A “**Deemed Qualifying DAM Derating**” shall be defined as a change in the rating of a constraint that, for a given constraint  $a$  and hour  $h$  of the Day-Ahead Market, meets each of the following requirements:

- (i) the constraint has a lower rating in hour  $h$  than it would have if all transmission facilities were modeled as in-service in hour  $h$ ;
- (ii) this lower rating is in whole or in part the result of a Deemed Qualifying DAM Outage  $o$  or Deemed Qualifying DAM Return-to-Service  $o$  for hour  $h$ ;
- (iii) the lower rating resulting from Deemed Qualifying DAM Outage  $o$  or Deemed Qualifying DAM Return-to-Service  $o$  for hour  $h$  was modeled [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$ , but

responsibility for Qualifying DAM Outage  $o$  or Qualifying DAM Return-to-Service  $o$  resulting in the lower rating for hour  $h$  is assigned pursuant to Section 20.2.4.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 20.2.4.4) other than the Transmission Owner responsible for the lower rating [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$ ;

- (iv) this lower rating is included [for the month that contains hour  \$h\$](#)  in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the last Reconfiguration Auction in which TCCs valid in hour  $h$  were sold (or if no Reconfiguration Auction was held for TCCs valid in hour  $h$ , then the Centralized TCC Auction Interface Uprate/Derate Table in effect for the last Centralized TCC Auction held for TCCs valid in hour  $h$ ); and
- (v) the constraint is binding in the Day-Ahead Market for hour  $h$ .

#### **20.2.4.3.1.2 Definition of Qualifying DAM Uprating**

A “**Qualifying DAM Uprating**” shall be defined to mean either an Actual Qualifying DAM Uprating or a Deemed Qualifying DAM Uprating. For purposes of this Attachment N, “ $r$ ” shall refer to a single Qualifying DAM Uprating.

An “**Actual Qualifying DAM Uprating**” shall be defined as a change in the rating of a constraint that, for a given constraint  $a$  in hour  $h$  of the Day-Ahead Market, meets each of the following requirements:

- (i) the constraint has a higher rating for hour  $h$  than it would have absent an Actual Qualifying DAM Outage  $o$  or Actual Qualifying DAM Return-to-Service  $o$  for hour  $h$ ;

- (ii) this higher rating resulting from Actual Qualifying DAM Outage  $o$  or Actual Qualifying Return-to-Service  $o$  for hour  $h$  was not modeled [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$ ;
- (iii) this higher rating is included [for the month that contains hour  \$h\$](#)  in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the last Reconfiguration Auction in which TCCs valid in hour  $h$  were sold (or if no Reconfiguration Auction was held for TCCs valid in hour  $h$ , then the Centralized TCC Auction Interface Uprate/Derate Table in effect for the last Centralized TCC Auction held for TCCs valid in hour  $h$ ); and
- (iv) the constraint is binding in the Day-Ahead Market for hour  $h$ .

A “**Deemed Qualifying DAM Uprating**” shall be defined as a change in the rating of a constraint that, for a given constraint  $a$  and hour  $h$  of the Day-Ahead Market, meets each of the following requirements:

- (i) the constraint has a lower rating in hour  $h$  than it would have if all transmission facilities were modeled as in-service in hour  $h$ ;
- (ii) this lower rating is in whole or in part the result of a Deemed Qualifying DAM Outage  $o$  or Deemed Qualifying DAM Return-to-Service  $o$  for hour  $h$ ;
- (iii) this lower rating resulting from Deemed Qualifying DAM Outage  $o$  or Deemed Qualifying DAM Return-to-Service  $o$  for hour  $h$  was modeled [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$ , but responsibility for Qualifying DAM Outage  $o$  or Qualifying DAM Return-to-Service  $o$  resulting in the lower rating for hour  $h$  is assigned pursuant to Section 20.2.4.4 to a Transmission Owner (including the ISO when it is deemed a



Transmission Owner for the purpose of applying Section 20.2.4.4) other than the Transmission Owner responsible for the lower rating [for the month that contains hour  \$h\$](#)  in the last auction held for TCCs valid for hour  $h$ ;

- (iv) this lower rating for hour  $h$  is included [for the month that contains hour  \$h\$](#)  in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the last Reconfiguration Auction in which TCCs valid in hour  $h$  were sold (or if no Reconfiguration Auction was held for TCCs valid in hour  $h$ , then the Centralized TCC Auction Interface Uprate/Derate Table in effect for the last Centralized TCC Auction held for TCCs valid in hour  $h$ ); and
- (v) the constraint is binding in the Day-Ahead Market for hour  $h$ .

#### **20.2.4.3.2 Allocation of U/D DAM Constraint Residuals**

This Section 20.2.4.3.2 describes the allocation of U/D DAM Constraint Residuals to Qualifying DAM Deratings and Qualifying DAM Upratings.

When there are Qualifying DAM Deratings or Qualifying DAM Upratings for constraint  $a$  in hour  $h$ , the ISO shall allocate a U/D DAM Constraint Residual in the form of a U/D Congestion Rent Shortfall Charge, U/D CRSC <sub>$a,t,h$</sub> , or U/D Congestion Rent Surplus Payment, U/D CRSP <sub>$a,t,h$</sub> , by first determining the net total impact on the constraint for hour  $h$  of all Qualifying DAM Upratings  $u$  and Qualifying DAM Deratings  $r$  for constraint  $a$  in hour  $h$  pursuant to Formula N-11 and then applying either Formula N-12 or Formula N-13, as specified herein, to assess U/D Congestion Rent Shortfall Charges and U/D Congestion Rent Surplus Payments.

### Formula N-11

$$U/D \text{ NetDAMImpact}_{a,h} = \left( \sum_{\text{for all } r \in R_{a,h}} \text{RatingChange}_{a,h,r} * \text{ShadowPrice}_{a,h} \right) * \text{SCUCSignChange}_{a,h}$$

Where,

$U/D \text{ NetDAMImpact}_{a,h}$  = The net impact, in dollars, on constraint  $a$  of all Qualifying DAM Upratings and Qualifying DAM Deratings for constraint  $a$  in hour  $h$ ; *provided, however*,  $U/D \text{ NetDAMImpact}_{a,h}$  shall be subject to recalculation as specified in the paragraph immediately following this Formula N-11

$\text{RatingChange}_{a,h,r}$  = Either

- (a) If Qualifying DAM Derating  $r$  or Qualifying DAM Uprating  $r$  is a Deemed Qualifying DAM Derating or a Deemed Qualifying DAM Uprating,  $\text{RatingChange}_{a,h,r}$  shall be equal to the amount, in MWh, of the decrease or increase in the rating of binding constraint  $a$  in hour  $h$  resulting from a Deemed Qualifying DAM Return-to-Service or Deemed Qualifying DAM Outage for constraint  $a$  in hour  $h$ , as shown [for the month that contains hour  \$h\$](#)  in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the [last](#) Reconfiguration Auction in which TCCs valid in hour  $h$  were sold (or if no Reconfiguration Auction was held for TCCs valid in hour  $h$ , then the Centralized TCC Auction Interface Uprate/Derate Table in effect for the last Centralized TCC Auction held for TCCs valid in hour  $h$ ); or
- (b) If Qualifying DAM Derating  $r$  or Qualifying DAM Uprating  $r$  is an Actual Qualifying DAM Derating or an Actual Qualifying DAM Uprating,  $\text{RatingChange}_{a,h,r}$  shall be equal to the amount, in MWh, of the decrease or increase in the rating of binding constraint  $a$  in hour  $h$  resulting from an Actual Qualifying DAM Return-to-Service or an Actual Qualifying DAM Outage for

constraint  $a$  in hour  $h$ , as shown [for the month that contains hour  \$h\$](#)  in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the [last](#) Reconfiguration Auction in which TCCs valid in hour  $h$  were sold (or if no Reconfiguration Auction was held for TCCs valid in hour  $h$ , then the Centralized TCC Auction Interface Uprate/Derate Table in effect for the last Centralized TCC Auction held for TCCs valid in hour  $h$ ); *provided, however*,  $\text{RatingChange}_{a,h,r}$  shall be subject to being set equal to zero as specified in the paragraph immediately following this Formula N-11

$R_{a,h}$  = The set of all Qualifying DAM Deratings  $r$  or Qualifying DAM Upratings  $r$  for binding constraint  $a$  in hour  $h$

and the variables  $\text{SCUCSignChange}_{a,h}$  and  $\text{ShadowPrice}_{a,h}$  are defined as set forth in Formula N-5.

After calculating  $\text{U/D NetDAMImpact}_{a,h}$  pursuant to Formula N-11, the ISO shall determine whether  $\text{U/D NetDAMImpact}_{a,h}$  for constraint  $a$  in hour  $h$  has a different sign than  $\text{U/D DCR}_{a,h}$  for constraint  $a$  in hour  $h$ . If the sign is different, the ISO shall (i) recalculate  $\text{U/D NetDAMImpact}_{a,h}$  pursuant to Formula N-11 after setting equal to zero each  $\text{RatingChange}_{a,h,r}$  for which  $\text{RatingChange}_{a,h,r} * \text{ShadowPrice}_{a,h} * \text{SCUCSignChange}_{a,h}$  has a different sign than  $\text{U/D DCR}_{a,h}$ , and then (ii) use this recalculated  $\text{U/D NetDAMImpact}_{a,h}$  and reset value of  $\text{RatingChange}_{a,h,r}$  to allocate U/D Congestion Rent Shortfall Charges and U/D Congestion Rent Surplus Payments pursuant to Formula N-12 or Formula N-13, as specified below.

If the absolute value of the net impact ( $\text{U/D NetDAMImpact}_{a,h}$ ) on constraint  $a$  of all Qualifying DAM Deratings and Qualifying DAM Upratings for constraint  $a$  in hour  $h$  as calculated using Formula N-11 (or recalculated pursuant to Formula N-11 using a reset value of  $\text{RatingChange}_{a,h,r}$  as described in the prior paragraph) is greater than the absolute value of the

U/D DAM Constraint Residual (U/D DCR<sub>a,h</sub>) for constraint  $a$  in hour  $h$ , then the ISO shall allocate the U/D DAM Constraint Residual in the form of a U/D Congestion Rent Shortfall Charge, U/D CRSC<sub>a,t,h</sub>, or U/D Congestion Rent Surplus Payment, U/D CRSP<sub>a,t,h</sub>, by using Formula N-12. If the absolute value of the net impact (U/D NetDAMImpact<sub>a,h</sub>) on constraint  $a$  of all Qualifying DAM Deratings and Qualifying DAM Upratings for constraint  $a$  in hour  $h$  as calculated using Formula N-11 (or recalculated pursuant to Formula N-11 using a reset value of RatingChange<sub>a,h,r</sub> as described in the prior paragraph) is less than or equal to the absolute value of the U/D DAM Constraint Residual (U/D DCR<sub>a,h</sub>) for constraint  $a$  in hour  $h$ , then the ISO shall allocate the U/D DAM Constraint Residual in the form of a U/D Congestion Rent Shortfall Charge, U/D CRSC<sub>a,t,h</sub>, or U/D Congestion Rent Surplus Payment, U/D CRSP<sub>a,t,h</sub>, by using Formula N-13.

**Formula N-12**

$$U/D Allocation_{a,t,h} = \left( \frac{\sum_{\substack{r \in R_{a,h} \\ \text{and } q=t}} (RatingChange_{a,h,r} * Responsibility_{h,q,r})}{\sum_{\text{for all } r \in R_{a,h}} RatingChange_{a,h,r}} \right) * U/D DCR_{a,h}$$

Where,

U/D Allocation<sub>a,t,h</sub> = Either a U/D Congestion Rent Shortfall Charge or a U/D Congestion Rent Surplus Payment, as specified in (a) and (b) below:

(a) If U/D Allocation<sub>a,t,h</sub> is negative, then U/D Allocation<sub>a,t,h</sub> shall be a U/D Congestion Rent Shortfall Charge, U/D CRSC<sub>a,t,h</sub>, charged to Transmission Owner  $t$  for binding constraint  $a$  in hour  $h$  of the Day-Ahead Market; or

(b) If U/D Allocation<sub>a,t,h</sub> is positive, then U/D Allocation<sub>a,t,h</sub> shall be a U/D Congestion Rent Surplus Payment, U/D CRSP<sub>a,t,h</sub>, paid to Transmission Owner  $t$  for binding constraint  $a$  in hour  $h$  of the Day-Ahead Market

Responsibility<sub>h,q,r</sub> = The amount, as a percentage, of responsibility borne by Transmission Owner  $q$  (which shall include the ISO when it is deemed a Transmission Owner for the purpose of applying Sections 20.2.4.4.2, 20.2.4.4.3, or

20.2.4.4.4) for Qualifying DAM Derating  $r$  or Qualifying DAM  
 Upgrading  $r$  in hour  $h$ , as determined pursuant to Section 20.2.4.4  
 and the variable  $U/D\ DCR_{a,h}$  is defined as set forth in Formula N-7 and the variables

$RatingChange_{a,h,r}$  and  $R_{a,h}$  are defined as set forth in Formula N-11.

### Formula N-13

$$U/D\ Allocation_{a,t,h} = \left( \sum_{\substack{r \in R_{a,h} \\ \text{and } q=t}} RatingChange_{a,h,r} * ShadowPrice_{a,h} * Responsibility_{h,q,r} \right) * SCUCSignChange_{a,h}$$

Where,

the variables  $ShadowPrice_{a,h}$  and  $SCUCSignChange_{a,h}$  are defined as set forth in Formula N-5,  
 the variables  $U/D\ Allocation_{a,t,h}$  and  $Responsibility_{h,q,r}$  are defined as set forth in Formula N-12,  
 and the variables  $RatingChange_{a,h,r}$  and  $R_{a,h}$  are defined as set forth in Formula N-11.

## 20.2.4.4 Assigning Responsibility for Outages, Returns-to-Service, Deratings, and Upgradings

### 20.2.4.4.1 General Rule for Assigning Responsibility; Presumption of Causation

Unless the special rules set forth in Sections 20.2.4.4.2 through 20.2.4.4.4 apply, a  
 Transmission Owner shall for purposes of this Section 20.2.4 be deemed responsible for a DAM  
 Status Change to the extent that the Transmission Owner has caused the DAM Status Change by  
 changing the in-service or out-of-service status of its transmission facility; *provided, however,*  
 that where a DAM Status Change results from a change to the in-service or out-of-service status  
 of a transmission facility owned by more than one Transmission Owner, responsibility for such  
 DAM Status Change shall be assigned to each owning Transmission Owner based on the  
 percentage of the transmission facility that is owned by the Transmission Owner (as determined  
 in accordance with Section 20.2.4.6.1) during the hour for which the DAM Status Change  
 occurred. For the sake of clarity, a Transmission Owner may, by changing the in-service or out-

of-service status of its transmission facility, cause a DAM Status Change of another transmission facility if the Transmission Owner's change in the in-service or out-of-service status of its transmission facility causes (directly or as a result of Good Utility Practice) a change in the in-service or out-of-service status of the other transmission facility.

