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");[1]

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");~~[1]~~ 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;

[1] 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~~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:

WHOLESALE TSC = {(RR÷12) + (CCC÷12) ~~+ (LTPP÷12)~~ - SR - ECR - CRR - WR - Reserved}/(BU÷12).

***Yellow Highlighting* Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting**

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_1 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_1 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_2 will equal the Transmission Owner's revenues from the Centralized TCC Auctions and Reconfiguration Auctions allocated pursuant to Attachments N. SR_2 includes~~, but is not~~

~~limited to,~~ 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 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_1 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_1 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_2 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_2 shall be adjusted after each Centralized TCC Auction and the revised SR_2 shall be effective at the start of each Capability Period;~~

~~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.~~1~~2 ~~—~~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 Reserved Component

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

Reserved_1 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_2 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_3 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_4 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 that ETCNL~~for which that sold 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_1 portion of the SR component of its TSC charge; and (~~3~~4) 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_2 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 ~~sold~~valid. The revenue from these TCCs will enter the TSC formula month-by-month 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)~~, beginning with the first month of the period covered by the Centralized Auction~~. 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 providing the information necessary to ~~calculating~~calculate the SR_2 portion 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 calculate a Transmission Owner's~~ is responsible for providing the information necessary to calculate the Reserved component of each Transmission Owner's 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_2), 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:~~

~~WHOLESALE TSC = [(RR÷12) +(CCC÷12) - SR-WR]/BU÷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:~~

~~WHOLESALE TSC = {(RR÷12) + (CCC÷12) - SR - ECR -CRR-WR}/(BU÷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:~~

~~WHOLESALE TSC = {(RR:12) + (CCC:12) – SR – ECR – CRR – WR – Reserved}/(BU: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, t~~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[1]
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[2]	$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

[1]The rate column represents the unit rate prior to crediting; the actual rate will be determined pursuant to the applicable TSC formula rate.

[2]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%
Bloomingburg	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[2] 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.

[2] 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.

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

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.

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

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

[1] 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

FERC Account/NMPC Internal Account No.		Annual Rate
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.

***Yellow Highlighting* Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting**

14.2 Attachment 1 to Attachment H

14.2.1 Schedules

Table of Contents

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

Niagara Mohawk Power Corporation **Attachment 1**

Calculation of RR Pursuant to Attachment H, Section 14.1.9.2 Year **Schedule 1**

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.

Historical Transmission Revenue Requirement (Historical TRR)

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) Transmission Related Real Estate Tax Expense, (D) Transmission Related Amortization of Investment Tax Credits, (E) Transmission Operation and Maintenance Expense, (F) Transmission Related Administrative and General Expenses, (G) Transmission Related Payroll Tax Expense, (H) Billing Adjustments, and (I) Transmission Related Bad Debt Expense less (J) Revenue Credits, and (K) Transmission Rents, all determined for the most recently ended calendar year as of the beginning of the update year.

	Reference		
	Section:	**0**	
Return and Associated Income Taxes	(A)	#DIV/0!	Schedule 8, line 64
Transmission-Related Depreciation Expense	(B)	#DIV/0!	Schedule 9, Line 6, column 5
Transmission-Related Real Estate Taxes	(C)	#DIV/0!	Schedule 9, Line 12, column 5
Transmission - Related Investment Tax Credit	(D)	#DIV/0!	Schedule 9, Line 16, column 5 times minus 1
Transmission Operation & Maintenance Expense	(E)	$0	Schedule 9, Line 23, column 5
Transmission Related Administrative & General Expense	(F)	#DIV/0!	Schedule 9, Line 38, column 5
Transmission Related Payroll Tax Expense	(G)	$0	Schedule 9, Line 44, column 5
Sub-Total (sum of Lines 10 - Line 16)		#DIV/0!	
Billing Adjustments	(H)	$0	Schedule 10, Line 1
Bad Debt Expenses	(I)	$0	Schedule 10, Line 4
Revenue Credits	(J)	$0	Schedule 10, Line 7
Transmission Rents	(K)	$0	Schedule 10, Line 14
Total Historical Transmission Revenue Requirement (Sum of Line 17 - Line 22)		#DIV/0!	

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

Niagara Mohawk Power Corporation **Attachment 1**

Forecasted Transmission Revenue Requirement **Schedule 2**

Attachment H, Section 14.1.9.2

0

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 Annual FTRRF, plus (2) the Mid-Year Trend				
3		Adjustment (MYTA), plus (3) the Tax Rate Adjustment (TRA), as shown in the following formula:				
4						
5		Forecasted TRR = (FTPA * FTRRF) + MYTA + TRA				
6						
7			Period	Reference		Source
8						
9						
10	(1)	Forecasted Transmission Plant Additions (FTPA)			$0	Workpaper 8, Section I, Line 16
11		Annual Transmission Revenue Requirement Factor (FTRRF)			#DIV/0!	Line 35
12		Sub-Total (Lines 10*11)			#DIV/0!	
13		Plus Mid-Year Trend Adjustment (2) (MYTA)			$0	Workpaper 9, line 31, variance column
14		Less Impact of Transmission Support Payments on Historical Transmission Revenue Requirement			$0	Worpaper 9A
15		Forecasted Transmission Revenue Requirement (Line 12 + Line 13- Line 14)			**#DIV/0!**	
16	(2)	**MID YEAR TREND ADJUSTMENT (MYTA)**				
17		The Mid-Year Trend Adjustment shall be the difference, whether positive or negative, between				
18						
19		(i) the Historical TRR Component (E) excluding Transmission Support Payments, based on actual data for the first three months of the Forecast Period, and (ii) the Historical TRR Component (E) excluding Transmission Support Payments, based on data for the first three months of the year prior to the Forecast Period.				
20						
21	(3)	**The Tax Rate Adjustment (TRA)**				
22		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				
23		and/or the State Income Tax Rate that takes effect during the first five months of the Forecast Period.				
24						
25	14.1.9.2(c)	**ANNUAL FORECAST TRANSMISSION REVENUE REQUIREMENT FACTOR**				
26		The Annual Forecast Transmission Revenue Requirement Factor (Annual FTRRF) shall equal the sum of Historical TRR components (A) through (C),				
27		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).				
28						
29						
30		Investment Return and Income Taxes		(A)	#DIV/0!	Schedule 1, Line 10
31		Depreciation Expense		(B)	#DIV/0!	Schedule 1, Line 11
32		Property Tax Expense		(C)	#DIV/0!	Schedule 1, Line 12
33		Total Expenses (Lines 30 thru 32)			#DIV/0!	

34	Transmission Plant	(a)	#DIV/0!	Schedule 6, Page 1, Line 12
35	Annual Forecast Transmission Revenue Requirement Factor (Lines 33/ Line 34)		#DIV/0!	

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

Niagara Mohawk Power Corporation **Attachment 1**

Annual True-up (ATU) **Schedule 3**

Attachment H Section 14.1.9.2 (c)

Line No.			0 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
27				
28		Annual True-up RR Component	#DIV/0!	(Line 24 + Line 26)
29				

Interest Calculation per 18 CFR § 35.19a

30	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
31	Quarters	Annual	Accrued Prin	Monthly	Days			Accrued Prin	Accrued
32		Interest	& Int. @ Beg	(Over)/Under	in	Period		& Int. @ End	Int. @ End
33		Rate (a)	Of Period	Recovery	Period	Days	Multiplier	Of Period	Of Period
34									
35									
36	3rd QTR '07		0		92	92	1.0000	$0	$0
37	July	0.00%		#DIV/0!	31	92	1.0000	#DIV/0!	#DIV/0!
38	August	0.00%		#DIV/0!	31	61	1.0000	#DIV/0!	#DIV/0!
39	September	0.00%		#DIV/0!	30	30	1.0000	#DIV/0!	#DIV/0!
40									

41	4th QTR '07		#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 '08		#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!	29	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 '08		#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

***Yellow Highlighting* Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting**

Attachment 1
Schedule 4

Niagara Mohawk Power Corporation Wholesale TSC Calculation Information

		(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!
2	Current Year Rates Effective July 1, _____	#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 14

(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 - 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 Operating (NYISO) system control and load dispatch expenses already recovered under Schedule 1 of the NYISO Tariff.

(f) Schedule 12 - 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

	0

Shading denotes an input

Line No.				Source	Definition
1	14.1.9.1 1.	**Electric Wages and Salaries Factor**	**83.5000%**		Fixed per settlement
2					
3	14.1.9.1 3.	**Transmission Wages and Salaries Allocation Factor**	**13.0000%**		Fixed per settlement
4					
5					
6					
7					
8	14.1.9.1 2.	**Gross Transmission Plant Allocation Factor**			
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
10		Plus: Transmission Related General	$0	Schedule 6, Page 2, Line 5, Col 5	Transmission Plant in Service, Transmission Related Electric General Plant,
11		Plus: Transmission Related Common	$0	Schedule 6, Page 2, Line 10, Col 5	Transmission Related Common Plant and Transmission Related Intangible Plant
12		Plus: Transmission Related Intangible Plant	$0	Schedule 6, Page 2, Line 15, Col 5	divided by Gross Electric Plant.
13		Gross Transmission Investment	#DIV/0!	Sum of Lines 9 - 13	
14					
15		Total Electric Plant		FF1 207.104	
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		**Percent Allocation**	**#DIV/0!**	Line 13 / Line 17	
20					
21	14.1.9.1 4.	**Gross Electric Plant Allocation Factor**			
22					
23		Total Electric Plant in Service	$0	Line 15	Gross Electric Plant Allocation Factor shall equal
24		Plus: Electric Common Plant	$0	Schedule 6, Page 2, Line 10, Col 3	Gross Electric Plant divided by the sum of Total Gas Plant,
25		Gross Electric Plant in Service	$0	Line 23 + Line 24	Total Electric Plant, and Total Common Plant
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		**Percent Allocation**	**#DIV/0!**	Line 25 / Line 30	

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

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.

14.1.9.2 (a) Transmission Investment Base

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

	Reference	**2007**	Reference
	Section:		
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!	

Transmission Investment Base (Part 1 of 2)

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

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Shading denotes an input

Line No.		(1) Total	(2) Allocation Factor		(3) = (1)*(2) Electric Allocated	(4) Allocation Factor		(5) = (3)*(4) Transmission Allocated	FERC Form 1/PSC Report Reference for col (1)		Definition
1	Transmission Plant								FF1 207.58g	14.1.9.2(a)A.1.(a)	Transmission Plant in Service shall equal the balance of total investment in Transmission Plant plus Wholesale Metering Investment
2	Wholesale Meter Plant							#DIV/0!	Workpaper 1		
3	Total Transmission Plant in Service (Line 1+ Line 2)							#DIV/0!			
4											
5	General Plant		100.00%		$0	13.00%	(c)	$0	FF1 207.99g	14.1.9.2(a)A.1.(b)	Transmission Related Electric General Plant shall equal the balance of investment in Electric General Plant mulitplied by the Transmission Wages and Salaries Allocation Factor
6											
7											
8											
9											
10	Common Plant		83.50%	(a)	$0	13.00%	(c)	$0	FF1 201. 8h	14.1.9.2(a)A.1.(c)	Transmission Related Common Plant shall equal Common Plant multiplied by the Electric Wages and Salaries Allocation Factor and further multiplied by the Transmission Wages and Salaries Allocation Factor.
11											
12											
13											
14											
15	Intangible Plant		100.00%		-	13.00%	(c)	$0	FF1 205.5g	14.1.9.2(a)A.1.(d)	Transmission Related Intangible Plant shall equal Intangible Electric Plant multiplied by the Transmission Wages and Salaries Allocation Factor.
16											
17											
18											
19	Transmission Plant Held for Future Use	$0						$0	Workpaper 10	14.1.9.2(a)A.1.(e)	Transmission Related Plant Held for Future Use shall equal

20											the balance in Plant Held for Future Use associated with property planned to be used for transmission service within five years
21											
22											
	Transmission Accumulated										
23	Depreciation										
24	Transmission Accum. Depreciation							$0	FF1 219.25b	14.1.9.2(a)A.1.(f)	Transmission Related Depreciation Reserve shall equal the
25	General Plant Accum.Depreciation		100.00%		$0	13.00%	(c)	$0	FF1 219.28b		balance of: (i) Transmission Depreciation Reserve, plus (ii)
26	Common Plant Accum Depreciation		83.50%	(a)	$0	13.00%	(c)	$0	FF1 356.1 end of year balance		the product of Electric General Plant Depreciation Reserve multiplied by the Transmission Wages and Salaries
27	Amortization of Other Utility Plant		100.00%		$0	13.00%	(c)	$0	FF1 200.21c		Allocation Factor, plus (iii) the
28	Wholesale Meters	#DIV/0!						#DIV/0!	Workpaper 1		product of Common Plant Depreciation Reserve multiplied
29	Total Depreciation (Sum of line 24 - Line 28)							#DIV/0!			by the Electric Wages and Salaries Allocation Factor and
30											further multiplied by the Transmission Wages and Salaries Allocation Factor plus (iv)
31											the product of Intangible Electric Plant Depreciation Reserve
32											multiplied by the Transmission Wages and Salaries
33											Allocation Factor plus (v) depreciation reserve associated with
34											the Wholesale Metering Investment
35											
36											

Allocation Factor Reference
(a) Schedule 5, line 1
(b) Schedule 5, line 32 - not used on this Schedule
(c) Schedule 5, line 3
(d) Schedule 5, line 19 - not used on this Schedule

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

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Line No.		(1) Total	(2) Allocation Factor	(3) = (1)*(2) Electric Allocated	(4) Allocation Factor		(5) = (3)*(4) Transmission Allocated	FERC Form 1/PSC Report Reference for col (1)		Definition
1	Transmission Accumulated Deferred Taxes									
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)			$0			#DIV/0!			Allocation Factor.
7										
8	Other Regulatory Assets									
9	FAS 109 (Asset Account 182.3)		100.00%	$0	#DIV/0!	(d)	#DIV/0!	FF1 232 lines 2,4,9,17	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 278.1 lines 4&21(f)		Assets net of Regulatory Liabilities multiplied by the Gross
11	Total (line 9 + Line 10)	$0		$0			#DIV/0!			Transmission Plant Allocation Factor.
12										
13	Transmission Prepayments							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 & 9 (h)		Prepayments excluding Federal and State taxes multiplied by
15	Total Prepayments	$0	#DIV/0! (b)	#DIV/0!	#DIV/0!	(d)	#DIV/0!			the Gross Electric Plant Allocation Factor and further
16										multiplied by the Gross Transmission Plant Allocation Factor.
17										
18	Transmission Material and Supplies								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 227.8		the balance of Materials and Supplies assigned to
20	Construction Materials and Supplies		#DIV/0! (b)	#DIV/0!	#DIV/0!	(d)	#DIV/0!	FF1 227.5		Transmission plus (ii) the product of Material and Supplies
21	Total (Line 19 + Line 20)						#DIV/0!			assigned to Construction multiplied by the Gross Electric
22										Plant Allocation Factor and further multiplied by Gross
23										Transmission Plant Allocation Factor.
24										
25	Cash Working Capital								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 days = 12.5%)
27		0.1250	x 45 / 360	multiplied by (ii) Transmission Operation and Maintenance Expense.
28	Total (line 26 * line 27)	$0		
29				
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