The Transmission Owner that owns a transmission facility that qualifies as a DAM Status Change shall be deemed to have caused the DAM Status Change of that transmission facility unless (i) the Transmission Owner that owns the facility informs the ISO that another Transmission Owner caused the DAM Status Change or that responsibility is to be shared among Transmission Owners in accordance with Sections 20.2.4.4.2, 20.2.4.4.3, or 20.2.4.4.4, and no party disputes such claim; (ii) in case of a dispute over the assignment of responsibility, the ISO determines a Transmission Owner other than the owner of the transmission facility caused the DAM Status Change or that responsibility is to be shared among Transmission Owners in accordance with Sections 20.2.4.4.2, 20.2.4.4.3, or 20.2.4.4.4; or (iii) FERC orders otherwise.

**20.2.4.4.2 Shared Responsibility For Outages, Returns-to-Service, and Ratings Changes Directed by the ISO or Caused by Facility Status Changes Directed by the ISO**

A Transmission Owner shall not be responsible for any DAM Status Change that qualifies as an ISO-Directed DAM Status Change or Deemed ISO-Directed DAM Status Change. Instead, the ISO shall allocate any revenue impacts resulting from a DAM Status Change that qualifies as an ISO-Directed DAM Status Change or Deemed ISO-Directed DAM Status Change as part of Net Congestion Rents for hour  $h$ . To do so, the ISO shall be treated as a Transmission Owner when allocating DAM Constraint Residuals pursuant to Section 20.2.4.2 and Section 20.2.4.3, and any DAM Status Change that qualifies as an ISO-Directed DAM Status Change or Deemed ISO-Directed DAM Status Change shall be attributed to the ISO when

performing the calculations described in Section 20.2.4.2 and Section 20.2.4.3; *provided*, however, any O/R-t-S Congestion Rent Shortfall Charge, U/D Congestion Rent Shortfall Charge, O/R-t-S Congestion Rent Surplus Payment, or U/D Congestion Rent Surplus Payment allocable to the ISO pursuant to this Section 20.2.4.4.2 shall ultimately be allocated to the Transmission Owners as Net Congestion Rents pursuant to Section 20.2.5.

Responsibility for a Qualifying DAM Return-to-Service or Qualifying DAM Upgrading that is directed by the ISO but does not qualify as a Deemed ISO-Directed DAM Status Change shall be assigned to the Transmission Owner that was responsible for the Qualifying Auction Outage or Qualifying Auction Derating [for the month that contains the relevant hour](#) in the last Reconfiguration Auction held for TCCs valid for the relevant hour [\(or if no Reconfiguration Auction was held for TCCs valid in the relevant hour,](#) the last 6-month Sub-Auction of a Centralized TCC Auction held for TCCs valid for the relevant hour).

#### **20.2.4.4.3 Shared Responsibility for External Events**

A Transmission Owner shall not be responsible for a DAM Status Change occurring inside the NYCA that is caused by a change in the in-service or out-of-service status or rating of a transmission facility located outside the NYCA. Instead, the ISO shall allocate any revenue impacts resulting from a DAM Status Change caused by such an event outside the NYCA as part of Net Congestion Rents for hour  $h$ . To do so, the ISO shall be treated as a Transmission Owner when allocating DAM Constraint Residuals pursuant to Section 20.2.4.2 and Section 20.2.4.3 and any DAM Status Change caused by such an event outside the NYCA shall be attributed to the ISO when performing the calculations described in Section 20.2.4.2 and Section 20.2.4.3; *provided*, however, any O/R-t-S Congestion Rent Shortfall Charge, U/D Congestion Rent Shortfall Charge, O/R-t-S Congestion Rent Surplus Payment, or U/D Congestion Rent Surplus

Payment allocable to the ISO pursuant to this Section 20.2.4.4.3 shall ultimately be allocated to the Transmission Owners as Net Congestion Rents pursuant to Section 20.2.5.

**~~20.2.4.4.4 Shared Responsibility For Returns-to-Service and Upratings During a Transitional Period~~**

~~Notwithstanding any other provision of this Attachment N, a Transmission Owner shall be deemed to be not responsible for a Qualifying DAM Return-to-Service, Qualifying DAM Derating, or Qualifying DAM Uprating for an hour of the Day Ahead Market if this Attachment N was not in effect at the time of the last Reconfiguration Auction held for TCCs valid for the hour. Instead, the ISO shall allocate any revenue impacts resulting from such a Qualifying DAM Return-to-Service, Qualifying DAM Derating, or Qualifying DAM Uprating as part of Net Congestion Rents for hour  $h$ . To do so, the ISO shall be treated as a Transmission Owner when allocating DAM Constraint Residuals pursuant to Section 20.2.4.2 and Section 20.2.4.3, and any such Qualifying DAM Return-to-Service, Qualifying DAM Derating, or Qualifying DAM Uprating during this transitional period shall be attributed to the ISO when performing the calculations described in Section 20.2.4.2 and Section 20.2.4.3; provided, however, any O/R-t-S Congestion Rent Shortfall Charge, U/D Congestion Rent Shortfall Charge, O/R-t-S Congestion Rent Surplus Payment, or U/D Congestion Rent Surplus Payment allocable to the ISO pursuant to this Section 20.2.4.4.4 shall ultimately be allocated to the Transmission Owners as Net Congestion Rents pursuant to Section 20.2.5.~~

**20.2.4.5 Exceptions: Setting Charges and Payments to Zero**

**20.2.4.5.1 Zeroing Out of Charges and Payments When Outages and Deratings Lead to Net Payments or Returns-to-Service and Upratings Lead to Net Charges**

The ISO shall use Formula N-14 to calculate the total O/R-t-S Congestion Rent Shortfall



Charges, U/D Congestion Rent Shortfall Charges, O/R-t-S Congestion Rent Surplus Payments, and U/D Congestion Rent Surplus Payments,  $NetDAMAllocations_{t,h}$ , for Transmission Owner  $t$  in hour  $h$ . Based on this calculation, the ISO shall set equal to zero all O/R-t-S  $CRSC_{a,t,h}$ , U/D  $CRSC_{a,t,h}$ , O/R-t-S  $CRSP_{a,t,h}$ , and U/D  $CRSP_{a,t,h}$  (each as defined in Formula N-14) for Transmission Owner  $t$  for all constraints for hour  $h$  if (i)  $NetDAMAllocations_{t,h}$  is positive and Transmission Owner  $t$  is not responsible (as determined pursuant to Section 20.2.4.4) for any Qualifying DAM Returns-to-Service or Qualifying DAM Upratings during hour  $h$ , or (ii)  $NetDAMAllocations_{t,h}$  is negative and Transmission Owner  $t$  is not responsible (as determined pursuant to Section 20.2.4.4) for any Qualifying DAM Outages or Qualifying DAM Deratings during hour  $h$ ; *provided, however*, the ISO shall not set equal to zero pursuant to this Section 20.2.4.5.1 any O/R-t-S  $CRSC_{a,t,h}$ , U/D  $CRSC_{a,t,h}$ , O/R-t-S  $CRSP_{a,t,h}$ , or U/D  $CRSP_{a,t,h}$  arising from an ISO-Directed DAM Status Change or Deemed ISO-Directed DAM Status Change described in Section 20.2.4.4.2, an external event described in Section 20.2.4.4.3, or an event occurring during a transitional period as described in Section 20.2.4.4.4.

#### Formula N-14

$$NetDAMAllocations_{t,h} = \sum_{for\ all\ a} (O/R-t-S\ CRSC_{a,t,h} + U/D\ CRSC_{a,t,h} + O/R-t-S\ CRSP_{a,t,h} + U/D\ CRSP_{a,t,h})$$

Where,

$NetDAMAllocations_{t,h}$	=	The total of the O/R-t-S Congestion Rent Shortfall Charges, U/D Congestion Rent Shortfall Charges, O/R-t-S Congestion Rent Surplus Payments, and U/D Congestion Rent Surplus Payments allocated to Transmission Owner $t$ in hour $h$
O/R-t-S $CRSC_{a,t,h}$	=	An O/R-t-S Congestion Rent Shortfall Charge allocated to Transmission Owner $t$ for binding constraint $a$ in hour $h$ of the Day-Ahead Market, calculated pursuant to Section 20.2.4.2
U/D $CRSC_{a,t,h}$	=	A U/D Congestion Rent Shortfall Charge allocated to Transmission Owner $t$ for binding constraint $a$ in hour $h$ of the Day-Ahead Market, calculated pursuant to Section 20.2.4.3
O/R-t-S $CRSP_{a,t,h}$	=	An O/R-t-S Congestion Rent Surplus Payment allocated to

Transmission Owner  $t$  for binding constraint  $a$  in hour  $h$  of the Day-Ahead Market, calculated pursuant to Section 20.2.4.2

$U/D\ CRSP_{a,t,h}$  = A U/D Congestion Rent Surplus Payment allocated to Transmission Owner  $t$  for binding constraint  $a$  in hour  $h$  of the Day-Ahead Market, calculated pursuant to Section 20.2.4.3.

#### **20.2.4.5.2 Zeroing Out of Charges and Payments Resulting from Formula Failure**

Notwithstanding any other provision of this Attachment N, the ISO shall set equal to zero any O/R-t-S Congestion Rent Shortfall Charge, U/D Congestion Rent Shortfall Charge, O/R-t-S Congestion Rent Surplus Payment, or U/D Congestion Rent Surplus Payment allocated to a Transmission Owner for an hour of the Day-Ahead Market if either:

- (i) data necessary to compute such a charge or payment, as specified in the formulas set forth in Section 20.2.4, is not known by the ISO and cannot be computed by the ISO (in interpreting this clause, equipment failure shall not preclude computation by the ISO unless necessary data is irretrievably lost); or
- (ii) both (a) the charge or payment is clearly and materially inconsistent with cost causation principles; and (b) this inconsistency is the result of factors not taken into account in the formulas used to calculate the charge or payment;

*provided, however*, if the amount of charges or payments set equal to zero as a result of the unknown data or inaccurate formula is greater than twenty five thousand dollars (\$25,000) in any given month or greater than one hundred thousand dollars (\$100,000) over multiple months, the ISO will inform the Transmission Owners of the identified problem and will work with the Transmission Owners to determine if an alternative allocation method is needed and whether it will apply to all months for which the intended formula does not work. Alternate methods would be subject to market participant review and subsequent filing with FERC, as appropriate.

For the sake of clarity, the ISO shall not pursuant to this Section 20.2.4.5.2 set equal to

zero any O/R-t-S Congestion Rent Shortfall Charge, U/D Congestion Rent Shortfall Charge, O/R-t-S Congestion Rent Surplus Payment, or U/D Congestion Rent Surplus Payment that fails to meet these conditions, even if another O/R-t-S Congestion Rent Shortfall Charge, U/D Congestion Rent Shortfall Charge, O/R-t-S Congestion Rent Surplus Payment, or U/D Congestion Rent Surplus Payment is set equal to zero pursuant to this Section 20.2.4.5.2 in the same hour of the Day-Ahead Market.

#### **20.2.4.6 Information Requirements**

##### **20.2.4.6.1 Information Regarding Facility Ownership**

A Transmission Owner shall be responsible for informing the ISO of any change in the ownership of a transmission facility. The ISO shall allocate responsibility for DAM Status Changes based on the transmission facility ownership information available to it at the time of initial settlement.

##### **20.2.4.6.2 Calculation of Settlements Without DCR Allocation Threshold**

One month each year, the ISO shall, for informational purposes only, calculate the DAM Constraint Residuals for each constraint for each hour without applying the DCR Allocation Threshold and shall calculate all O/R-t-S Congestion Rent Shortfall Charges, O/R-t-S Congestion Rent Surplus Payments, U/D Congestion Rent Shortfall Charges, and U/D Congestion Rent Surplus Payments. Before choosing the month for which it will perform these calculations, the ISO will consult with the Transmission Owners.

#### **20.2.5 Allocation of Net Congestion Rents to Transmission Owners**

The Net Congestion Rents for each hour of month  $m$  shall be summed over the month, so that positive and negative values net to a monthly total,  $NCR_m$ . The ISO shall allocate  $NCR_m$

each month to the Transmission Owners by allocating to each Transmission Owner  $t$  an amount equal to the product of (i)  $NCR_m$ , and (ii) the allocation factor for Transmission Owner  $t$  for month  $m$ , as calculated pursuant to Formula N-15.

### Formula N-15

$$AllocationFactor_{t,m} = \frac{(OriginalResidual_{t,m} + ETCNL_{t,m} + NARs_{t,m} + GFR\&GFTCC_{t,m} + HFPTCC_{t,m})}{\sum_{q \in T} (OriginalResidual_{q,m} + ETCNL_{q,m} + NARs_{q,m} + GFR\&GFTCC_{q,m} + HFPTCC_{q,m})}$$

Where,

- |                                  |   |
|----------------------------------|---|
| Allocation Factor <sub>t,m</sub> | = The allocation factor used by the ISO to allocate a share of the Net Congestion Rents to Transmission Owner $t$ for month $m$   |
| Original Residual <sub>q,m</sub> | = The <u>sum of the</u> one-month portion of the revenue imputed to the Direct Sale <del>or</del> <u>and</u> the sale in any Centralized TCC Auction Sub-Auction of Original Residual TCCs <u>held by Transmission Owner <math>q</math></u> that are valid in month $m$ . The one-month portion of the revenue imputed to the Direct Sale of these Original Residual TCCs shall be the market-clearing price of the TCCs <u>valid in month <math>m</math></u> in the <u>last</u> Reconfiguration Auction held for <u>TCCs valid in month <math>m</math></u> (or one-sixth of the average market-clearing price in the rounds of the 6-month Sub-Auction of the last Centralized TCC Auction if no Reconfiguration Auction was held for <u>TCCs valid in month <math>m</math></u> ). <del>For Centralized TCC Auctions conducted before May 1, 2010, the calculation of the average market-clearing price in rounds of the 6-month Sub-Auction shall incorporate only Stage 1 six month rounds.)</del> The one-month portion of the revenue imputed to the sale in any Centralized TCC Auction Sub-Auction of these Original Residual TCCs shall be calculated by dividing the revenue received from the sale of these Original Residual TCCs in the Centralized TCC Auction Sub-Auction by the duration in months of the TCCs sold in that Centralized TCC Auction Sub-Auction. |
| ETCNL <sub>q,m</sub>             | = The sum of the one-month portion of the revenue <del>the</del> <u>imputed to Transmission Owner <math>q</math> has received as payment for</u> the Direct Sale of <u>Transmission Owner <math>q</math>'s</u> ETCNL or for its ETCNL released in the Centralized TCC Auction Sub-Auction held for TCCs valid for month $m$ . <del>Each</del> <u>The</u> one-month portion of the revenue <u>imputed</u> for ETCNL released in <del>such</del> <u>any</u> Centralized TCC Auction shall be calculated by dividing the revenue received in a Centralized TCC Auction Sub-Auction from the sale of the ETCNL by the duration in months of the TCCs corresponding to the ETCNL sold in the   |

Centralized TCC Auction Sub-Auction.<sup>2</sup> The one-month portion of the revenue imputed to the Direct Sale of ETCNL shall be the ~~value~~market-clearing price of the TCCs valid in month  $m$  corresponding to that ETCNL in the last Reconfiguration Auction held for TCCs valid in month  $m$  (or one-sixth of the average market-clearing price of such TCCs in the rounds of the 6-month Sub-Auction of the last Centralized TCC Auction if no Reconfiguration Auction was held for TCCs valid in month  $m$ ). ~~For Centralized TCC Auctions conducted before May 1, 2010, the calculation of the average market clearing price in rounds of the 6-month Sub-Auction shall incorporate only Stage 1 six month rounds.~~

NAR<sub>s<sub>q,m</sub></sub>

= The one-month portion of the Net Auction Revenues ~~the~~ Transmission Owner  $q$  has received in Centralized TCC Auction Sub-Auctions and all Reconfiguration Auctions held for TCCs valid for month  $m$  (which shall not include any revenue from the sale of Original Residual TCCs). The one-month portion of the revenues shall be calculated by summing (i) the revenue Transmission Owner  $q$  received from the allocation of Net Auction Revenue pursuant to Section 20.3.7 in each Centralized TCC Auction Sub-Auction for TCCs valid in month  $m$ , divided in each case by the duration in months of the TCCs sold in the Centralized TCC Auction Sub-Auction ~~or~~ and the sum of the revenue Transmission Owner  $q$  received from the allocation of that portion of Net Auction Revenue pursuant to Section 20.3.7 related to month  $m$  for all Reconfiguration Auctions held for TCCs valid in month  $m$  from the allocation of Net Auction Revenue pursuant to Section 20.3.7, divided by the duration in months of the TCCs sold in the Centralized TCC Auction Sub-Auction or Reconfiguration Auction (or, to the extent TCC auction revenues were allocated pursuant to a different methodology, the amount of such revenues allocated to Transmission Owner  $q$ ), minus (ii) the sum of NetAuctionAllocations<sub>t,n</sub> as calculated pursuant to Formula N-27 (as adjusted for any charges or payments that are zeroed out) for Transmission Owner  $q$  for all 6-month Sub-Auction rounds  $n$  of all Centralized TCC Auctions held for TCCs valid in month  $m$ , divided in each case by the duration in months of the TCCs sold in each Centralized TCC Auction Sub-Auction (or, to the extent that the revenue impact of transmission facility outages, returns-to-service, upratings, and deratings were settled pursuant to a different methodology, the net of such revenue impacts for Transmission Owner  $q$ ), minus (iii) the sum of the portion of NetAuctionAllocations<sub>t,n</sub> as calculated pursuant to Formula N-27 and as adjusted for any charges or payments that are zeroed out for

	Transmission Owner $q$ for <u>month <math>m</math> for the all</u> Reconfiguration Auctions <del>held for TCCs valid in</del> month $m$ (or, to the extent that the revenue impact of transmission facility outages, returns-to-service, upratings, and deratings were settled pursuant to a different methodology, the net of such revenue impacts for Transmission Owner $q$ ). <del>For Centralized TCC Auctions conducted before May 1, 2010, the calculation of (ii) shall incorporate only Stage 1 six month rounds.</del>
GFR&GFTCC <sub><math>q,m</math></sub>	= The one-month portion of the imputed value of Grandfathered TCCs and Grandfathered Rights <u>held by Transmission Owner <math>q</math></u> , valued at their market-clearing prices <u>for month <math>m</math></u> in the <u>last</u> Reconfiguration Auction for <u>TCCs valid in</u> month $m$ (or one-sixth of the average market clearing price for rounds in the 6-month Sub-Auction of the last Centralized TCC Auction if no Reconfiguration Auction was held for <u>TCCs valid in</u> month $m$ ), provided that <del>the</del> Transmission Owner $q$ is the selling party and the Existing Transmission Agreement related to each Grandfathered TCC and Grandfathered Right remains valid in month $m$ . <del>For Centralized TCC Auctions conducted before May 1, 2010, the calculation of the average market clearing price in rounds of the 6-month Sub-Auction shall incorporate only Stage 1 six month rounds.</del>
HFPTCC <sub><math>q,m</math></sub>	= The one-month portion of the Historic Fixed Price TCC revenues that Transmission Owner $q$ has received for Historic Fixed Price TCCs valid for month $m$ , valued at the sum of the share of revenues received by Transmission Owner $q$ pursuant to Section 20.4 of this Attachment N for all Historic Fixed Price TCCs valid for month $m$ , divided by twelve; provided, however that the value shall be zero for all Historic Fixed Price TCCs that took effect on or before November 1, 2016.
$t$	= Transmission Owner $t$
$T$	= The set of all Transmission Owners $q$ .

For purposes of Formula N-15, variables subscripted by  $t$  shall be calculated for Transmission Owner  $t$  in the same manner as variables subscripted by  $q$  are calculated for Transmission Owner  $q$ .

Each Transmission Owner's share of Net Congestion Rents allocated pursuant to this Section 20.2.5 shall be incorporated into its TSC or NTAC, as the case may be.

## 20.3 Settlement of TCC Auctions

### 20.3.1 Overview of TCC Auction Settlements; Calculation of Net Auction Revenue

*Overview of TCC Auction Settlements.* For each round  $n$  of a Centralized TCC Auction and for each Reconfiguration Auction  $n$ , the ISO shall settle all settlements for round  $n$  or for Reconfiguration Auction  $n$ . These settlements include, as applicable pursuant to the provisions of this Attachment N: (i) the market-clearing price charged or paid to purchasers of TCCs; (ii) payments to Transmission Owners that released ETCNL; (iii) payments or charges to Primary Holders selling TCCs; (iv) payments to Transmission Owners that released Original Residual TCCs; (v) O/R-t-S Auction Revenue Shortfall Charges and U/D Auction Revenue Shortfall Charges; and (vi) O/R-t-S Auction Revenue Surplus Payments and U/D Auction Revenue Surplus Payments. Each of these settlements is represented by a variable in Formula N-16.

*Calculation of Net Auction Revenues for a Round or a Reconfiguration Auction.* In each Centralized TCC Auction round  $n$  and in each Reconfiguration Auction  $n$ , the ISO shall calculate Net Auction Revenue pursuant to Formula N-16.

#### Formula N-16

$$Net\ Auction\ Revenue_n = \begin{bmatrix} TCC\ Auction\ Revenue_n \\ -ETCNL_n \\ -Primary\ Holder\ TCCs\ Sold_n \\ -Original\ Residual\ TCCs_n \\ -O/R-t-S\&U/D\ ARSC\&ARSP_n \end{bmatrix}$$

Where,

$n$  = A round of a Centralized TCC Auction (which may be either a round of a 6-month Sub-Auction ~~or~~ a round of a Sub-Auction in which TCCs with a duration greater than 6 months are sold~~;~~) or a Reconfiguration Auction, as the case may be

Net Auction Revenue <sub>$n$</sub>  = Net Auction Revenue for the round  $n$  of a Centralized TCC Auction or for Reconfiguration Auction  $n$ , as the case may be

TCC Auction Revenue <sub>n</sub>	= The gross amount of revenue that the ISO collects from the award of TCCs to purchasers in round <i>n</i> or in Reconfiguration Auction <i>n</i> , which results from the charges and payments allocated pursuant to Section 20.3.2
ETCNL <sub>n</sub>	= Either (i) if round <i>n</i> is a round of a Centralized TCC Auction, the total of all payments that the ISO makes to Transmission Owners releasing ETCNL into the round pursuant to Section 20.3.3; or (ii) for Reconfiguration Auction <i>n</i> , 0
Primary Holder TCCs Sold <sub>n</sub>	= The net of the total payments and charges the ISO allocates to Primary Holders selling TCCs in round <i>n</i> or in Reconfiguration Auction <i>n</i> pursuant to Section 20.3.4
Original Residual TCCs <sub>n</sub>	= Either (i) if round <i>n</i> is a round of a Centralized TCC Auction, the total payments the ISO makes in round <i>n</i> pursuant to Section 20.3.5 to Transmission Owners that release into round <i>n</i> Original Residual TCCs; or (ii) for Reconfiguration Auction <i>n</i> , 0
O/R-t-S&U/D ARSC&ARSP <sub>n</sub>	= Either (i) if round <i>n</i> is a round of a Centralized TCC Auction in which 6-month TCCs are sold, the sum of the total O/R-t-S Auction Revenue Shortfall Charges, U/D Auction Revenue Shortfall Charges, O/R-t-S Auction Revenue Surplus Payments, and U/D Auction Revenue Surplus Payments (calculated as NetAuctionAllocations <sub>t,n</sub> pursuant to Formula N-27) for all Transmission Owners <i>t</i> , reduced by any zeroing out of such charges or payments pursuant to Section 20.3.6.5; (ii) if round <i>n</i> is a round of a Centralized TCC Auction Sub-Auction in which TCCs with durations longer than 6 months are sold, 0; or (iii) for Reconfiguration Auction <i>n</i> , the sum of the total O/R-t-S Auction Revenue Shortfall Charges (O/R-t-S ARSC <sub>a,t,n</sub> ), U/D Auction Revenue Shortfall Charges (U/D ARSC <sub>a,t,n</sub> ), O/R-t-S Auction Revenue Surplus Payments (O/R-t-S ARSP <sub>a,t,n</sub> ), and U/D Auction Revenue Surplus Payments (U/D ARSP <sub>a,t,n</sub> ) for all Transmission Owners <i>t</i> (which sum is calculated for each Transmission Owner as NetAuctionAllocations <sub>t,n</sub> pursuant to Formula N-27), reduced by any zeroing out of such charges or payments pursuant to Section 20.3.6.5

The ISO shall allocate the Net Auction Revenue calculated in each round of a Centralized TCC Auction Sub-Auction and in each Reconfiguration Auction to Transmission Owners pursuant to Section 20.3.7.

## 20.3.2 Charges for TCCs Purchased

All bidders awarded TCCs in round *n* of a Centralized TCC Auction or in



Reconfiguration Auction  $n$  shall pay or be paid the market clearing price in round  $n$  or in Reconfiguration Auction  $n$ , as determined pursuant to Attachment M of this Tariff, for the TCCs purchased. For a Balance-of-Period Auction, if an awarded TCC has a duration of more than one month, the market-clearing price for such multi-month TCC will equal the sum of the market-clearing prices for one-month TCCs with the same Point of Injection and Point of Withdrawal, which in aggregate cover the same period for which the multi-month TCC is valid.

### **20.3.3 Payments for ETCNL**

The ISO shall, in each round of a Centralized TCC Auction in which ETCNL is released, pay the market clearing price determined in that round for TCCs that correspond to that ETCNL to the Transmission Owner that releases the ETCNL.

If a Transmission Owner releases ETCNL for sale in a round of the Centralized TCC Auction, and the market-clearing price for those TCCs corresponding to that ETCNL in that round is negative, the value of those TCCs will not be included in the determination of payments to the Transmission Owners for ETCNL released into the Centralized TCC Auction. If the market-clearing price is negative for TCCs corresponding to any ETCNL, the value will be set to zero for purposes of allocating auction revenues from the sale of ETCNL. If the total value of the auction revenues available for payment to the Transmission Owners for ETCNL and Original Residual TCCs released into the Centralized TCC Auction is insufficient to fund payments at market-clearing prices, the total payments to each Transmission Owner for ETCNL and Original Residual TCCs will be reduced proportionately. Notwithstanding any other provision in this Tariff, ETCNL that is offered in any Centralized TCC Auction and that is assigned a negative market-clearing price or value shall not give rise to a payment obligation by the Transmission Owner that released it.

#### **20.3.4 Payments to Primary Holders Selling TCCs; Distribution of Revenues from Sale of Certain Grandfathered TCCs (excluding ETCNL) in a Centralized TCC Auction**

The ISO shall distribute to or collect from each Primary Holder of a TCC selling that TCC in the Centralized TCC Auction or Reconfiguration Auction the market-clearing price of that TCC in the round of the Centralized TCC Auction or in the Reconfiguration Auction in which that TCC was sold. For a Balance-of-Period Auction, if a TCC sold has a duration of more than one month, the market-clearing price for such multi-month TCC will equal the sum of the market-clearing prices for one-month TCCs with the same Point of Injection and Point of Withdrawal, which in aggregate cover the same period for which the multi-month TCC was sold.

In the event a Grandfathered TCC<sup>1</sup> is terminated by mutual agreement of the parties to the grandfathered ETA prior to the conditions specified within Attachments K and L, then the ISO shall distribute the revenues from the sale of the TCCs that correspond to the terminated Grandfathered TCCs in a round of a Centralized TCC Auction directly back to the Transmission Owner identified in Attachment L, until such time as the conditions specified within Attachments K and L are met. Upon such time that the conditions within Attachments K and L are met, the ISO shall allocate the revenues from the sale of the TCCs that correspond to terminated Grandfathered TCCs in the Centralized TCC Auction as Net Auction Revenues in accordance with Section 20.3.7 of this Attachment.

#### **20.3.5 Allocation of Revenues from the Sale of Original Residual TCCs**

~~Revenues associated with Original Residual TCCs shall be distributed directly to each Primary Holder for the duration of the LBMP Transition Period. The Primary Holder of such an Original Residual TCC shall be paid the market-clearing price of the Original Residual TCC in~~

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<sup>1</sup> These TCCs include TCCs, if any, associated with those rate schedules to which footnote 9 of Attachment L pertains, whether by mutual agreement or otherwise.

~~the round of the Sub-Auction in which that Original Residual TCC was sold.~~

If a Transmission Owner releases an Original Residual TCC for sale in a round of the Centralized TCC Auction, and the market-clearing price for those TCCs in that round is negative, the value of those TCCs will not be included in the determination of payments to the Transmission Owners for Original Residual TCCs released into the Centralized TCC Auction. If the market-clearing price is negative for any Original Residual TCC, the value will be set to zero for purposes of allocating auction revenues from the sale of Original Residual TCCs. If the total value of the auction revenues available for payment to the Transmission Owners for Original Residual TCCs and ETCNL released into the Centralized TCC Auction is insufficient to fund payments at market-clearing prices, the total payments to each Transmission Owner for Original Residual TCCs and ETCNL will be reduced proportionately. This proportionate reduction would include a reduction in payments reflecting a proportionate reduction in the auction value of Original Residual TCCs sold in a Direct Sale. Notwithstanding any other provision in this Tariff, Original Residual TCCs that are offered in any Centralized TCC Auction and that are assigned a negative market-clearing price or value shall not give rise to a payment obligation by the Transmission Owner that released them.

#### **20.3.6 Charges and Payments to Transmission Owners for Auction Outages and Returns-to-Service**

The ISO shall charge O/R-t-S Auction Revenue Shortfall Charges and U/D Auction Revenue Shortfall Charges and pay O/R-t-S Auction Revenue Surplus Payments and U/D Auction Revenue Surplus Payments pursuant to this Section 20.3.6. To do so, the ISO shall calculate the Auction Constraint Residual for each constraint for each round  $n$  of a Centralized TCC Auction 6-month Sub-Auction or for each month covered by Reconfiguration Auction  $n$ , as the case may be, pursuant to Section 20.3.6.1 and then determine the amount of each Auction

Constraint Residual that is O/R-t-S Auction Constraint Residual and the amount that is U/D Auction Constraint Residual, as specified in Section 20.3.6.1. The ISO shall use the O/R-t-S Auction Constraint Residual to allocate O/R-t-S Auction Revenue Shortfall Charges and O/R-t-S Auction Revenue Surplus Payments to Transmission Owners pursuant to Sections 20.3.6.2 and 20.3.6.4, each of which shall be subject to being reduced to zero pursuant to Section 20.3.6.5. The ISO shall use the U/D Auction Constraint Residual to allocate U/D Auction Revenue Shortfall Charges and U/D Auction Revenue Surplus Payments to Transmission Owners pursuant to Sections 20.3.6.3 and 20.3.6.4, each of which shall be subject to being reduced to zero pursuant to Section 20.3.6.5.