Niagara Mohawk Power Corporation **Attachment 1**
Annual Revenue Requirements of Transmission Facilities **Schedule 8**
Cost of Capital Rate

Shading denotes an input **0**

The Cost of Capital Rate shall equal the proposed Weighted Costs of Capital plus Federal Income Taxes and State Income Taxes.

The Weighted Costs of Capital will be calculated for the Transmission Investment Base using NMPC's actual capital structure and will equal the sum of (i), (ii), and (iii) below:

(i) the long-term debt component, which equals the product of the actual weighted average embedded cost to maturity of NMPC's long-term debt outstanding during the year and the sum of (a) the ratio of actual long-term debt to total capital at year-end; and (b) the extent, if any, by which the ratio of NMPC's actual common equity to total capital at year-end exceeds fifty percent (50%). Long term debt shall be defined as the average of the beginning of the year and end of year balances of the following: long term debt less the unamortized Discounts on Long-Term Debt less the unamortized Loss on Reacquired Debt plus unamortized Gain on Reacquired Debt. Cost to maturity of NMPC's long-term debt shall be defined as the cost of long term debt included in the debt discount expense and any loss or gain on reacquired debt.

(ii) the preferred stock component, which equals the product of the actual weighted average embedded cost to maturity of NMPC's preferred stock then outstanding and the ratio of actual preferred stock to total capital at year-end;

(iii) the return on equity component shall be the product of the allowed return on equity of 10.3% and the ratio of NMPC's actual common equity to total capital at year-end, provided that such ratio shall not exceed fifty percent (50%).

		CAPITALIZATION	Source:	CAPITALIZATION RATIOS	COST OF CAPITAL	Source:	WEIGHTED COST OF CAPITAL	EQUITY PORTION
(i)	Long-Term Debt	$0	Workpaper. 6, Line 16b	#DIV/0!	#DIV/0!	Workpaper 6, Line 17c	#DIV/0!	
(ii)	Preferred Stock		FF1 112.3c	#DIV/0!	#DIV/0!	Workpaper 6, Line 24d	#DIV/0!	#DIV/0!
(iii)	Common Equity		FF1 112.16c - FF1 112.3,12,15c	#DIV/0!	10.30%		#DIV/0!	#DIV/0!
	Total Investment Return	$0		#DIV/0!			#DIV/0!	#DIV/0!

14.1.9.2.2.(b) Federal Income Tax shall equal = (A. + [B / C] X Federal Income Tax Rate)
(1 - 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.

$$= \left(\#DIV/0! + \left(\$0 \right) \Big/ \#DIV/0! \times \frac{}{\left(1 - 0 \right)} \right)$$

$$= \#DIV/0!$$

14.1.9.2.2.(c) State Income Tax shall equal

$$= \left(A. + \left[B \Big/ C \right] + \text{Federal Income Tax Rate} \right) \times \frac{\text{State Income Tax Rate}}{\left(1 - \text{State Income Tax Rate} \right)}$$

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.

$$= \left(\#DIV/0! + \left(\$0 \right) \Big/ \#DIV/0! + \#DIV/0! \right) \times \frac{}{\left(1 - 0 \right)}$$

$$= \#DIV/0!$$

(a)+(b)+(c) Cost of Capital Rate = #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

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

	Investment Base		
61			
	Cost of Capital		
62	Rate	#DIV/0!	Line 53
63			
	= Investment Return		
64	and Income Taxes	#DIV/0!	Line 60 X Line 62

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

Niagara Mohawk Power Corporation **Attachment 1**
Annual Revenue Requirements of Transmission Facilities **Schedule 9**
Transmission Expenses

Attachment H Section 14.1.9.2 **0**

Shading denotes an input

Line No.		(1) Total	(2) Allocation Factor	(3) = (1)*(2) Electric Allocated	(4) Allocation Factor	(5) = (3)*(4) Transmission Allocated	FERC Form 1/ PSC Report Reference for col (1)		Definition
	Depreciation Expense								
1	Transmission Depreciation					$0	FF1 336.7f	14.1.9.2.B.	Transmission Related Depreciation Expense shall equal the sum of:
2	General Depreciation		100.0000%	$0	13.0000% (c)	$0	FF1 336.10f		(i) Depreciation Expense for Transmission Plant in Service, plus (ii)
3	Common Depreciation		83.5000% (a)	$0	13.0000% (c)	$0	FF1 356.1		the product of Electric General Plant Depreciation Expense multiplied
4	Intangible Depreciation		100.0000%	$0	13.0000% (c)	$0	FF1 336.1f		by the Transmission Wages and Salaries Allocation Factor plus (iii)
5	Wholesale Meters					#DIV/0!	Workpaper 1		Common Plant Depreciation Expense multiplied by the Electric
6	Total (line 1+2+3+4+5)					#DIV/0!			Wages and Salaries Allocation Factor, further multiplied by the
7									Transmission Wages and Salaries Allocation Factor plus (iv)
8									Intangible Electric Plant Depreciation Expense multiplied by the
9									Transmission Wages and Salaries Factor plus (v) depreciation
10									expense associated with the Wholesale Metering Investment.
11									
12	Real Estate Taxes		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
13									electric Real Estate Tax Expenses multiplied by the Gross
14									Transmission Plant Allocation Factor.
15									
16	Amortization of Investment Tax Credits		#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	Transmission Operation and Maintenance								
21	Operation and Maintenance					$0	FF1 321.112b	14.1.9.2.E.	Transmission Operation and Maintenance Expense shall equal
22	less Load Dispatching - #561					$0	FF1 321.84-92b		the sum of electric expenses as recorded in
23	O&M (Line 21 - Line 22)	$0				$0			FERC Account Nos. 560, 562-574.
24									
25	Transmission Administrative and General							14.1.9.2.F.	Transmission Related Administrative and General Expenses shall
26	Total Administrative and General						FF1 323.197b		equal the product of electric Administrative and General Expenses,
27	less Property Insurance (#924)						FF1 323.185b		excluding the sum of Electric Property Insurance, Electric Research and
28	less Pensions and Benefits (#926)						FF1 323.187b		Development Expense and Electric Environmental Remediation