The ISO shall not calculate an Auction Constraint Residual, O/R-t-S Auction Constraint Residual, or U/D Auction Constraint Residual for any rounds of a Centralized TCC Auction except for rounds of the 6-month Sub-Auction.

**20.3.6.1 Measuring the Impact of Auction Outages and Returns-to-Service: Calculation of Auction Constraint Residuals and Division of Auction Constraint Residuals into O/R-t-S Auction Constraint Residuals and U/D Auction Constraint Residuals**

The ISO shall identify all constraints that are binding in the final Optimal Power Flow solution for round  $n$  of a 6-month Sub-Auction of a Centralized TCC Auction or for [each month covered by](#) Reconfiguration Auction  $n$ , as the case may be. For each binding constraint  $a$  and for each -round  $n$  of a 6-month Sub-Auction of a Centralized TCC Auction or [month covered by](#) Reconfiguration Auction  $n$ , the ISO shall calculate the Auction Constraint Residual,  $ACR_{a,n}$ , using Formula N-17; *provided, however*, the ISO shall recalculate  $ACR_{a,n}$  using Formula N-18 if (i)  $ACR_{a,n}$  is positive based on the calculation using Formula N-17, and (ii) constraint  $a$  was not binding in the Power Flow used to determine the Energy flow on constraint  $a$  in calculating the variable  $FLOW_{a,n,basecase}$  in Formula N-17.

### Formula N-17

$$ACR_{a,n} = ShadowPrice_{a,n} * \left[ \frac{(FLOW_{a,n,actual} - FLOW_{a,n,basecase})}{+(ISORatingChange_{a,n} * OPFSignChange_{a,n})} \right] * \%Sold_n$$

Where,

$ACR_{a,n}$  = The Auction Constraint Residual, in dollars, for binding constraint  $a$  in round  $n$  of a 6-month Sub-Auction or in Reconfiguration Auction  $n$

$ShadowPrice_{a,n}$  = The Shadow Price, in dollars/MW- $p$ , of binding constraint  $a$  in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$ , where  $p$  is a one-month period for [the relevant month covered by](#) Reconfiguration Auction  $n$  and  $p$  is a six-month period for round  $n$  of a 6-month Sub-Auction, which Shadow Price is calculated in a manner so that if relaxation of constraint  $a$  would permit an increase in the objective function used for round  $n$  of a 6-month Sub-Auction or Reconfiguration Auction  $n$  as described in Attachment M of this [Tariff](#), then  $ShadowPrice_{a,n}$  is positive

$FLOW_{a,n,actual}$  = The Energy flow, in MW- $p$ , on binding constraint  $a$  resulting from a Power Flow using, as the case may be:

- (a) For [a given month covered by](#) Reconfiguration Auction  $n$ , (i) the Transmission System model [for the relevant month](#) for Reconfiguration Auction  $n$ , (ii) the set of TCCs and Grandfathered Rights represented in the solution to Reconfiguration Auction  $n$  [for the relevant month](#) (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in that auction), and (iii) the phase angle regulator schedules determined in the Optimal Power Flow solution [for the relevant month covered by](#) for Reconfiguration Auction  $n$ ; or
- (b) For round  $n$  of a 6-month Sub-Auction, (i) the Transmission System model for round  $n$ , (ii) the set of TCCs (scaled appropriately) and Grandfathered Rights represented in the solution to round  $n$  (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in that auction), and (iii) the phase angle regulator schedules produced in the Optimal Power Flow solution for round  $n$

$FLOW_{a,n,basecase}$  = The Energy flow, in MW- $p$ , on binding constraint  $a$  produced in, as the case may be:

- (a) For a given month covered by Reconfiguration Auction  $n$ , a Power Flow using the following base case data set: (i) the Transmission System model for the relevant month for Reconfiguration Auction  $n$ , (ii) the set of TCCs and Grandfathered Rights for the relevant month represented in the solution to the last Reconfiguration Auction held for TCCs valid during the relevant month, or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the final round of the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ , (including those pre-existing TCCs and Grandfathered Rights for the relevant month represented as fixed injections and withdrawals in that auction), and (iii) the phase angle regulator schedules determined in the Optimal Power Flow solution for the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the final round of the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ); or (b) For round  $n$  of a 6-month Sub-Auction, a Power Flow run using the following base case data set: (i) the Transmission System model for the actual 6-month Sub-Auction, and (ii) the base case set of TCCs (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in the simulated auction) and the phase angle regulator schedules s produced in a single simulated TCC auction administered for all rounds of the 6-month Sub-Auction using the Transmission System model for the actual 6-month Sub-Auction

modified so as to model as in-service all transmission facilities that were out-of-service in the Transmission System model used for the Sub-Auction and model as fully rated all transmission facilities that were derated in the Transmission System model used for the Sub-Auction, the pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in the Sub-Auction, and all bids to purchase and offers to sell made into all rounds of the Sub-Auction that includes round  $n$

ISORatingChange<sub>a,n</sub>=The total change in the rating of constraint  $a$  for round  $n$  or for a given month covered by Reconfiguration Auction  $n$  resulting from ISO-Directed Auction Status Changes or Deemed ISO-Directed Auction Status Changes described in Section 20.3.6.4.2, external events described in Section 20.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction Returns-to-Service for round  $n$  or the relevant month covered by Reconfiguration Auction  $n$ , which shall be calculated as follows:

- (a) For a given month covered by Reconfiguration Auction  $n$ , zero, except that in the event of a change in the rating of constraint  $a$  resulting from ISO-Directed Auction Status Changes or Deemed ISO-Directed Auction Status Changes described in Section 20.3.6.4.2, external events described in Section 20.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction Returns-to-Service for ~~round  $n$  or~~ the relevant month covered by Reconfiguration Auction  $n$ , ISORatingChange<sub>a,n</sub> shall be equal to: ~~the amount, in MW- $p$ , of the change in the rating limit of constraint  $a$  as shown in the Reconfiguration Auction Interface Uprate/Derate Table applicable for Reconfiguration Auction  $n$~~  (1) the rating limit, in MW- $p$ , of constraint  $a$  as shown in the Reconfiguration Auction Interface Uprate/Derate Table for the relevant month in the last Reconfiguration Auction held for TCCs valid during the relevant

month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the rating limit, in MW- $p$ , of constraint  $a$  as shown in the Centralized TCC Auction Interface Uprate/Derate Table for last Centralized TCC Auction held for TCCs valid during the relevant month), minus (2) the rating limit, in MW- $p$ , of constraint  $a$  resulting from ISO-Directed Auction Status Changes or Deemed ISO-Directed Auction Status Changes described in Section 20.3.6.4.2, external events described in Section 20.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction Returns-to-Service for the relevant month covered by Reconfiguration Auction  $n$  as shown in the Reconfiguration Auction Interface Uprate/Derate Table applicable for the relevant month in Reconfiguration Auction  $n$

- (b) For round  $n$  of a 6-month Sub-Auction, zero, except that in the event of a change in the rating of a transmission facility resulting from ISO-Directed Auction Status Changes or Deemed ISO-Directed Auction Status Changes described in Section 20.3.6.4.2, external events described in Section 20.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction Returns-to-Service for round  $n$  ~~or Reconfiguration Auction  $n$~~ , ISORatingChange <sub>$a,n$</sub>  shall be equal to: (1) the ~~amount~~ rating limit, in MW- $p$ , of ~~the change in the rating limit of~~ constraint  $a$  in a case where all transmission facilities are in-service and fully rated as shown in the Centralized TCC Auction Interface Uprate/Derate Table applicable for round  $n$ , minus (2) the rating limit, in MW- $p$ , of constraint  $a$  resulting from ISO-Directed Auction Status Changes or Deemed ISO-Directed Auction Status Changes described in Section 20.3.6.4.2, external



events described in Section 20.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction Returns-to-Service for round  $n$  as shown in the Centralized TCC Auction Interface

Uprate/Derate Table applicable for round  $n$

$OPFSignChange_{a,n} = 1$  if  $ShadowPrice_{a,n}$  is greater than zero; otherwise,  $-1$

$\%Sold_n$  = Either (i) for round  $n$  of a 6-month Sub-Auction, the percentage of transmission Capacity sold in round  $n$ , divided by the percentage of transmission Capacity sold in all rounds of the Sub-Auction of which round  $n$  is a part; or (ii) for a given month covered by Reconfiguration Auction  $n$ , 1.

#### Formula N-18

$$ACR_{a,n} = ShadowPrice_{a,n} * \left[ \begin{array}{c} (FLOW_{a,n,actual} - FLOW_{a,n,basecase}) \\ + (ISORatingChange_{a,n} * OPFSignChange_{a,n}) \\ - (UnsoldCapacity_{a,n,PriorAuction} * OPFSignChange_{a,n}) \end{array} \right] * \%Sold_n$$

Where,

$UnsoldCapacity_{a,n,PriorAuction}$  = Either:

- (a) For a given month covered by Reconfiguration Auction  $n$ , the rating limit for binding constraint  $a$  for the relevant month applied in the model used in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last Centralized TCC Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ , minus the Energy flow, in MW-p, on binding constraint  $a$  for the relevant month produced in the Optimal Power Flow in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last round of ~~that~~that the last Centralized TCC Auction

[held for TCCs valid during the relevant month](#)); or

- (b) For round  $n$  of a 6-month Sub-Auction, the rating limit for binding constraint  $a$  applied in the model used in the simulated auction run to determine  $FLOW_{a,n,basecase}$  in Formula N-17, minus the Energy flow, in MW- $p$ , on binding constraint  $a$  produced in the Optimal Power Flow in the simulated auction run to determine  $FLOW_{a,n,basecase}$  in Formula N-17

and each of the other variables is as set forth in Formula N-17; *provided, however*, if  $ACR_{a,n}$  is less than zero when calculated using this Formula N-18,  $ACR_{a,n}$  shall be set equal to zero.

Following calculation of the Auction Constraint Residual for each constraint  $a$  for each round  $n$  of a 6-month Sub-Auction or each [month covered by](#) Reconfiguration Auction  $n$ , the ISO shall calculate the amount of each O/R-t-S Auction Constraint Residual and the amount of each U/D Auction Constraint Residual for each constraint  $a$  for each round  $n$  of a 6-month Sub-Auction or [each month covered by](#) Reconfiguration Auction  $n$ , as the case may be. The amount of each O/R-t-S Auction Constraint Residual for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, for constraint  $a$  shall be determined by applying Formula N-19. The amount of each U/D Auction Constraint Residual for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, for constraint  $a$  shall be determined by applying Formula N-20.

#### Formula N-19

$$O/R-t-SACR_{a,n} = ACR_{a,n} * \left[ \frac{(FLOW_{a,n,actual} - FLOW_{a,n,basecase}) + (TotalRatingChange_{a,n} * OPFSignChange_{a,n})}{(FLOW_{a,n,actual} - FLOW_{a,n,basecase}) + (ISORatingChange_{a,n} * OPFSignChange_{a,n})} \right]$$

Where:

O/R-t-S  $ACR_{a,n}$  = The amount of the O/R-t-S Auction Constraint Residual for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, for constraint  $a$

TotalRatingChange<sub>a,n</sub> = The total change in the rating of constraint *a*, which shall be calculated as follows:

- (a) For a given month covered by Reconfiguration Auction *n*, TotalRatingChange<sub>a,n</sub> shall be equal to (1) the rating limit, in MW-*p*, of constraint *a* for the relevant month in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last Centralized TCC Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction *n*~~, minus (2) the rating limit, in MW-*p*, of constraint *a* applicable for the relevant month in Reconfiguration Auction *n*
- (b) For round *n* of a 6-month Sub-Auction, TotalRatingChange<sub>a,n</sub> shall be equal to (1) the rating limit, in MW-*p*, of constraint *a* in a case where all transmission facilities are in-service and fully rated, minus (2) the rating limit, in MW-*p*, of constraint *a* in round *n*

and the variable ACR<sub>a,n</sub> is as calculated pursuant to Formula N-17 or, if required, pursuant to Formula N-18, and each of the other variables are as defined in Formula N-17.

#### Formula N-20

$$U/D ACR_{a,n} = ACR_{a,n} * \left[ \frac{-(TotalRatingChange_{a,n} - ISORatingChange_{a,n}) * OPFSignChange_{a,n}}{(FLOW_{a,n,actual} - FLOW_{a,n,basewcase}) + (ISORatingChange_{a,n} * OPFSignChange_{a,n})} \right]$$

Where,

U/D ACR<sub>a,n</sub> = The amount of the U/D Auction Constraint Residual for round *n* of a 6-month Sub-Auction or a given month covered by Reconfiguration Auction *n*, as the case may be, for constraint *a*

and the variable ACR<sub>a,n</sub> is as calculated pursuant to Formula N-17 or, if required, pursuant to Formula N-18, the variable TotalRatingChange<sub>a,n</sub> is defined as set forth in Formula N-19 and each of the other variables are defined as set forth in Formula N-17.

### **20.3.6.2 Charges and Payments for the Direct Impact of Auction Outages and Returns-to-Service**

The ISO shall use O/R-t-S Auction Constraint Residuals to allocate O/R-t-S Auction Revenue Shortfall Charges and O/R-t-S Auction Revenue Surplus Payments, as the case may be, among Transmission Owners pursuant to this Section [20.3.6.2](#). Each O/R-t-S Auction Revenue Shortfall Charge and each O/R-t-S Auction Revenue Surplus Payment allocated to a Transmission Owner pursuant to this Section 20.3.6.2 is subject to being set equal to zero pursuant to Section 20.3.6.5.

#### **20.3.6.2.1 Identification of Outages and Returns-to-Service Qualifying for Charges and Payments**

For each round of a 6-month Sub-Auction or [each month covered by a](#) Reconfiguration Auction, as the case may be, the ISO shall identify each Qualifying Auction Outage and each Qualifying Auction Return-to-Service, as described below. The Transmission Owner responsible, as determined pursuant to Section 20.3.6.4, for the Qualifying Auction Outage or Qualifying Auction Return-to-Service shall be allocated an O/R-t-S Auction Revenue Shortfall Charge or an O/R-t-S Auction Revenue Surplus Payment pursuant to Sections 20.3.6.2.2 or 20.3.6.2.3.

##### **20.3.6.2.1.1 Definition of Qualifying Auction Outage**

A “**Qualifying Auction Outage**” (which term shall apply to round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be) shall be defined to mean either an Actual Qualifying Auction Outage or a Deemed Qualifying Auction Outage. For purposes of this Attachment N, “ $o$ ” shall refer to a single Qualifying Auction Outage.

An “**Actual Qualifying Auction Outage**” (which term shall apply to round  $n$  of a 6-

month Sub-Auction or a given month covered by Reconfiguration Auction  $n$ , as the case may be) shall be defined as a transmission facility that, for a given round  $n$  of a 6-month Sub-Auction or a given month covered by Reconfiguration Auction  $n$ , as the case may be:

- (a) For a given month covered by Reconfiguration Auction  $n$ , meets each of the following requirements:
  - (i) the facility existed and was modeled as in-service for the relevant month in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ); and
  - (ii) the facility exists but is not modeled as in-service in the relevant month for Reconfiguration Auction  $n$ ;
  - (iii) the facility was not Normally Out-of-Service Equipment for the relevant month at the time of the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ); or
- (b) For round  $n$  of a 6-month Sub-Auction, meets each of the following requirements:
  - (i) the facility exists but is not modeled as in-service for round  $n$  of a 6-month Sub-Auction; and
  - (ii) the facility was not Normally Out-of-Service Equipment at the time of stage 1 round  $n$  of that 6-month Sub-Auction.

A “**Deemed Qualifying Auction Outage**” (which term shall apply only to a given month

covered by Reconfiguration Auction  $n$ ) shall be defined as a transmission facility that, for the relevant month covered by Reconfiguration Auction  $n$ , meets each of the following

requirements:

- (i) the facility existed but was not modeled as in-service for the relevant month in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ );
- (ii) the facility existed but was not modeled as in-service for the relevant month in Reconfiguration Auction  $n$  as a result of an Auction Status Change or external event described in Section 20.3.6.4.3 in the relevant month covered by Reconfiguration Auction  $n$  for which responsibility was assigned pursuant to Section 20.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 20.3.6.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as in-service for the relevant month in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ );
- (iii) the facility was not Normally Out-of-Service Equipment for the relevant month at the time of the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during

the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ).

#### 20.3.6.2.1.2 Definition of Qualifying Auction Return-to-Service

A “**Qualifying Auction Return-to-Service**” shall be defined to mean either an Actual Qualifying Auction Return-to-Service or a Deemed Qualifying Auction Return-to-Service. For purposes of this Attachment N, “ $o$ ” shall refer to a single Qualifying Auction Return-to-Service.

An “**Actual Qualifying Auction Return-to-Service**” shall be defined as a transmission facility that, for a given month covered by Reconfiguration Auction  $n$ , meets each of the following requirements:

- (i) the facility existed but was not modeled as in-service in the relevant month for the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ); and
- (ii) the facility exists and is modeled as in-service for the relevant month in Reconfiguration Auction  $n$ ;
- (iii) the facility was not Normally Out-of-Service Equipment for the relevant month at the time of the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ).

Notwithstanding any other provision of this Attachment N, a transmission facility returning to service for round  $n$  of a 6-month Sub-Auction shall not be an Actual Qualifying Auction Return-to-Service for that round  $n$  and shall not qualify a Transmission Owner for an

O/R-t-S Auction Revenue Shortfall Charge or O/R-t-S Auction Revenue Surplus Payment for that round  $n$ .

A “**Deemed Qualifying Auction Return-to-Service**” shall be defined as a transmission facility that, for a given month covered by Reconfiguration Auction  $n$ , meets each of the following requirements:

- (i) the facility existed but was not modeled as in-service for the relevant month in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ );
- (ii) the facility existed but was not modeled as in-service for the relevant month in Reconfiguration Auction  $n$  as a result of an Auction Status Change or external event described in Section 20.3.6.4.3 in the relevant month covered by Reconfiguration Auction  $n$  for which responsibility was assigned pursuant to Section 20.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 20.3.6.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as in-service in the relevant month for the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ); and
- (iii) the facility was not Normally Out-of-Service Equipment for the relevant month at the time of the last Reconfiguration Auction held for TCCs valid during the



relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ).

#### **20.3.6.2.2 Allocation of an O/R-t-S Auction Constraint Residual When Only One Transmission Owner is Responsible for All of the Relevant Outages and Returns-to-Service**

This Section 20.3.6.2.2 describes the allocation of an O/R-t-S Auction Constraint Residual for a given round of a 6-month Sub-Auction or a given month covered by a Reconfiguration Auction, as the case may be, and a given constraint when only one Transmission Owner is responsible, as determined pursuant to Section 20.3.6.4, for all of the Qualifying Auction Outages and all of the Qualifying Auction Returns-to-Service for that round of a 6-month Sub-Auction or the relevant month covered by that Reconfiguration Auction that contribute to that constraint.

If the same Transmission Owner is responsible, as determined pursuant to Section 20.3.6.4, for all of the Qualifying Auction Outages  $o$  and Qualifying Auction Returns-to-Service  $o$  for round  $n$  of a 6-month Sub-Auction or a given month covered by Reconfiguration Auction  $n$  that contribute to constraint  $a$ , then the ISO shall allocate the O/R-t-S Auction Constraint Residual for that round  $n$  of a 6-month Sub-Auction or that month covered by Reconfiguration Auction  $n$  and that constraint, O/R-t-S  $ACR_{a,n}$ , to that Transmission Owner in the form of either (i) an O/R-t-S Auction Revenue Shortfall Charge in the amount of O/R-t-S  $ACR_{a,n}$  if O/R-t-S  $ACR_{a,n}$  is negative, or (ii) an O/R-t-S Auction Revenue Surplus Payment in the amount of O/R-t-S  $ACR_{a,n}$  if O/R-t-S  $ACR_{a,n}$  is positive.

### **20.3.6.2.3 Allocation of an O/R-t-S Auction Constraint Residual When More Than One Transmission Owner is Responsible for the Relevant Outages and Returns-to-Service**

This Section 20.3.6.2.3 describes the allocation of an O/R-t-S Auction Constraint Residual for a given round of a 6-month Sub-Auction or [a given month covered by a](#) Reconfiguration Auction, as the case may be, and a given constraint when more than one Transmission Owner is responsible, as determined pursuant to Section 20.3.6.4, for the Qualifying Auction Outages and the Qualifying Auction Returns-to-Service for the round of a 6-month Sub-Auction or [the relevant month covered by the](#) Reconfiguration Auction that contribute to the constraint.

If more than one Transmission Owner is responsible, as determined pursuant to Section 20.3.6.4, for the Qualifying Auction Outages and the Qualifying Auction Returns-to-Service for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$  that contribute to constraint  $a$ , the ISO shall allocate the O/R-t-S Auction Constraint Residual for constraint  $a$  for round  $n$  of a 6-month Sub-Auction or for [the relevant month covered by](#) Reconfiguration Auction  $n$ , O/R-t-S  $ACR_{a,n}$ , in the form of an O/R-t-S Auction Revenue Shortfall Charge or O/R-t-S Auction Revenue Surplus Payment to the Transmission Owners responsible for the Qualifying Auction Outages  $o$  and Qualifying Auction Returns-to-Service  $o$  for round  $n$  of a 6-month Sub-Auction or [the relevant month covered by](#) Reconfiguration Auction  $n$  by first determining the net total impact on the constraint of all Qualifying Auction Outages and Qualifying Auction Returns-to Service for round  $n$  of a 6-month Sub-Auction or [the relevant month covered by](#) Reconfiguration Auction  $n$  with an impact on the Energy flow across that constraint of 1 MW- $p$  or more by applying Formula N-21, and then applying either Formula N-22 or Formula N-23, as specified herein, to assess O/R-t-S Auction Revenue Shortfall Charges and O/R-t-S Auction Revenue Surplus Payments.

### Formula N-21

$$O/R-t-SNetAuctionImpact_{a,n} = \sum_{for\ all\ o \in O_n} FlowImpact_{a,n,o} * ShadowPrice_{a,n}$$

Where,

O/R-t-SNetAuctionImpact<sub>a,n</sub> = The net impact, in dollars, for round *n* of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction *n*, as the case may be, on constraint *a* of all Qualifying Auction Outages and Qualifying Auction Returns-to-Service for -round *n* of a 6-month Sub-Auction or [the relevant month covered by](#) Reconfiguration Auction *n* having an impact of more than 1 MW-*p* on Energy flow across constraint *a*; *provided, however*, O/R-t-SNetAuctionImpact<sub>a,n</sub> shall be subject to recalculation as specified in the paragraph immediately following this Formula N-21

FlowImpact<sub>a,n,o</sub> = The Energy flow impact, in MW-*p*, of a Qualifying Auction Outage *o* or Qualifying Auction Return-to-Service *o* on binding constraint *a* determined for [a given month covered by](#) Reconfiguration Auction *n* or round *n* of a 6-month Sub-Auction, which shall either:

- (a) if Qualifying Auction Outage *o* is a Deemed Qualifying Auction Outage, be equal to the negative of FlowImpact<sub>a,n,o</sub> calculated for the corresponding Deemed Qualifying Auction Return-to-Service as described in part (b) of this definition of FlowImpact<sub>a,n,o</sub>, or
- (b) if Qualifying Auction Outage *o* or Qualifying Auction Return-to-Service *o* is an Actual Qualifying Auction Outage, an Actual Qualifying Auction Return-to-Service, or a Deemed Qualifying Auction Return-to-Service, be calculated pursuant to the following formula:

$$FlowImpact_{a,n,o} = BaseCaseFlow_{a,n} - One-OffFlow_{a,n,o}$$

Where,

BaseCaseFlow<sub>a,n</sub> = Either, as the case may be:

- (i) for a [given month covered by](#) Reconfiguration Auction *n*, the Energy flow on constraint *a* resulting from a Power Flow using (1) the set of injections and withdrawals corresponding to the actual TCCs and Grandfathered Rights [for the](#)

relevant month represented in the solution to the last Reconfiguration Auction held for TCCs valid during the relevant month, or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~  (including those pre-existing TCCs and

Grandfathered Rights represented as fixed injections and withdrawals in that auction); (2) the phase angle regulator schedules determined in the Optimal Power Flow solution for the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the final round of the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ; and (3) the Transmission System model for the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration Auction  $n$~~ ; or

- (ii) for any round of a 6-month Sub-Auction, the Energy flow on constraint  $a$  resulting from a Power Flow run using the following base case data set: (1) the Transmission System model for the actual 6-month Sub-Auction, modified so as to model as in-service all transmission facilities that were out-of-service for the actual 6-month Sub-Auction, and (2) the set of injections and withdrawals corresponding to the base case set of TCCs (including those pre-existing TCCs and Grandfathered Rights that are represented as fixed injections and withdrawals

in the 6-month Sub-Auction) and the phase angle regulator schedules<sup>u</sup> produced in the Optimal Power Flow used to calculate the Energy flow on constraint  $a$  for round  $n$  of a 6-month Sub-Auction, as described in the definition of  $FLOW_{a,n,basecase}$  in Formula N-17

One-OffFlow<sub>a,n,o</sub> = Either

- (i) if Qualifying Auction Outage  $o$  or Qualifying Auction Return-to-Service  $o$  is an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service, the Energy flow on constraint  $a$  resulting from a Power Flow using each element of the base case data set used in the calculation of BaseCaseFlow<sub>a,n</sub> above (*provided, however, if a transmission facility was modeled as free-flowing in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, because of the outage of any transmission facility, the ISO shall appropriately adjust the phase angle regulator schedules<sup>u</sup> and related variables to model the transmission facility as free flowing*), but in each case with the Transmission System model modified so as to, as the case may be, either (i) model as out-of-service Actual Qualifying Auction Outage  $o$ , or (ii) model as in-service Actual Qualifying Auction Return-to-Service  $o$ ; or
- (ii) if Qualifying Auction Return-to-Service  $o$  is a Deemed Qualifying Auction Return-to-Service, the Energy flow on constraint  $a$  resulting from a Power Flow using each element of the base case data set used in the calculation of BaseCaseFlow<sub>a,n</sub> above (*provided, however, if a transmission facility was modeled as free-flowing in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, because of the outage*

of any transmission facility, the ISO shall appropriately adjust the phase angle regulator schedules<sup>5</sup> and related variables to model the transmission facility as free flowing), but with the Transmission System model modified so as to model as in-service the facility that is Deemed Qualifying Auction Return-to-Service  $o$ ;

*provided, however*, where the absolute value of  $\text{FlowImpact}_{a,n,o}$  calculated using the procedures set forth above is less than  $1 \text{ MW} \cdot p$ , then  $\text{FlowImpact}_{a,n,o}$  shall be set equal to zero *provided further*,  $\text{FlowImpact}_{a,n,o}$  shall be subject to being set equal to zero as specified in the paragraph immediately following this Formula N-21

$O_n$  = The set of all Qualifying Auction Outages  $o$  and Qualifying Auction Returns-to-Service  $o$  in round  $n$  of a 6-month Sub-Auction or [in a given month covered by](#) Reconfiguration Auction  $n$

$p$  = A one-month period for [a given month covered by](#) Reconfiguration Auction  $n$ , or a six-month period for round  $n$  of a 6-month Sub-Auction

and the variable  $\text{ShadowPrice}_{a,n}$  is defined as set forth in Formula N-17.

After calculating O/R-t-S  $\text{NetAuctionImpact}_{a,n}$  pursuant to Formula N-21, the ISO shall determine whether O/R-t-S  $\text{NetAuctionImpact}_{a,n}$  for constraint  $a$  in round  $n$  of a 6-month Sub-Auction or [in a given month covered by](#) Reconfiguration Auction  $n$  has a different sign than O/R-t-S  $\text{ACR}_{a,n}$  for constraint  $a$  in round  $n$  of a 6-month Sub-Auction or [in the relevant month covered by](#) Reconfiguration Auction  $n$ . If the sign is different, the ISO shall (i) recalculate O/R-t-S  $\text{NetAuctionImpact}_{a,n}$  pursuant to Formula N-21 after setting equal to zero each  $\text{FlowImpact}_{a,n,o}$  for which  $\text{FlowImpact}_{a,n,o} * \text{ShadowPrice}_{a,n}$  has a different sign than O/R-t-S  $\text{ACR}_{a,n}$ , and then (ii) use this recalculated O/R-t-S  $\text{NetAuctionImpact}_{a,n}$  and reset value of  $\text{FlowImpact}_{a,n,o}$  to allocate O/R-t-S Auction Revenue Shortfall Charges and O/R-t-S Auction Revenue Surplus Payments pursuant to Formula N-22 or Formula N-23, as specified below.

If the absolute value of the net impact (O/R-t-S  $\text{NetAuctionImpact}_{a,n}$ ) on constraint  $a$  of

all Qualifying Auction Outages and Qualifying Auction Returns-to-Service for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$  as calculated using Formula N-21 (or recalculated pursuant to Formula N-21 using a reset value of  $\text{FlowImpact}_{a,n,o}$  as described in the prior paragraph) is greater than the absolute value of the O/R-t-S Auction Constraint Residual ( $\text{O/R-t-S ACR}_{a,n}$ ) for constraint  $a$  in round  $n$  of a 6-month Sub-Auction or [in the relevant month covered by](#) Reconfiguration Auction  $n$ , as the case may be, then the ISO shall allocate the O/R-t-S Auction Constraint Residual in the form of an O/R-t-S Auction Revenue Shortfall Charge,  $\text{O/R-t-S ARSC}_{a,t,n}$ , or O/R-t-S Auction Revenue Surplus Payment,  $\text{O/R-t-S ARSP}_{a,t,n}$ , by using Formula N-22. If the absolute value of the net impact ( $\text{O/R-t-S NetAuctionImpact}_{a,n}$ ) on constraint  $a$  of all Qualifying Auction Outages and Qualifying Auction Returns-to-Service for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$  as calculated using Formula N-21 (or recalculated pursuant to Formula N-21 using a reset value of  $\text{FlowImpact}_{a,n,o}$  as described in the prior paragraph) is less than or equal to the absolute value of the O/R-t-S Auction Constraint Residual ( $\text{O/R-t-S ACR}_{a,n}$ ) for constraint  $a$  in round  $n$  of a 6-month Sub-Auction or [in the relevant month covered by](#) Reconfiguration Auction  $n$ , as the case may be, then the ISO shall allocate the O/R-t-S Auction Constraint Residual in the form of an O/R-t-S Auction Revenue Shortfall Charge,  $\text{O/R-t-S ARSC}_{a,t,n}$ , or O/R-t-S Auction Revenue Surplus Payment,  $\text{O/R-t-S ARSP}_{a,t,n}$ , by using Formula N-23.