								Expense,
29	less: Research and Development Expenses (#930)	$0					Workpaper 12	
								and 50% of the NYPSC Regulatory Expense
30	Less: 50% of NY PSC Regulatory Expense						50% of Workpaper 15	multiplied by the Transmission Wages and Salaries Allocation Factor,
31	Less: 18a Charges (Temporary Assessment						Workpaper 15	
32	less: Environmental Remediation Expense	$0					Workpaper 11	plus the sum of Electric Property Insurance multiplied by the Gross
33	Subtotal (Line 26-27-28-29-30-31-32)	$0	100.0000 %	$0	13.0000% (c)	$0		Transmission Plant Allocation Factor, plus transmission-specific Electric
34	PLUS Property Insurance alloc. using Plant Allocation	$0	100.0000 %	$0	#DIV/0! (d)	#DIV/0!	Line 27	Research and Development Expense, and transmission-specific
35	PLUS Pensions and Benefits	$88,644,000	100.0000 %	$88,644,000	13.0000% (c)	$11,523,720	Workpaper 3	Electric Environmental Remediation Expense. In addition, Administrative
36	PLUS Transmission-related research and development	$0				$0	Workpaper 12	
37	PLUS Transmission-related Environmental Expense	$0				$0	Workpaper 11	and General Expenses shall exclude the actual Post-Employment Benefits Other than Pensions ("PBOP") included in FERC Account 926,
38	Total A&G (Line 33+34+35+36+37)	$88,644,000		$88,644,000		#DIV/0!		and shall add back in the amounts shown on Workpaper 3, page 1,
39								or other amount subsequently approved by FERC under Section 205 or 206.
40	Payroll Tax Expense							14.1.9.2.G. Transmission Related Payroll Tax Expense shall equal the product of
41	Federal Unemployment						FF1 263.4i	electric Payroll Taxes multiplied by the Transmission Wages and
42	FICA						FF1 263.3i	Salaries Allocation Factor.
43	State Unemployment						FF1 263.17i	
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

***Yellow Highlighting* Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting**

Niagara Mohawk Power Corporation **Attachment 1**
Annual Revenue Requirements of Transmission Facilities **Schedule 10**
Billing Adjustments, Revenue Credits, Rental Income

0

Attachment H Section
14.1.9.2 (a)

Shading denotes an input

Line No.		(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
33					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.

(b)	List of Items excluded from the Revenue Requirement	Reason

Attachment 1
Schedule 11
Page 1 of 1

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.

1	**Scheduling and Dispatch Expenses**			**0**	**Source**
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 lines 3 - 11
14					
15	Less Account 561 directly recovered under Schedule 1 of the NY ISO 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

Attachment 1
Schedule 12
Page 1 of 1

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.			SOURCE
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 lines 1-6
8	LESS: All non-retail transactions		
9	Watertown		FF1 page 329.11.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 lines 9 - 11
13	PLUS: TSC Load		
14	NYMPA Muni's, Misc. Villages, Jamestown (X1)		FF1 page 329.19.j
15	NYPA Niagara Muni's (X2)		FF1 page 329.1.j
16	Total additions	**0.000**	sum lines 15 -17
17	Total Billing Units	**0.000**	line 7 - line 12 + line 16

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");[1] 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");~~13~~ 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.

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:

[1] 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.

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

Where:

$ATRR_{NTAC}$ = 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;

SR = $SR_1 + SR_2$

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 $ATRR_{NTAC}$ where NYPA is the Primary ~~Owner~~Holder of said TCCs. SR_1 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).

SR_2 will equal NYPA's revenues from the Centralized TCC Auctions and Reconfiguration Auctions allocated pursuant to Attachment ~~M~~N; this includes~~, but is not limited to,~~ 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 $ATRR_{NTAC}$. 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 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_1 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_1 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_2 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_2 shall be adjusted after each Centralized TCC Auction, and the revised SR_2 shall be effective at the start of each Capability Period~~;

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 $ATRR_{NTAC}$ 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 $ATRR_{NTAC}$ for NYPA transmission initially accepted by FERC ("Base Period $ATRR_{NTAC}$") for the purposes of computing the Initial Cost. Whenever an amendment to the $ATRR_{NTAC}$ is accepted by FERC or the $ATRR_{NTAC}$ is updated pursuant to the procedures set forth in Section 14.2.3.2 of this Attachment ("Amended $ATRR_{NTAC}$"), the system rate for the purpose of computing the Initial Cost will be increased (or decreased) by the ratio of the Amended $ATRR_{NTAC}$ to the Base Period

$ATRR_{NTAC}$ 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 $ATRR_{NTAC}$ 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, ECR, 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 ($ATRR_{NTAC}$) 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:~~

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

~~SR_2 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:~~

~~$NTAC = \{(ATRR_{NTAC} \div 12) - (EA) - (IR \div 12) - WR - CRN - SR_1 - ECR\}/(BU \div 12)$~~

~~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 pursuant to NTAC initially is limited to expenses and return associated with its transmission system as that system exists at the time of FERC approval of the NTAC ("base period revenue requirement"). Additions to its system may be included in the computation of NTAC only if: a) upgrades or expansions do not exceed $5 million on an annual basis; or b) such upgrades or expansions have been unanimously approved by the Transmission Owners. Notwithstanding the above, NYPA may invest in transmission facilities in excess of $5 million annually without unanimous Transmission Owners' authorization 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 $ATRR_{NTAC}$, 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 Transmission Owners and NYPA is NYPA's consent to the submission of its $ATRR_{NTAC}$ 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 $ATRR_{NTAC}$ for facilities owned as of January 31, 1997, and Annual Billing Units (BU) of the NTAC are:

$ATRR_{NTAC}$ = $165,449,297

BU = 133,386,541MWh

NYPA's $ATRR_{NTAC}$ 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.

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

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 month~~s 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

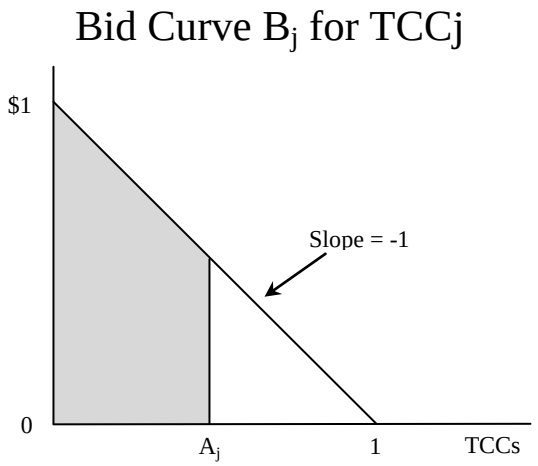
j = Any individual Table 1 ETCNL/TCC

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.

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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 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 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.

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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-~~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 Injection~~s~~ 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-Action 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 and Reconfiguration~~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~~ 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~~auction-related information to all ~~A~~auction participants between rounds of the Centralized TCC Auction. (This last requirement will not apply to single-round ~~A~~auctions.)

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~~auction 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 Auction, the

~~duration in multiples of Capability Periods~~ months ~~of the TCC~~ 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 or Reconfiguration~~ 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 ~~A~~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 which follow~~ings~~ 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 ~~A~~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 Market;

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 Transmission Owner 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.

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

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

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

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

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.

***Yellow Highlighting** Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting*

(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

$$DCR_{a,h} = ShadowPrice_{a,h} * \begin{bmatrix} (FLOW_{a,h,DAM} - FLOW_{a,h,TCCAuction}) \\ +(UprateDerate_{a,h} * SCUCSignChange_{a,h}) \\ +(UnsoldCapacity_{a,h,RA} * SCUCSignChange_{a,h}) \end{bmatrix}$$

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[1] 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

[1] 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.