**Formula N-22**

$$\text{O/R-t-S Allocation}_{a,t,n} = \left[ \frac{\sum_{\substack{o \in O_n \\ \text{and } q=t}} (\text{FlowImpact}_{a,n,o} * \text{Responsibility}_{n,q,o})}{\sum_{\text{for all } o \in O_n} \text{FlowImpact}_{a,n,o}} \right] * \text{O/R-t-S ACR}_{a,n}$$

Where,

O/R-t-S Allocation<sub>a,t,n</sub> = Either an O/R-t-S Auction Revenue Shortfall Charge or an O/R-t-S Auction Revenue Surplus Payment, as specified in (a) and (b) below:

(a) If O/R-t-S Allocation<sub>a,t,n</sub> is negative, then O/R-t-S Allocation<sub>a,t,n</sub> shall be an O/R-t-S Auction Revenue Shortfall Charge, O/R-t-S ARSC<sub>a,t,n</sub>, charged to Transmission Owner *t* for binding constraint *a* in [a given month covered by](#) Reconfiguration Auction *n* or round *n* of a 6-month Sub-Auction; or

(b) If O/R-t-S Allocation<sub>a,t,n</sub> is positive, then O/R-t-S Allocation<sub>a,t,n</sub> shall be an O/R-t-S Auction Revenue Surplus Payment, O/R-t-S ARSP<sub>a,t,n</sub>, paid to Transmission Owner *t* for binding constraint *a* in [a given month covered by](#) Reconfiguration Auction *n* or round *n* of a 6-month Sub-Auction

Responsibility<sub>n,q,o</sub> = The amount, as a percentage, of responsibility borne by Transmission Owner *q* (which shall include the ISO when it is deemed a Transmission Owner for the purpose of applying Sections 20.3.6.4.2 or 20.3.6.4.3) for Qualifying Auction Outage *o* or Qualifying Auction Return-to-Service *o* in [a given month covered by](#) Reconfiguration Auction *n* or round *n* of a 6-month Sub-Auction, as determined pursuant to Section 20.3.6.4

and the variable O/R-t-S ACR<sub>a,n</sub> is defined as set forth in Formula N-19 and the variables

FlowImpact<sub>a,n,o</sub> and O<sub>n</sub> are defined as set forth in Formula N-21.

### Formula N-23

$$O/R-t-S Allocation_{a,t,n} = \sum_{\substack{o \in O_n \\ \text{and } q=t}} FlowImpact_{a,n,o} * ShadowPrice_{a,n} * Responsibility_{n,q,o}$$

Where,

the variable ShadowPrice<sub>a,n</sub> is defined as set forth in Formula N-17, the variables O/R-t-S

Allocation<sub>a,t,n</sub> and Responsibility<sub>n,q,o</sub> are defined as set forth in Formula N-22, and the variables

FlowImpact<sub>a,n,o</sub> and O<sub>n</sub> are defined as set forth in Formula N-21.



### **20.3.6.3 Charges and Payments for the Secondary Impact of Auction Outages and Returns-to-Service**

The ISO shall use U/D Auction Constraint Residuals to allocate U/D Auction Revenue Shortfall Charges and U/D Auction Revenue Surplus Payments, as the case may be, among Transmission Owners pursuant to this Section 20.3.6.3. Each U/D Auction Revenue Shortfall Charge and each U/D Auction Revenue Surplus Payment allocated to a Transmission Owner pursuant to this Section 20.3.6.3 is subject to being set equal to zero pursuant to Section 20.3.6.5.

#### **20.3.6.3.1 Identification of Upratings and Deratings Qualifying for Charges and Payments**

For each constraint for each round of a 6-month Sub-Auction or [each month covered by a](#) Reconfiguration Auction, the ISO shall identify each Qualifying Auction Derating and each Qualifying Auction Uprating, as described below. The Transmission Owner responsible, as determined pursuant to Section 20.3.6.4, for a Qualifying Auction Derating or Qualifying Auction Uprating shall be allocated a U/D Auction Revenue Shortfall Charge or a U/D Auction Revenue Surplus Payment, as the case may be, pursuant to Section 20.3.6.3.2.

##### **20.3.6.3.1.1 Definition of Qualifying Auction Derating**

A “**Qualifying Auction Derating**” (which term shall apply to round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be) shall be defined to mean an Actual Qualifying Auction Derating or a Deemed Qualifying Auction Derating. For purposes of this Attachment N, “ $r$ ” shall refer to a single Qualifying Auction Derating.

An “**Actual Qualifying Auction Derating**” (which term shall apply to round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be) shall be defined as a change in the rating of a constraint that, for a given constraint  $a$  and a given

round  $n$  or [a given month covered by](#) Reconfiguration Auction  $n$  meets each of the following requirements:

For [a given month covered by](#) Reconfiguration Auction  $n$ :

- (i) the constraint has a lower rating in [the relevant month covered by](#) Reconfiguration Auction  $n$  than it would have if all transmission facilities were modeled as in-service [for the relevant month](#) in Reconfiguration Auction  $n$ ;
- (ii) this lower rating is in whole or in part the result of an Actual Qualifying Auction Outage  $o$  or an Actual Qualifying Auction Return-to-Service  $o$  for [the relevant month covered by](#) Reconfiguration Auction  $n$ ;
- (iii) the lower rating resulting from Actual Qualifying Auction Outage  $o$  or Actual Qualifying Auction Return-to-Service  $o$  for [the relevant month covered by](#) Reconfiguration Auction  $n$  was not modeled in the last [Reconfiguration Auction held for TCCs valid during the relevant month \(or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month-corresponding to Reconfiguration Auction  \$n\$ \)](#);
- (iv) this lower rating [for the relevant month](#) is included in the Reconfiguration Auction Interface Uprate/Derate Table in effect for Reconfiguration Auction  $n$ ;  
and
- (v) the constraint was binding in [the relevant month covered by](#) Reconfiguration Auction  $n$ .

For round  $n$  of a 6-month Sub-Auction:

- (i) the constraint has a lower rating in round  $n$  of the 6-month Sub-Auction than that

constraint would have in a case where all transmission facilities are in-service and fully rated;

- (ii) this lower rating is the result of an Actual Qualifying Auction Outage  $o$  or Actual Qualifying Auction Return-to-Service  $o$  for round  $n$  of the 6-month Sub-Auction;
- (iii) this lower rating is included in the Centralized TCC Auction Interface Uprate/Derate Table in effect for round  $n$  of the 6-month Sub-Auction; and
- (iv) the constraint is binding in round  $n$  of the 6-month Sub-Auction.

A “**Deemed Qualifying Auction Derating**” (which term shall apply to a given month covered by Reconfiguration Auction  $n$ ) shall be defined as a change in the rating of a constraint that, for a given constraint  $a$  and a given month covered by Reconfiguration Auction  $n$  meets each of the following requirements:

- (i) the constraint has a lower rating in the relevant month covered by Reconfiguration Auction  $n$  than it would have if all transmission facilities were modeled as in-service for the relevant month in Reconfiguration Auction  $n$ ;
- (ii) this lower rating is in whole or in part the result of a Deemed Qualifying Auction Outage  $o$  or Deemed Qualifying Auction Return-to-Service  $o$  for the relevant month covered by Reconfiguration Auction  $n$ ;
- (iii) this lower rating resulting from Deemed Qualifying Auction Outage  $o$  or Deemed Qualifying Auction Return-to-Service  $o$  for the relevant month covered by Reconfiguration Auction  $n$  was modeled in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month ~~corresponding to Reconfiguration~~

~~Auction  $n$~~ ), but responsibility for Qualifying Auction Outage  $o$  or Qualifying Auction Return-to-Service  $o$  resulting in the lower rating for the relevant month covered by Reconfiguration Auction  $n$  is assigned pursuant to Section 20.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 20.3.6.4) other than the Transmission Owner responsible for the lower rating in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month~~-corresponding to Reconfiguration Auction  $n$~~ );

- (iv) this lower rating is included for the relevant month in the Reconfiguration Auction Interface Uprate/Derate Table in effect for Reconfiguration Auction  $n$ ; and
- (v) the constraint is binding in the relevant month covered by Reconfiguration Auction  $n$ .

#### **20.3.6.3.1.2 Definition of Qualifying Auction Uprating**

A “**Qualifying Auction Uprating**” shall be defined to mean either an Actual Qualifying Auction Uprating or a Deemed Qualifying Auction Uprating. For purposes of this Attachment N, “ $r$ ” shall refer to a single Qualifying Auction Uprating.

An “**Actual Qualifying Auction Uprating**” shall be defined as a change in the rating of a constraint that, for a given constraint  $a$  and a given month covered by Reconfiguration Auction  $n$ , as the case may be, meets each of the following requirements:

- (i) the constraint has a higher rating for the relevant month covered by

Reconfiguration Auction  $n$  than it would have absent an Actual Qualifying Auction Outage  $o$  or Actual Qualifying Auction Return-to-Service  $o$  for [the relevant month covered by](#) Reconfiguration Auction  $n$ ;

- (ii) this higher rating resulting from Actual Qualifying Auction Outage  $o$  or Actual Qualifying Auction Return-to-Service  $o$  for [the relevant month covered by](#) Reconfiguration Auction  $n$  was not modeled in the last [Reconfiguration Auction held for TCCs valid during the relevant month \(or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last](#) 6-month Sub-Auction held for TCCs valid during the [relevant](#) month ~~corresponding to Reconfiguration Auction  $n$~~ );
- (iii) this higher rating [in the relevant month covered by Reconfiguration Auction  \$n\$](#)  is included in the Reconfiguration Auction Interface Uprate/Derate Table in effect for Reconfiguration Auction  $n$ ; and
- (iv) the constraint is binding in [the relevant month covered by](#) Reconfiguration Auction  $n$ .

Notwithstanding any other provision of this Attachment N, a transmission facility uprating for a round of a 6-month Sub-Auction shall not be a Qualifying Auction Uprating and shall not qualify a Transmission Owner for a U/D Auction Revenue Shortfall Charge or U/D Auction Revenue Surplus Payment.

A “**Deemed Qualifying Auction Uprating**” shall be defined as a change in the rating of a constraint that, for a given constraint  $a$  and [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, meets each of the following requirements:

- (i) the constraint has a lower rating in [the relevant month covered by](#) Reconfiguration

Auction  $n$  than it would have if all transmission facilities were modeled as in-service for the relevant month in Reconfiguration Auction  $n$ ;

- (ii) this lower rating is in whole or in part the result of a Deemed Qualifying Auction Outage  $o$  or Deemed Qualifying Auction Return-to-Service  $o$  for the relevant month covered by Reconfiguration Auction  $n$ ;
- (iii) this lower rating resulting from Deemed Qualifying Auction Outage  $o$  or Deemed Qualifying Auction Return-to-Service  $o$  for the relevant month covered by Reconfiguration Auction  $n$  was modeled in the last Reconfiguration Auction held for TCCs valid during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month), but responsibility for Qualifying Auction Outage  $o$  or Qualifying Auction Return-to-Service  $o$  resulting in the lower rating for the relevant month covered by Reconfiguration Auction  $n$  is assigned pursuant to Section 20.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 20.3.6.4) other than the Transmission Owner responsible for the lower rating in the last ~~Reconfiguration Auction~~ Reconfiguration Auction held for TCCs valid ~~for hour #~~ during the relevant month (or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the relevant month);
- (iv) this lower rating in the relevant month covered by Reconfiguration Auction  $n$  is included in the Reconfiguration Auction Interface Uprate/Derate Table in effect for Reconfiguration Auction  $n$ ; and

- (v) the constraint is binding in [the relevant month covered by](#) Reconfiguration Auction  $n$ .

#### 20.3.6.3.2 Allocation of U/D Auction Constraint Residuals

This Section 20.3.6.3.2 describes the allocation of U/D Auction Constraint Residuals to Qualifying Auction Deratings and Qualifying Auction Upratings.

When there are Qualifying Auction Deratings or Qualifying Auction Upratings in [a given month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction for constraint  $a$ , the ISO shall allocate a U/D Auction Constraint Residual in the form of a U/D Auction Revenue Shortfall Charge, U/D ARSC <sub>$a,t,n$</sub> , or U/D Auction Revenue Surplus Payment, U/D ARSP <sub>$a,t,n$</sub> , by first determining the net total impact on the constraint for the round  $n$  of a 6-month Sub-Auction or [the relevant month covered by](#) Reconfiguration Auction  $n$  of all Qualifying Auction Deratings  $r$  and Qualifying Auction Upratings  $r$  for constraint  $a$  in [the relevant month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction pursuant to Formula N-24 and then applying either Formula N-25 or Formula N-26, as specified herein, to assess U/D Auction Revenue Shortfall Charges and U/D Auction Revenue Surplus Payments.

#### Formula N-24

$$U/D \text{ NetAuctionImpact}_{a,n} = \left( \sum_{r \in R_{a,n}} \text{RatingChange}_{a,n,r} * \text{ShadowPrice}_{a,n} \right) * \text{OPFSignChange}_{a,n}$$

Where,

U/D NetAuctionImpact <sub>$a,n$</sub>  = The net impact, in dollars, on constraint  $a$  in [a given month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction of all Qualifying Auction Deratings or Qualifying Auction Upratings for constraint  $a$  in [the relevant month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction; *provided, however*, U/D NetAuctionImpact <sub>$a,n$</sub>  shall be subject to recalculation as specified in the

paragraph immediately following this Formula N-24

RatingChange<sub>a,n,r</sub>= Either:

- (a) If Qualifying Auction Derating  $r$  or Qualifying Auction Up-rating  $r$  is a Deemed Qualifying Auction Derating or a Deemed Qualifying Auction Up-rating, RatingChange<sub>a,n,r</sub> shall be equal to the amount, in MW- $p$ , of the decrease or increase in the rating of binding constraint  $a$  in [a given month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction resulting from a Deemed Qualifying Auction Outage or Deemed Qualifying Auction Return-to-Service for constraint  $a$  in [the relevant month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction, which in the case of [the relevant month covered by](#) Reconfiguration Auction  $n$  shall be as shown in the Reconfiguration Auction Interface Up-rate/De-rate Table in effect for Reconfiguration Auction  $n$ , and which in the case of round  $n$  of a 6-month Sub-Auction shall be as shown in the Centralized TCC Auction Interface Up-rate/De-rate Table in effect for round  $n$  of a 6-month Sub-Auction; or
- (b) If Qualifying Auction Derating  $r$  or Qualifying Auction Up-rating  $r$  is an Actual Qualifying Auction Derating or an Actual Qualifying Auction Up-rating, RatingChange<sub>a,n,r</sub> shall be equal to the amount, in MW- $p$ , of the decrease or increase in the rating of binding constraint  $a$  in [a given month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction resulting from an Actual Qualifying Auction Outage or Actual Qualifying Auction Return-to-Service for constraint  $a$  in [the relevant month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction, which in the case of [the relevant month covered by](#) Reconfiguration Auction  $n$  shall be as shown in the



Reconfiguration Auction Interface Uprate/Derate Table in effect for  
Reconfiguration Auction  $n$ , and which in the case of round  $n$  of a 6-month Sub-  
Auction shall be as shown in the Centralized TCC Auction Interface  
Uprate/Derate Table in effect for round  $n$  of a 6-month Sub-Auction;

*provided, however, RatingChange<sub>a,n,r</sub> shall be subject to being set equal to zero as  
specified in the paragraph immediately following this Formula N-24*

$R_{a,n}$  = The set of all Qualifying Auction Deratings  $r$  or Qualifying Auction  
Upratings  $r$  for binding constraint  $a$  in [a given month covered by](#)  
Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction  
and the variables ShadowPrice<sub>a,n</sub> and OPFSignChange<sub>a,n</sub> are defined as set forth in  
Formula N-17.