$FLOW_{a,h,TCC\ Auction}$ because a simulated run of SCUC does not produce Shift Factors to calculate $FLOW_{a,h,TCC\ Auction}$:

(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, $FLOW_{a,h,TCC\ Auction}$ 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 $FLOW_{a,h,TCC\ Auction}$

(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, $FLOW_{a,h,TCC\ Auction}$ 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, $FLOW_{a,h,TCC\ Auction}$ 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 $FLOW_{a,h,TCC\ Auction}$

(4) in the event that a simulated run of SCUC does not produce Shift Factors to calculate $FLOW_{a,h,TCC\ Auction}$, $FLOW_{a,h,TCC\ Auction}$ 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 Uprating 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*.

$UnsoldCapacity_{a,h,RA}$ = Zero, except that if $ShadowPrice_{a,h}$ * [($FLOW_{a,h,DAM}$ – $FLOW_{a,h,TCCAuction}$) + ($UprateDerate_{a,h}$ * $SCUCSignChange_{a,h}$)] is less than zero, then $UnsoldCapacity_{a,h,RA}$ 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 ($FLOW_{a,h,DAM}$ – $FLOW_{a,h,TCCAuction}$) + ($UprateDerate_{a,h}$ * $SCUCSignChange_{a,h}$).

$SCUCSignChange_{a,h}$ = 1 if $ShadowPrice_{a,h}$ is greater than zero; otherwise, -1.

$OPF/SCUCAdjust_a$ = 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

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

Where,

$O/R\text{-}t\text{-}S\ DCR_{a,h}$ = 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.

Yellow Highlighting Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting

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* 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, 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 O/R-t-S $DCR_{a,h}$ if O/R-t-S $DCR_{a,h}$ is negative, or (ii) an O/R-t-S Congestion Rent Surplus Payment in the amount of O/R-t-S $DCR_{a,h}$ if 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

$$O/R\text{-}t\text{-}S\ NetDAMImpact_{a,h} = \left(\sum_{for\ all\ o \in O_h} FlowImpact_{a,h,o} * ShadowPrice_{a,h} \right) * OPF/SCUCAdjust_a$$

Where,

O/R-t-S $NetDAMImpact_{a,h}$ = 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 $NetDAMImpact_{a,h}$ shall be subject to recalculation as specified in the paragraph immediately following this

Formula N-8

$FlowImpact_{a,h,o}$ = 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 $FlowImpact_{a,h,o}$ calculated for the corresponding Deemed Qualifying DAM Return-to-Service as described in part (b) of this definition of $FlowImpact_{a,h,o}$; 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:

$$FlowImpact_{a,h,o} = One\text{-}OffFlow_{a,h,o} - BaseCaseFlow_{a,h}$$

Where,

$BaseCaseFlow_{a,h}$ = 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*;

$One\text{-}OffFlow_{a,h,o}$ = 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 $BaseCaseFlow_{a,h}$ 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 $BaseCaseFlow_{a,h}$ 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 $FlowImpact_{a,h,o}$ calculated using the procedures set forth above is less than 1 MWh, then $FlowImpact_{a,h,o}$ shall be set equal to zero;

provided further, $FlowImpact_{a,h,o}$ 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 $ShadowPrice_{a,h}$ and $OPF/SCUCAdjust_a$ are defined as set forth in Formula N-5.

After calculating O/R-t-S NetDAMImpact$_{a,h}$ pursuant to Formula N-8, the ISO shall determine whether O/R-t-S NetDAMImpact$_{a,h}$ for constraint *a* in hour *h* has a different sign than O/R-t-S DCR$_{a,h}$ for constraint *a* in hour *h*. If the sign is different, the ISO shall (i) recalculate O/R-t-S NetDAMImpact$_{a,h}$ pursuant to Formula N-8 after setting equal to zero each FlowImpact$_{a,h,o}$ for which FlowImpact$_{a,h,o}$ * ShadowPrice$_{a,h}$ * OPF/SCUCAdjust$_a$ has a different sign than O/R-t-S DCR$_{a,h}$, and then (ii) use this recalculated O/R-t-S NetDAMImpact$_{a,h}$ and reset value of FlowImpact$_{a,h,o}$ 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$_{a,h}$) 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$_{a,h,o}$ 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$_{a,h}$), 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$_{a,t,h}$, or O/R-t-S Congestion Rent Surplus Payment, O/R-t-S CRSP$_{a,t,h}$, by using Formula N-9. If the absolute value of the net impact (O/R-t-S NetDAMImpact$_{a,h}$) 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$_{a,h,o}$ 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$_{a,h}$), 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

$$O/R\text{-}t\text{-}S\ Allocation_{a,t,h} = \left(\frac{\sum_{\substack{o \in O_h \\ and\ q=t}} \left(FlowImpact_{a,h,o} * Responsibility_{h,q,o} \right)}{\sum_{for\ all\ o \in O_h} FlowImpact_{a,h,o}} \right) * O/R\text{-}t\text{-}S\ DCR_{a,h}$$

Where,

O/R-t-S Allocation$_{a,t,h}$ = 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$_{a,t,h}$ is negative, then O/R-t-S Allocation$_{a,t,h}$ shall be an O/R-t-S Congestion Rent Shortfall Charge, O/R-t-S CRSC$_{a,t,h}$, 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$_{a,t,h}$ is positive, then O/R-t-S Allocation$_{a,t,h}$ shall be an O/R-t-S Congestion Rent Surplus Payment, O/R-t-S CRSP$_{a,t,h}$, paid to Transmission Owner *t* for binding constraint *a* in hour *h* of the Day-Ahead Market

Responsibility$_{h,q,o}$ = 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$_{a,h}$ is defined as set forth in Formula N-6 and the variables

FlowImpact$_{a,h,o}$ and O$_h$ are defined as set forth in Formula N-8.

Formula N-10

$$O/R\text{-}t\text{-}S\ Allocation_{a,t,h} = \left(\sum_{\substack{o \in O_h \\ and\ q=t}} FlowImpact_{a,h,o} * ShadowPrice_{a,h} * Responsibility_{h,q,o} \right) * OPF/SCUCAdjust_a$$

Where,

the variables ShadowPrice$_{a,h}$ and OPF/SCUCAdjust$_a$ are defined as set forth in Formula

N-5, the variables O/R-t-S Allocation$_{a,t,h}$ and Responsibility$_{h,q,o}$ are defined as set forth in Formula N-9, and the variables FlowImpact$_{a,h,o}$ and O_h 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 $CRSC_{a,t,h}$, or U/D Congestion Rent Surplus Payment, U/D $CRSP_{a,t,h}$, by first determining the net total impact on the constraint for hour *h* of all Qualifying DAM Upratings r 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

$$U/D\ NetDAMImpact_{a,h} = \left(\sum_{for\ all\ r \in R_{a,h}} RatingChange_{a,h,r} * ShadowPrice_{a,h} \right) * SCUCSignChange_{a,h}$$

Where,

U/D 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 NetDAMImpact$_{a,h}$ shall be subject to recalculation as specified in the paragraph immediately following this Formula N-11

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, 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, 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*, $RatingChange_{a,h,r}$ 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 $SCUCSignChange_{a,h}$ and $ShadowPrice_{a,h}$ are defined as set forth in Formula N-5.

After calculating U/D $NetDAMImpact_{a,h}$ pursuant to Formula N-11, the ISO shall determine whether U/D $NetDAMImpact_{a,h}$ for constraint *a* in hour *h* has a different sign than U/D $DCR_{a,h}$ for constraint *a* in hour *h*. If the sign is different, the ISO shall (i) recalculate U/D $NetDAMImpact_{a,h}$ pursuant to Formula N-11 after setting equal to zero each $RatingChange_{a,h,r}$ for which $RatingChange_{a,h,r} * ShadowPrice_{a,h} * SCUCSignChange_{a,h}$ has a different sign than U/D $DCR_{a,h}$, and then (ii) use this recalculated U/D $NetDAMImpact_{a,h}$ and reset value of $RatingChange_{a,h,r}$ 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 (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

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$_{a,h}$) 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$_{a,t,h}$, or U/D Congestion Rent Surplus Payment, U/D CRSP$_{a,t,h}$, by using Formula N-12. If the absolute value of the net impact (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 RatingChange$_{a,h,r}$ 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$_{a,h}$) 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$_{a,t,h}$, or U/D Congestion Rent Surplus Payment, U/D CRSP$_{a,t,h}$, by using Formula N-13.

Formula N-12

$$U/D\ Allocation_{a,t,h} = \left(\frac{\sum_{\substack{r \in R_{a,h} \\ and\ q=t}} \left(RatingChange_{a,h,r} * Responsibility_{h,q,r} \right)}{\sum_{for\ all\ r \in R_{a,h}} RatingChange_{a,h,r}} \right) * U/D\ DCR_{a,h}$$

Where,

U/D Allocation$_{a,t,h}$ = 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$_{a,t,h}$ is negative, then U/D Allocation$_{a,t,h}$ shall be a U/D Congestion Rent Shortfall Charge, U/D CRSC$_{a,t,h}$, charged to Transmission Owner *t* for binding constraint *a* in hour *h* of the Day-Ahead Market; or

(b) If U/D Allocation$_{a,t,h}$ is positive, then U/D Allocation$_{a,t,h}$ shall be a U/D Congestion Rent Surplus Payment, U/D CRSP$_{a,t,h}$, paid to Transmission Owner *t* for binding constraint *a* in hour *h* of the Day-Ahead Market

Responsibility$_{h,q,r}$ = 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 Uprating *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

$$U/D\ Allocation_{a,t,h} = \left(\sum_{\substack{r \in R_{a,h} \\ and\ q=t}} RatingChange_{a,h,r} * ShadowPrice_{a,h} * Responsibility_{h,q,r} \right) * SCUCSignChange_{a,h}$$

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 Upratings

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 Uprating 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, $\text{NetDAMAllocations}_{t,h}$, for Transmission Owner *t* in hour *h*. Based on this calculation, the ISO shall set equal to zero all O/R-t-S $\text{CRSC}_{a,t,h}$, U/D $\text{CRSC}_{a,t,h}$, O/R-t-S $\text{CRSP}_{a,t,h}$, and U/D $\text{CRSP}_{a,t,h}$ (each as defined in Formula N-14) for Transmission Owner *t* for all constraints for hour *h* if (i) $\text{NetDAMAllocations}_{t,h}$ 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) $\text{NetDAMAllocations}_{t,h}$ 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 $\text{CRSC}_{a,t,h}$, U/D $\text{CRSC}_{a,t,h}$, O/R-t-S $\text{CRSP}_{a,t,h}$, or U/D $\text{CRSP}_{a,t,h}$ 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

$$NetDAMAllocations_{t,h} = \sum_{for\ all\ a} \left(O/R\text{-}t\text{-}S\ CRSC_{a,t,h} + U/D\ \text{CRSC}_{a,t,h} + O/R\text{-}t\text{-}S\ CRSP_{a,t,h} + U/D\ CRSP_{a,t,h} \right)$$

Where,

$\text{NetDAMAllocations}_{t,h}$ = 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 $\text{CRSC}_{a,t,h}$ = 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.

Yellow Highlighting Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting

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

$$AllocationFactor_{t,m} = \frac{(OriginalResidual_{t,m} + ETCNL_{t,m} + NARs_{t,m} + GFR\&GFTCC_{t,m})}{\sum_{q \in T}(OriginalResidual_{q,m} + ETCNL_{q,m} + NARs_{q,m} + GFR\&GFTCC_{q,m})}$$

Where,

$Allocation\ Factor_{t,m}$ = The allocation factor used by the ISO to allocate a share of the Net Congestion Rents to Transmission Owner *t* for month *m*

$Original\ Residual_{q,m}$ = 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 the Transmission Owner *q* 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 valid in month *m* in the last Reconfiguration Auction held for TCCs valid in month *m* (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 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.).~~ 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.

$ETCNL_{q,m}$ = The sum of the one-month portion of the revenue 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

month *m*. ~~Each~~The one-month portion of the revenue imputed for ETCNL released in ~~such~~any 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.[2] 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.~~

$NARs_{q,m}$ = 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 $NetAuctionAllocations_{t,n}$ 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

2 A TCC corresponds to ETCNL if it has the same POI and POW as the ETCNL.

		methodology, the net of such revenue impacts for Transmission Owner *q*), minus (iii) the sum of the portion of $NetAuctionAllocations_{t,n}$ as calculated pursuant to Formula N-27 and as adjusted for any charges or payments that are zeroed out for Transmission Owner *q* for month *m* for ~~the~~all Reconfiguration Auctions ~~*n*~~ 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.~~
$GFR\&GFTCC_{q,m}$	=	The one-month portion of the imputed value of Grandfathered TCCs and Grandfathered Rights held by Transmission Owner *q*, valued at their market-clearing prices for month *m* in the last Reconfiguration Auction for TCCs valid in 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 TCCs valid in month *m*), 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 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.~~
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

$$Net\ Auction\ Revenue_n = \begin{bmatrix} TCC\ Auction\ Revenue_n \\ -ETCNL_n \\ -Primary\ Holder\ TCCs\ Sold_n \\ -Original\ Residual\ TCCs_n \\ -O/R\text{-}t\text{-}S\&U/D\ ARSC\&ARSP_n \end{bmatrix}$$

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$_n$	=	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$_n$	=	The gross amount of revenue that the ISO collects from the award of TCCs to purchasers in round *n* or in Reconfiguration Auction *n*, which results from the charges and payments allocated pursuant to Section 20.3.2
ETCNL$_n$	=	Either (i) if round *n* 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 *n*, 0
Primary Holder TCCs Sold$_n$	=	The net of the total payments and charges the ISO allocates to Primary Holders selling TCCs in round *n* or in Reconfiguration Auction *n* pursuant to Section 20.3.4
Original Residual TCCs$_n$	=	Either (i) if round *n* is a round of a Centralized TCC Auction, the total payments the ISO makes in round *n* pursuant to Section 20.3.5 to Transmission Owners that release into round *n* Original Residual TCCs; or (ii) for Reconfiguration Auction *n*, 0
O/R-t-S&U/D ARSC&ARSP$_n$	=	Either (i) if round *n* 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$_{t,n}$ pursuant to Formula N-27) for all Transmission Owners *t*, reduced by any zeroing out of such charges or payments pursuant to Section 20.3.6.5; (ii) if round *n* 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 *n*, the sum of the total O/R-t-S Auction Revenue Shortfall Charges(O/R-t-S ARSC$_{a,t,n}$), U/D Auction Revenue Shortfall Charges (U/D ARSC$_{a,t,n}$), O/R-t-S Auction Revenue Surplus Payments (O/R-t-S ARSP$_{a,t,n}$), and U/D Auction Revenue Surplus Payments (U/D ARSP$_{a,t,n}$) for all Transmission Owners *t* (which sum is calculated for each Transmission Owner as NetAuctionAllocations$_{t,n}$ 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[1] 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

[1] 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.