After calculating U/D NetAuctionImpact<sub>a,n</sub> pursuant to Formula N-24, the ISO shall  
determine whether U/D NetAuctionImpact<sub>a,n</sub> for constraint  $a$  in round  $n$  of a 6-month Sub-  
Auction or [in a given month covered by](#) Reconfiguration Auction  $n$  has a different sign than U/D  
ACR<sub>a,n</sub> for constraint  $a$  in round  $n$  of a 6-month Sub-Auction or [in the relevant month covered](#)  
[by](#) Reconfiguration Auction  $n$ . If the sign is different, the ISO shall (i) recalculate U/D  
NetAuctionImpact<sub>a,n</sub> pursuant to Formula N-24 after setting equal to zero each RatingChange<sub>a,n,r</sub>  
for which RatingChange<sub>a,n,r</sub> \* ShadowPrice<sub>a,n</sub> \* OPFSignChange<sub>a,n</sub> has a different sign than U/D  
ACR<sub>a,n</sub>, and then (ii) use this recalculated U/D NetAuctionImpact<sub>a,n</sub> and reset value of  
RatingChange<sub>a,n,r</sub> to allocate U/D Auction Revenue Shortfall Charges and U/D Auction Revenue  
Surplus Payments pursuant to Formula N-25 or Formula N-26, as specified below.

If the absolute value of the net impact (U/D NetAuctionImpact<sub>a,n</sub>) on constraint  $a$  for [a](#)  
[given month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction of all  
Qualifying Auction Deratings or Qualifying Auction Upratings for constraint  $a$  in [the relevant](#)  
[month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction as calculated

using Formula N-24 (or recalculated pursuant to Formula N-24 using a reset value of  $RatingChange_{a,n,r}$  as described in the prior paragraph) is greater than the absolute value of the U/D Auction Constraint Residual ( $U/D ACR_{a,n}$ ) for constraint  $a$  in [the relevant month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction, as the case may be, then the ISO shall allocate the U/D Auction Constraint Residual in the form of a U/D Auction Revenue Shortfall Charge,  $U/D ARSC_{a,t,n}$ , or U/D Auction Revenue Surplus Payment,  $U/D ARSP_{a,t,n}$ , by using Formula N-25. If the absolute value of the net impact ( $U/D NetAuctionImpact_{a,n}$ ) on constraint  $a$  for [a given month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction of all Qualifying Auction Deratings or Qualifying Auction Upratings for constraint  $a$  in [the relevant month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction as calculated using Formula N-24 (or recalculated pursuant to Formula N-24 using a reset value of  $RatingChange_{a,n,r}$  as described in the prior paragraph) is less than or equal to the absolute value of the U/D Auction Constraint Residual ( $U/D ACR_{a,n}$ ) for constraint  $a$  in [the relevant month covered by](#) Reconfiguration Auction  $n$  or round  $n$  of a 6-month Sub-Auction, as the case may be, then the ISO shall allocate the U/D Auction Constraint Residual in the form of a U/D Auction Revenue Shortfall Charge,  $U/D ARSC_{a,t,n}$ , or U/D Auction Revenue Surplus Payment,  $U/D ARSP_{a,t,n}$ , by using Formula N-26.

**Formula N-25**

$$U/D Allocation_{a,t,n} = \left( \frac{\sum_{\substack{r \in R_{a,n} \\ \text{and } q=t}} (RatingChange_{a,n,r} * Responsibility_{n,q,r})}{\sum_{\substack{\text{for all } r \in R_{a,n}}} RatingChange_{a,n,r}} \right) * U/D ACR_{a,n}$$

Where,

$U/D Allocation_{a,t,n}$  = Either a U/D Auction Revenue Shortfall Charge or a U/D Auction

Revenue Surplus Payment, as specified in (a) and (b) below:

(a) If U/D Allocation<sub>a,t,n</sub> is negative, then U/D Allocation<sub>a,t,n</sub> shall be a U/D Auction Revenue Shortfall Charge, U/D ARSC<sub>a,t,n</sub>, charged to Transmission Owner *t* for binding constraint *a* in [a given month covered by](#) Reconfiguration Auction *n* or round *n* of a 6-month Sub-Auction; or

(b) If U/D Allocation<sub>a,t,n</sub> is positive, then U/D Allocation<sub>a,t,n</sub> shall be a U/D Auction Revenue Surplus Payment, U/D ARSP<sub>a,t,n</sub>, paid to Transmission Owner *t* for binding constraint *a* in [a given month covered by](#) Reconfiguration Auction *n* or round *n* of a 6-month Sub-Auction

Responsibility<sub>n,q,r</sub> = The amount, as a percentage, of responsibility borne by Transmission Owner *q* (which shall include the ISO when it is deemed a Transmission Owner for the purpose of applying Sections 20.3.6.4.2 or 20.3.6.4.3) for Qualifying Auction Derating *r* or Qualifying Auction Up-rating *r* in [a given month covered by](#) Reconfiguration Auction *n* or round *n* of a 6-month Sub-Auction, as determined pursuant to Section 20.3.6.4

and the variable U/D ACR<sub>a,n</sub> is defined as set forth in Formula N-20 and the variables

RatingChange<sub>a,n,r</sub> and R<sub>a,n</sub> are defined as set forth in Formula N-24.

#### Formula N-26

$$U/D Allocation_{a,t,n} = \sum_{\substack{r \in R_{a,n} \\ \text{and } q=t}} RatingChange_{a,n,r} * ShadowPrice_{a,n} * Responsibility_{n,q,r}$$

Where,

the variables U/D Allocation<sub>a,t,n</sub> and Responsibility<sub>n,q,r</sub> are defined as set forth in Formula N-25, the variable ShadowPrice<sub>a,n</sub> is defined as set forth in Formula N-17, and the variables RatingChange<sub>a,n,r</sub> and R<sub>a,n</sub> are defined as set forth in Formula N-24.

### 20.3.6.4 Assigning Responsibility for Outages, Returns-to-Service, Deratings, and Up-ratings

#### 20.3.6.4.1 General Rule for Assigning Responsibility; Presumption of Causation

Unless the special rules set forth in Sections 20.3.6.4.2 or 20.3.6.4.3 apply, a Transmission Owner shall for purposes of this Section 20.3.6 be deemed responsible for an Auction Status Change to the extent that the Transmission Owner has caused the Auction Status Change by changing the in-service or out-of-service status of its transmission facility; *provided*,

however, that where an Auction Status Change results from a change to the in-service or out-of-service status of a transmission facility owned by more than one Transmission Owner, responsibility for such Auction Status Change shall be assigned to each owning Transmission Owner based on the percentage of the transmission facility that is owned by the Transmission Owner (as determined in accordance with Section 20.3.6.6.3) ~~during the hour for which the DAM Status Change occurred~~. For the sake of clarity, a Transmission Owner may, by changing the in-service or out-of-service status of its transmission facility, cause an Auction Status Change of another transmission facility if the Transmission Owner's change in the in-service or out-of-service status of its transmission facility causes (directly or as a result of Good Utility Practice) a change in the in-service or out-of-service status of the other transmission facility.

The Transmission Owner that owns a transmission facility that qualifies as an Auction Status Change shall be deemed to have caused the Auction Status Change of that transmission facility unless (i) the Transmission Owner that owns the facility informs the ISO that another Transmission Owner caused the Auction Status Change or that responsibility is to be shared among Transmission Owners in accordance with Sections 20.3.6.4.2 or 20.3.6.4.3, and no party disputes such claim; (ii) in case of a dispute over the assignment of responsibility, the ISO determines a Transmission Owner other than the owner of the transmission facility caused the Auction Status Change or that responsibility is to be shared among Transmission Owners in accordance with Section 20.3.6.4.2 or Section 20.3.6.4.3; or (iii) FERC orders otherwise.

**20.3.6.4.2 Shared Responsibility For Outages, Returns-to-Service, and Ratings Changes Directed by the ISO or Caused by Facility Status Changes Directed by the ISO**

A Transmission Owner shall not be responsible for any Auction Status Change that qualifies as an ISO-Directed Auction Status Change or Deemed ISO-Directed Auction Status

Change. Instead, the ISO shall allocate any revenue impacts resulting from an Auction Status Change that qualifies as an ISO-Directed Auction Status Change or Deemed ISO-Directed Auction Status Change as part of Net Auction Revenues for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ . To do so, the ISO shall be treated as a Transmission Owner when allocating Auction Constraint Residuals pursuant to Section 20.3.6.2 and Section 20.3.6.3, and any Auction Status Change that qualifies as an ISO-Directed Auction Status Change or Deemed ISO-Directed Auction Status Change shall be attributed to the ISO when performing the calculations described in Section 20.3.6.2 and Section 20.3.6.3; *provided, however*, any O/R-t-S Auction Revenue Shortfall Charge, U/D Auction Revenue Shortfall Charge, O/R-t-S Auction Revenue Surplus Payment, or U/D Auction Revenue Surplus Payment allocable to the ISO pursuant to this Section 20.3.6.4.2 shall ultimately be allocated to the Transmission Owners as Net Auction Revenues pursuant to Section 20.3.7.

Responsibility for a Qualifying Auction Return-to-Service or Qualifying Auction Upgrading that is directed by the ISO but does not qualify as a Deemed ISO-Directed Auction Status Change shall be assigned to the Transmission Owner that was responsible for the Qualifying Auction Outage or Qualifying Auction Derating in the last [Reconfiguration Auction held for TCCs valid during the a given month covered by Reconfiguration Auction  \$n\$  \(or if no Reconfiguration Auction was held for TCCs valid during the relevant month, then the last 6-month Sub-Auction held for TCCs valid during the \[relevant\]\(#\) month~~-corresponding to the relevant Reconfiguration Auction\).~~](#)

The ISO shall not direct that a transmission facility be modeled as in-service or out-of-service for purposes of a [given month covered by a](#) Reconfiguration Auction without the unanimous consent of the Transmission Owner(s), if any, that will be allocated a resulting O/R-t-

S Auction Revenue Shortfall Charge, U/D Auction Revenue Shortfall Charge, O/R-t-S Auction Revenue Surplus Payment, or U/D Auction Revenue Surplus Payment in accordance with this Section 20.3.6.4.2.

#### **20.3.6.4.3 Shared Responsibility for External Events**

A Transmission Owner shall not be responsible for an Auction Status Change occurring inside the NYCA that is caused by a change in the in-service or out-of-service status or rating of a transmission facility located outside the NYCA. Instead, the ISO shall allocate any revenue impacts resulting from an Auction Status Change caused by such an event outside the NYCA as part of Net Auction Revenues for round  $n$  of a 6-month Sub-Auction or [a given month covered by](#) Reconfiguration Auction  $n$ . To do so, the ISO shall be treated as a Transmission Owner when allocating Auction Constraint Residuals pursuant to Section 20.3.6.2 and Section 20.3.6.3 and any Auction Status Change caused by such an event outside the NYCA shall be attributed to the ISO; *provided, however*, any O/R-t-S Auction Revenue Shortfall Charge, U/D Auction Revenue Shortfall Charge, O/R-t-S Auction Revenue Surplus Payment, or U/D Auction Revenue Surplus Payment allocable to the ISO pursuant to this Section 20.3.6.4.3 shall ultimately be allocated to the Transmission Owners as Net Auction Revenues pursuant to Section 20.3.7.

#### **20.3.6.5 Exceptions: Setting Charges and Payments to Zero**

##### **20.3.6.5.1 Zeroing Out of Charges and Payments When Outages and Deratings Lead to Net Payments or Returns-to-Service and Upratings Lead to Net Charges**

The ISO shall use Formula N-27 to calculate the total O/R-t-S Auction Revenue Shortfall Charges, U/D Auction Revenue Shortfall Charges, O/R-t-S Auction Revenue Surplus Payments, and U/D Auction Revenue Surplus Payments,  $\text{NetAuctionAllocations}_{t,n}$ , for Transmission Owner  $t$  in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction

$n$ , as the case may be. Based on this calculation, the ISO shall set equal to zero all O/R-t-S  $ARSC_{a,t,n}$ , U/D  $ARSC_{a,t,n}$ , O/R-t-S  $ARSP_{a,t,n}$ , and U/D  $ARSP_{a,t,n}$  (each as defined in Formula N-27) for Transmission Owner  $t$  for all constraints for round  $n$  of a 6-month Sub-Auction or [the relevant month covered by](#) Reconfiguration Auction  $n$ , as the case may be, if (i)  $NetAuctionAllocations_{t,n}$  is positive and Transmission Owner  $t$  is not responsible (as determined pursuant to Section 20.3.6.4) for any Qualifying Auction Returns-to-Service or Qualifying Auction Upratings in round  $n$  of a 6-month Sub-Auction or in [the relevant month covered by](#) Reconfiguration Auction  $n$ , as the case may be, or (ii)  $NetAuctionAllocations_{t,n}$  is negative and Transmission Owner  $t$  is not responsible (as determined pursuant to Section 20.3.6.4) for any Qualifying Auction Outages or Qualifying Auction Deratings in round  $n$  of a 6-month Sub-Auction or in [the relevant month covered by](#) Reconfiguration Auction  $n$ , as the case may be; *provided, however*, the ISO shall not set equal to zero pursuant to this Section 20.3.6.5.1 any O/R-t-S  $ARSC_{a,t,n}$ , U/D  $ARSC_{a,t,n}$ , O/R-t-S  $ARSP_{a,t,n}$ , or U/D  $ARSP_{a,t,n}$  arising from an ISO-Directed Auction Status Change or Deemed ISO-Directed Auction Status Change described in Section 20.3.6.4.2 or external events described in Section 20.3.6.4.3.

#### Formula N-27

$$NetAuctionAllocations_{t,n} = \sum_{\text{for all } a} (O/R-t-S ARSC_{a,t,n} + U/D ARSC_{a,t,n} + O/R-t-S ARSP_{a,t,n} + U/D ARSP_{a,t,n})$$

Where,

$NetAuctionAllocations_{t,n}$  = The total of the O/R-t-S Auction Revenue Shortfall Charges, U/D Auction Revenue Shortfall Charges, O/R-t-S Auction Revenue Surplus Payments, and U/D Auction Revenue Surplus Payments allocated to Transmission Owner  $t$  in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$

O/R-t-S  $ARSC_{a,t,n}$  = An O/R-t-S Auction Revenue Shortfall Charge allocated to Transmission Owner  $t$  for binding constraint  $a$  in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$ , calculated pursuant to Section 20.3.6.2

U/D ARSC<sub>a,t,n</sub> = A U/D Auction Revenue Shortfall Charge allocated to Transmission Owner  $t$  for binding constraint  $a$  in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$ , calculated pursuant to Section 20.3.6.3

O/R-t-S ARSP<sub>a,t,n</sub> = An O/R-t-S Auction Revenue Surplus Payment allocated to Transmission Owner  $t$  for binding constraint  $a$  in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$ , calculated pursuant to Section 20.3.6.2

U/D ARSP<sub>a,t,n</sub> = A U/D Auction Revenue Surplus Payment allocated to Transmission Owner  $t$  for binding constraint  $a$  in round  $n$  of a 6-month Sub-Auction or in [a given month covered by](#) Reconfiguration Auction  $n$ , calculated pursuant to Section 20.3.6.3.