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 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

$$ACR_{a,n} = ShadowPrice_{a,n} * \begin{bmatrix} (FLOW_{a,n,actual} - FLOW_{a,n,basecase}) \\ +(ISORatingChange_{a,n} * OPFSignChange_{a,n}) \end{bmatrix} * \%Sold_n$$

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 ~~t~~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 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 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*

$ISORatingChange_{a,n}$ =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*, $ISORatingChange_{a,n}$ 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*~~, $ISORatingChange_{a,n}$ 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

$$ACR_{a,n} = ShadowPrice_{a,n} * \begin{bmatrix} (FLOW_{a,n,actual} - FLOW_{a,n,basecase}) \\ +(ISORatingChange_{a,n} * OPFSignChange_{a,n}) \\ -(UnsoldCapacity_{a,n,PriorAuction} * OPFSignChange_{a,n}) \end{bmatrix} * \%Sold_n$$

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~~ 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

$$O/R\text{-}t\text{-}S\ ACR_{a,n} = ACR_{a,n} * \left[\frac{(FLOW_{a,n,actual} - FLOW_{a,n,basecase}) + (TotalRatingChange_{a,n} * OPFSignChange_{a,n})}{(FLOW_{a,n,actual} - FLOW_{a,n,basecase}) + (ISORatingChange_{a,n} * OPFSignChange_{a,n})}\right]$$

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*

$TotalRatingChange_{a,n}$ = 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*, $TotalRatingChange_{a,n}$ 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, $TotalRatingChange_{a,n}$ 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 $ACR_{a,n}$ 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

$$U/D\,ACR_{a,n} = ACR_{a,n} * \left[\frac{-(TotalRatingChange_{a,n} - ISORatingChange_{a,n}) * OPFSignChange_{a,n}}{(FLOW_{a,n,actual} - FLOW_{a,n,basecase}) + (ISORatingChange_{a,n} * OPFSignChange_{a,n})}\right]$$

Where,

U/D $ACR_{a,n}$ = 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 $ACR_{a,n}$ is as calculated pursuant to Formula N-17 or, if required, pursuant to Formula N-18, the variable $TotalRatingChange_{a,n}$ 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

$$O/R\text{-}t\text{-}SNetAuctionImpact_{a,n} = \sum_{for\ all\ o \in O_n} FlowImpact_{a,n,o} * ShadowPrice_{a,n}$$

Where,

$O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$ = 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,* $O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$ shall be subject to recalculation as specified in the paragraph immediately following this Formula N-21

$FlowImpact_{a,n,o}$ = 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 $FlowImpact_{a,n,o}$ calculated for the corresponding Deemed Qualifying Auction Return-to-Service as described in part (b) of this definition of $FlowImpact_{a,n,o}$, 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:

$$FlowImpact_{a,n,o} = BaseCaseFlow_{a,n} - One\text{-}OffFlow_{a,n,o}$$

Where,

$BaseCaseFlow_{a,n}$ = 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 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

$One\text{-}OffFlow_{a,n,o}$ = 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 $BaseCaseFlow_{a,n}$ 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 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 $BaseCaseFlow_{a,n}$ 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 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 $FlowImpact_{a,n,o}$ calculated using the procedures set forth above is less than 1 MW-*p*, then $FlowImpact_{a,n,o}$ shall be set equal to zero *provided further*, $FlowImpact_{a,n,o}$ 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 $ShadowPrice_{a,n}$ is defined as set forth in Formula N-17.

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After calculating O/R-t-S NetAuctionImpact$_{a,n}$ pursuant to Formula N-21, the ISO shall determine whether O/R-t-S 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 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 NetAuctionImpact$_{a,n}$ pursuant to Formula N-21 after setting equal to zero each FlowImpact$_{a,n,o}$ for which FlowImpact$_{a,n,o}$ * ShadowPrice$_{a,n}$ has a different sign than O/R-t-S ACR$_{a,n}$, and then (ii) use this recalculated O/R-t-S NetAuctionImpact$_{a,n}$ and reset value of 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 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 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 (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, O/R-t-S ARSC$_{a,t,n}$, or O/R-t-S Auction Revenue Surplus Payment, O/R-t-S ARSP$_{a,t,n}$, by using Formula N-22. If the absolute value of the net impact (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 $FlowImpact_{a,n,o}$ as described in the prior paragraph) is less than or equal to the absolute value of the O/R-t-S Auction Constraint Residual (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, O/R-t-S $ARSC_{a,t,n}$, or O/R-t-S Auction Revenue Surplus Payment, O/R-t-S $ARSP_{a,t,n}$, by using Formula N-23.

Formula N-22

$$O/R\text{-}t\text{-}S\ Allocation_{a,t,n} = \left(\frac{\sum_{o \in O_n \text{ and } q=t} \left(FlowImpact_{a,n,o} * Responsibility_{n,q,o} \right)}{\sum_{for\ all\ o \in O_n} FlowImpact_{a,n,o}} \right) * O/R\text{-}t\text{-}S\ ACR_{a,n}$$

Where,

$O/R\text{-}t\text{-}S\ Allocation_{a,t,n}$ = 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 $O/R\text{-}t\text{-}S\ Allocation_{a,t,n}$ is negative, then $O/R\text{-}t\text{-}S\ Allocation_{a,t,n}$ shall be an O/R-t-S Auction Revenue Shortfall Charge, O/R-t-S $ARSC_{a,t,n}$, 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 $O/R\text{-}t\text{-}S\ Allocation_{a,t,n}$ is positive, then $O/R\text{-}t\text{-}S\ Allocation_{a,t,n}$ shall be an O/R-t-S Auction Revenue Surplus Payment, O/R-t-S $ARSP_{a,t,n}$, 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

$Responsibility_{n,q,o}$ = 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 $ACR_{a,n}$ is defined as set forth in Formula N-19 and the variables

FlowImpact$_{a,n,o}$ and O_n are defined as set forth in Formula N-21.

Formula N-23

$$O/R\text{-}t\text{-}S\ Allocation_{a,t,n} = \sum_{\substack{o \in O_n \\ and\ q=t}} FlowImpact_{a,n,o} * ShadowPrice_{a,n} * Responsibility_{n,q,o}$$

Where,

the variable ShadowPrice$_{a,n}$ is defined as set forth in Formula N-17, the variables O/R-t-S Allocation$_{a,t,n}$ and Responsibility$_{n,q,o}$ are defined as set forth in Formula N-22, and the variables FlowImpact$_{a,n,o}$ and O_n 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 is included for the relevant month 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 for the relevant 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*.

Yellow Highlighting Reflects Changes to the Draft Tariff Revisions Reviewed at the 06/08/2016 Market Issues Working Group Meeting

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 ~~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 ~~a~~Auction held for TCCs valid ~~for hour *h*~~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 $ARSC_{a,t,n}$, or U/D Auction Revenue Surplus Payment, U/D $ARSP_{a,t,n}$, 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.

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Formula N-24

$$U/D\ NetAuctionImpact_{a,n} = \left(\sum_{r \in R_{a,n}} RatingChange_{a,n,r} * ShadowPrice_{a,n} \right) * OPFSignChange_{a,n}$$

Where,

U/D NetAuctionImpact$_{a,n}$ = 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$_{a,n}$ shall be subject to recalculation as specified in the paragraph immediately following this Formula N-24

RatingChange$_{a,n,r}$= Either:

(a) If Qualifying Auction Derating *r* or Qualifying Auction Uprating *r* is a Deemed Qualifying Auction Derating or a Deemed Qualifying Auction Uprating, RatingChange$_{a,n,r}$ 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 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; or

(b) If Qualifying Auction Derating *r* or Qualifying Auction Uprating *r* is an Actual

Qualifying Auction Derating or an Actual Qualifying Auction Uprating, $RatingChange_{a,n,r}$ 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, $RatingChange_{a,n,r}$ 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 $ShadowPrice_{a,n}$ and $OPFSignChange_{a,n}$ are defined as set forth in Formula N-17.

After calculating U/D $NetAuctionImpact_{a,n}$ pursuant to Formula N-24, the ISO shall determine whether U/D $NetAuctionImpact_{a,n}$ 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 U/D $ACR_{a,n}$ 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 U/D $NetAuctionImpact_{a,n}$ pursuant to Formula N-24 after setting equal to zero each $RatingChange_{a,n,r}$

for which $RatingChange_{a,n,r}$ * $ShadowPrice_{a,n}$ * $OPFSignChange_{a,n}$ has a different sign than U/D $ACR_{a,n}$, and then (ii) use this recalculated U/D $NetAuctionImpact_{a,n}$ and reset value of $RatingChange_{a,n,r}$ 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 $NetAuctionImpact_{a,n}$) 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 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

$$U/D\ Allocation_{a,t,n} = \left(\frac{\sum_{\substack{r \in R_{a,n} \\ and\ q=t}} \left(RatingChange_{a,n,r} * Responsibility_{n,q,r} \right)}{\sum_{for\ all\ r \in R_{a,n}} RatingChange_{a,n,r}} \right) * U/D\ ACR_{a,n}$$

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 $U/D\ Allocation_{a,t,n}$ is negative, then $U/D\ Allocation_{a,t,n}$ shall be a U/D Auction Revenue Shortfall Charge, U/D $ARSC_{a,t,n}$, 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 $U/D\ Allocation_{a,t,n}$ is positive, then $U/D\ Allocation_{a,t,n}$ shall be a U/D Auction Revenue Surplus Payment, U/D $ARSP_{a,t,n}$, 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

$Responsibility_{n,q,r}$ = 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 Uprating *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 $ACR_{a,n}$ is defined as set forth in Formula N-20 and the variables $RatingChange_{a,n,r}$ and $R_{a,n}$ are defined as set forth in Formula N-24.

Formula N-26

$$U/D\ Allocation_{a,t,n} = \sum_{\substack{r \in R_{a,n} \\ and\ q=t}} RatingChange_{a,n,r} * ShadowPrice_{a,n} * Responsibility_{n,q,r}$$

Where,

the variables $U/D\ Allocation_{a,t,n}$ and $Responsibility_{n,q,r}$ are defined as set forth in Formula N-25, the variable $ShadowPrice_{a,n}$ is defined as set forth in Formula N-17, and the variables

$RatingChange_{a,n,r}$ and $R_{a,n}$ are defined as set forth in Formula N-24.

20.3.6.4 Assigning Responsibility for Outages, Returns-to-Service, Deratings, and Upratings

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 Uprating 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, $NetAuctionAllocations_{t,n}$, 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

$$NetAuctionAllocations_{t,n} = \sum_{for\ all\ a} \left(O/R\text{-}t\text{-}S\ ARSC_{a,t,n} + U/D\ ARSC_{a,t,n} + O/R\text{-}t\text{-}S\ ARSP_{a,t,n} + U/D\ ARSP_{a,t,n}\right)$$

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 $ARSC_{a,t,n}$ = 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 $ARSP_{a,t,n}$ = 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 $ARSP_{a,t,n}$ = 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 the 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

$$FFB_{t,n} = \frac{\sum_{l \in L_{t,n}} \left| \left(FLOW_{l,n} - FLOW_{l,IC}\right) * \left(Price_{y,l} - Price_{x,l}\right) * Share_{n,t,l} \right|}{\sum_{l \in L_n} \left| \left(FLOW_{l,n} - FLOW_{l,IC}\right) * \left(Price_{y,l} - Price_{x,l}\right) \right|}$$

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

$$NNAR_{t,n} = \frac{\left(Original\ Residual_{t,n} + ETCNL_{t,n} + NARs_{t,n} + GFR\&GFTCC_{t,n}\right)}{\sum_{q \in T}\left(Original\ Residual_{q,n} + ETCNL_{q,n} + NARs_{q,n} + GFR\&GFTCC_{q,n}\right)}$$

Where,

$NNAR_{t,n}$ = The negative Net Auction Revenue coefficient for Transmission Owner *t* for a given month covered by Reconfiguration Auction *n*

$Original\ Residual_{q,n}$ = 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 *tq* that are valid during ~~the~~a given month ~~corresponding to~~ 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

$ETCNL_{q\text{~~t~~},n}$ = The sum of the one-month portion of the revenue~~s~~ imputed to ~~the Transmission Owner has received as payment for~~ the Direct Sale of Transmission Owner ~~*t*~~*q*'s ETCNL or for its ETCNL released in the Centralized TCC Auction Sub-Auction held for TCCs valid for ~~the~~a given month ~~corresponding to~~ 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.[2] 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.~~

$NARs_{q\text{~~t~~},n}$ = The one-month portion of the Net Auction Revenues ~~the~~ Transmission Owner ~~*t*~~*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*~~*t*~~ 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 ~~*t*~~*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*~~*t*~~), minus (ii) the sum of $NetAuctionAllocations_{t,n}$ 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

[4] A TCC corresponds to ETCNL if it has the same POI and POW as the ETCNL.

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 *qt*), minus (iii) the sum of the portion of $NetAuctionAllocations_{t,n}$ as calculated pursuant to Formula N-27 and as adjusted for any charges or payments that are zeroed out for Transmission Owner *qt* 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 *tq*). ~~For Centralized TCC Auctions conducted before May 1, 2010, the calculation of (ii) shall incorporate only Stage 1 six month rounds.~~

$GFR\&GFTCC_{qt,n}$ = The one-month portion of the imputed value of Grandfathered TCCs and Grandfathered Rights held by Transmission Owner *tq*, valued at one-sixth of the market-clearing price in the last Centralized TCC Auction held for TCCs valid during ~~the~~a given month ~~corresponding to~~covered by Reconfiguration Auction *n*, provided that ~~the~~ Transmission Owner *tq* 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.~~

t = Transmission Owner *t*

T = The set of all Transmission Owners *qt*.

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 its TSC or NTAC, as the case may be.