#### **20.3.6.5.2 Zeroing Out of Charges and Payments Resulting from Formula Failure**

Notwithstanding any other provision of this Attachment N, the ISO shall set equal to zero any O/R-t-S Auction Revenue Shortfall Charge, U/D Auction Revenue Shortfall Charge, O/R-t-S Auction Revenue Surplus Payment, or U/D Auction Revenue Surplus Payment allocated to a Transmission Owner for a [given month covered by a](#) Reconfiguration Auction or a round of a Centralized TCC Auction if either:

- (i) data necessary to compute such a charge or payment, as specified in the formulas set forth in Section 20.3.6, is not known by the ISO and cannot be computed by the ISO (in interpreting this clause, equipment failure shall not preclude computation by the ISO unless necessary data is irretrievably lost); or
- (ii) both (a) the charge or payment is clearly and materially inconsistent with cost causation principles; and (b) this inconsistency is the result of factors not taken into account in the formulas used to calculate the charge or payment;

*provided, however*, if the amount of charges or payments set equal to zero as a result of the unknown data or inaccurate formula is greater than twenty five thousand dollars (\$25,000) in any given month or greater than one hundred thousand dollars (\$100,000) over multiple months, the ISO will inform the Transmission Owners of the identified problem and will work with the



Transmission Owners to determine if an alternative allocation method is needed and whether it will apply to all months for which the intended formula does not work. Alternate methods would be subject to market participant review and subsequent filing with FERC, as appropriate.

For the sake of clarity, the ISO shall not pursuant to this Section 20.3.6.5.2 set equal to zero any O/R-t-S Auction Revenue Shortfall Charge, U/D Auction Revenue Shortfall Charge, O/R-t-S Auction Revenue Surplus Payment, or U/D Auction Revenue Surplus Payment that fails to meet these conditions, even if another O/R-t-S Auction Revenue Shortfall Charge, U/D Auction Revenue Shortfall Charge, O/R-t-S Auction Revenue Surplus Payment, or U/D Auction Revenue Surplus Payment is set equal to zero pursuant to this Section 20.3.6.5.2 in the same round of a Centralized TCC Auction or the same [month covered by a](#) Reconfiguration Auction, as the case may be.

### **20.3.6.6 Information Requirements**

#### **20.3.6.6.1 Posting of Uprate/Derate Tables**

Prior to each Reconfiguration Auction, the ISO shall post on its website the Reconfiguration Auction Interface Uprate/Derate Table, which table shall specify the expected impact (at the time of the Reconfiguration Auction based on all information available to the ISO) of all transmission facility outages and returns-to-service on interface transfer limits for the ~~period~~[month\(s\)](#) for which TCCs are to be sold in the Reconfiguration Auction.

Prior to each Centralized TCC Auction, the ISO shall post on its website the Centralized TCC Auction Interface Uprate/Derate Table, which table shall specify the expected impact (at the time of the Centralized TCC Auction based on all information available to the ISO) of all transmission facility outages and returns-to-service on interface transfer limits for the period for which TCCs are to be sold in each Sub-Auction of the Centralized TCC Auction.

#### **20.3.6.6.2 Posting of List of Normally Out-of-Service Equipment**

The ISO shall maintain on its website a list of Normally Out-of-Service Equipment and update such list prior to each Reconfiguration Auction and each Centralized TCC Auction.

#### **20.3.6.6.3 Information Regarding Facility Ownership**

A Transmission Owner shall be responsible for informing the ISO of any change in the ownership of a transmission facility. The ISO shall allocate responsibility for Auction Status Changes based on the transmission facility ownership information available to it at the time of initial settlement.

### **20.3.7 Allocation of Net Auction Revenue to Transmission Owners**

In Centralized TCC Auction round  $n$  or in [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, the ISO shall use the Facility Flow-Based Methodology to allocate Net Auction Revenue to each Transmission Owner  $t$  in an amount equal to the product of (i) the Facility Flow-Based Methodology coefficient,  $FFB_{t,n}$ , and (ii) the Net Auction Revenue for the round or for the [relevant month covered by the](#) Reconfiguration Auction; *provided, however*, where the Net Auction Revenue is negative for a [given month covered by a](#) Reconfiguration Auction, the ISO shall allocate Net Auction Revenue to each Transmission Owner  $t$  in an amount equal to the product of (i) the negative Net Auction Revenue coefficient,  $NNAR_{t,n}$ , and (ii) the negative Net Auction Revenue for the [relevant month covered by](#) Reconfiguration Auction.

*Calculation of Facility Flow-Based Methodology Coefficient.* The Facility Flow-Based Methodology coefficient for Transmission Owner  $t$  for Centralized TCC Auction round  $n$  or [a given month covered by](#) Reconfiguration Auction  $n$  is calculated pursuant to Formula N-28.

### Formula N-28

$$FFB_{t,n} = \frac{\sum_{l \in L_{t,n}} |(FLOW_{l,n} - FLOW_{l,IC}) * (Price_{y,l} - Price_{x,l}) * Share_{n,t,l}|}{\sum_{l \in L_n} |(FLOW_{l,n} - FLOW_{l,IC}) * (Price_{y,l} - Price_{x,l})|}$$

Where,

$FFB_{t,n}$  = The Facility Flow-Based Methodology coefficient for Transmission Owner  $t$  for Centralized TCC Auction round  $n$  or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be

$L_n$  = The set of all transmission facilities [owned by Transmission Owners that are modeled in the Transmission System model for round  \$n\$  or for a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be

$L_{t,n}$  = The set of all transmission facilities owned by Transmission Owner  $t$  that are modeled in the Transmission System model applied in round  $n$  or in [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be

$l$  = A transmission facility from bus  $x$  to bus  $y$

$FLOW_{l,n}$  = The Energy flow, in MW- $p$ , on transmission facility  $l$  from the set of TCCs ([as scaled appropriately](#)) and Grandfathered Rights represented in the solution to round  $n$  or to [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be (including those pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in that auction).

$FLOW_{l,IC}$  = The Energy flow, in MW- $p$ , on transmission facility  $l$  from (i) the set of pre-existing TCCs and Grandfathered Rights represented as fixed injections and withdrawals in administering the TCC auction held for round  $n$  or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be, (ii) ETCNL not sold in prior Centralized TCC Auctions, [prior rounds of the Centralized TCC Auction that includes round  \$n\$](#)  or through a Direct Sale, and (iii) Original Residual TCCs not sold in prior Centralized TCC Auctions, [prior rounds of the Centralized TCC Auction that includes round  \$n\$](#)  or through a Direct Sale

$Price_{y,l}$  = The market-clearing price at bus  $y$  on transmission facility  $l$  in the Optimal Power Flow solution to round  $n$  or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be

$Price_{x,l}$  = The market-clearing price at bus  $x$  on transmission facility  $l$  in the Optimal Power Flow solution to round  $n$  or [a given month covered by](#) Reconfiguration Auction  $n$ , as the case may be

$Share_{n,t,l}$  = The percentage of transmission facility  $l$  owned by Transmission Owner  $t$  on the effective date of the TCCs sold in round  $n$  or in [a given month covered by](#) Reconfiguration Auction  $n$

$p$  = A one-month period for [a given month covered by a](#) Reconfiguration Auction  $n$ ,

or the effective period of TCCs sold in round ~~*n*~~ ~~for round *n*~~.

*Calculation of Negative Net Auction Revenue Coefficient.* The negative Net Auction Revenue coefficient for Transmission Owner *t* for a given month covered by Reconfiguration Auction *n* is calculated pursuant to Formula N-29.

### Formula N-29

$$NNAR_{t,n} = \frac{(OriginalResidual_{t,n} + ETCNL_{t,n} + NARs_{t,n} + GFR\&GFTCC_{t,n} + HFPTCC_{t,n})}{\sum_{q \in T} (OriginalResidual_{q,n} + ETCNL_{q,n} + NARs_{q,n} + GFR\&GFTCC_{q,n} + HFPTCC_{q,n})}$$

Where,

- NNAR<sub>t,n</sub> = The negative Net Auction Revenue coefficient for Transmission Owner *t* for a given month covered by Reconfiguration Auction *n*
- Original Residual<sub>q,n</sub> = The sum of the one-month portion of the revenue imputed to the Direct Sale ~~or~~ and the sale in any Centralized TCC Auction Sub-Auction of Original Residual TCCs held by Transmission Owner *q* that are valid during ~~the month~~ corresponding to a given month covered by Reconfiguration Auction *n*. The one-month portion of the revenue imputed to the Direct Sale of these Original Residual TCCs shall be one-sixth of the average market-clearing price in the rounds of the 6-month Sub-Auction of the last Centralized TCC Auction held for TCCs valid during the relevant month ~~corresponding to~~ covered by Reconfiguration Auction *n*. ~~For Centralized TCC Auctions conducted before May 1, 2010, the calculation of the average market clearing price in rounds of the 6-month Sub-Auction shall incorporate only Stage 1 six month rounds.~~ The one-month portion of the revenue imputed to the sale in any Centralized TCC Auction Sub-Auction of these Original Residual TCCs shall be calculated by dividing the revenue received from the sale of these Original Residual TCCs in the Centralized TCC Auction Sub-Auction by the duration in months of the TCCs sold in that Centralized TCC Auction Sub-Auction
- ETCNL<sub>q,n</sub> = The sum of the one-month portion of the revenues ~~imputed to the Transmission Owner has received as payment for~~ the Direct Sale of Transmission Owner *q*'s ETCNL or for its ETCNL released in the Centralized TCC Auction Sub-Auction held for TCCs valid for ~~the month~~ corresponding to a given month covered by Reconfiguration Auction *n*. ~~Each~~ The one-month portion of the revenue imputed for ETCNL released in ~~such~~ any Centralized TCC Auction Sub-Auction shall be calculated by dividing the revenue received in a Centralized TCC Auction Sub-Auction from the sale of the ETCNL by the duration in months of the TCCs

corresponding to the ETCNL sold in the Centralized TCC Auction Sub-Auction.<sup>2</sup> The one-month portion of the revenue imputed to the Direct Sale of ETCNL shall be one-sixth of the average market-clearing price of the TCCs corresponding to that ETCNL in the rounds of the 6-month Sub-Auction of the last Centralized TCC Auction held for TCCs valid during the relevant month ~~corresponding to~~covered by Reconfiguration Auction *n*. ~~For Centralized TCC Auctions conducted before May 1, 2010, the calculation of the average market clearing price in rounds of the 6-month Sub-Auction shall incorporate only Stage 1 six month rounds.~~

NAR<sub>s<sub>q,n</sub></sub> = The one-month portion of the Net Auction Revenues ~~the~~ Transmission Owner *q* has received in Centralized TCC Auction Sub-Auctions and all Reconfiguration Auctions held for TCCs valid for ~~the~~a given month ~~corresponding to~~covered by Reconfiguration Auction *n* (which shall not include any revenue from the sale of Original Residual TCCs). The one-month portion of the revenues shall be calculated by summing (i) the revenue Transmission Owner *q* received in each Centralized TCC Auction Sub-Auction from the allocation of Net Auction Revenue pursuant to Section 20.3.7, divided by the duration in months of the TCCs sold in the Centralized TCC Auction Sub-Auction and the sum of the revenue Transmission Owner *q* received from the allocation of that portion of Net Auction Revenue pursuant to Section 20.3.7 related to month *m* for all Reconfiguration Auctions held for TCCs valid in month *m* (or, to the extent TCC auction revenues were allocated pursuant to a different methodology, the amount of such revenues allocated to Transmission Owner *q*), minus (ii) the sum of NetAuctionAllocations<sub>t,n</sub> as calculated pursuant to Formula N-27 (as adjusted for any charges or payments that are zeroed out) for Transmission Owner *q* for all rounds *n* of a 6-month Sub-Auction for all Centralized TCC Auctions held for TCCs valid in the relevant month ~~corresponding to~~covered by Reconfiguration Auction *n*, divided in each case by the duration in months of the TCCs sold in each Centralized TCC Auction Sub-Auction (or, to the extent that the revenue impact of transmission facility outages, returns-to-service, upratings, and deratings were settled pursuant to a different methodology, the net of such revenue impacts for Transmission Owner *q*), minus (iii) the sum of the portion of NetAuctionAllocations<sub>t,n</sub> as calculated pursuant to Formula N-27 and as adjusted for any charges or payments that are zeroed out for Transmission Owner *q* for the relevant month covered by Reconfiguration Auction *n* for all Reconfiguration Auctions held for TCCs valid in month *m* (or, to the extent that the revenue impact of transmission facility outages, returns-to-service, upratings, and deratings were settled pursuant to a different methodology, the net of such revenue impacts for Transmission Owner *q*). ~~For Centralized TCC Auctions conducted before May 1, 2010, the calculation of (ii) shall incorporate only Stage 1 six month rounds.~~

GFR&GFTCC<sub>q,n</sub> = The one-month portion of the imputed value of Grandfathered TCCs and Grandfathered Rights held by Transmission Owner *q*, valued at one-sixth of the market-clearing price in the last Centralized TCC Auction held for TCCs valid

<sup>4</sup> A TCC corresponds to ETCNL if it has the same POI and POW as the ETCNL.

during ~~the~~ a given month ~~corresponding to~~ covered by Reconfiguration Auction  $n$ , provided that ~~the~~ Transmission Owner  $q$  is the selling party and the Existing Transmission Agreement related to each Grandfathered TCC and Grandfathered Right remains valid in the relevant month ~~corresponding to~~ covered by Reconfiguration Auction  $n$ . ~~For Centralized TCC Auctions conducted before May 1, 2010, the calculation of the average market clearing price in rounds of the 6-month Sub-Auction shall incorporate Stage 1 six-month rounds.~~

HFPTCC $_{q,n}$  = The one-month portion of the Historic Fixed Price TCC revenues that Transmission Owner  $q$  has received for Historic Fixed Price TCCs valid during a given month covered by Reconfiguration Auction  $n$ , valued at the sum of the share of revenues received by Transmission Owner  $q$  pursuant to Section 20.4 of this Attachment N for all Historic Fixed Price TCCs valid in the relevant month covered by Reconfiguration Auction  $n$ , divided by twelve; provided, however that the value shall be zero for all Historic Fixed Price TCCs that took effect on or before November 1, 2016.

$t$  = Transmission Owner  $t$

$T$  = The set of all Transmission Owners  $q$ .

For purposes of Formula N-29, variables subscripted by  $t$  shall be calculated for Transmission Owner  $t$  in the same manner as variables subscripted by  $q$  are calculated for Transmission Owner  $q$ .

For a Balance-of-Period Auction, the ISO shall sum the share of Net Auction Revenues allocated to each Transmission Owner across the month(s) covered by the auction to determine each Transmission Owner's aggregate share of Net Auction Revenues for such auction. The ISO shall also provide each Transmission Owner information regarding their respective share of Net Auction Revenues for each month covered by the Balance-of-Period Auction.

Each Transmission Owner's share of Net Auction Revenues allocated pursuant to this Section 20.3.7 shall be incorporated into, or otherwise accounted for as part of, its TSC, NTAC, or other applicable rate mechanism under the ISO Tariffs used to assess charges for Transmission Service provided by the Transmission Owner pursuant to this Tariff, as the case may be.