Attachment IV

17.5 Congestion Settlements Related To the Day-Ahead Market and TCC Auction Settlements

17.5.1 Overview and Definitions

17.5.1.1 Overview

This Part 17.5 of this Attachment B describes the Congestion settlements related to the Day-Ahead Market and the settlements related to Centralized TCC Auctions and Reconfiguration Auctions. Congestion Rent settlements for Real-Time Market Energy Transactions or Bilateral Transactions scheduled in the Real-Time Market are not addressed in this Part 17.5 of this Attachment B.

Section 17.5.2 addresses the Congestion settlements related to each hour of the Day-Ahead Market. These settlements include, as applicable pursuant to this Part 17.5 of this Attachment B, charges or payments for Congestion Rents for Energy Transactions in the Day-Ahead Market and for Bilateral Transactions scheduled in the Day-Ahead Market, and settlements with Primary Holders of TCCs. In addition, these settlements include, as applicable pursuant to this Part 17.5 of this Attachment B, O/R-t-S Congestion Rent Shortfall Charges, U/D Congestion Rent Shortfall Charges, O/R-t-S Congestion Rent Surplus Payments, and U/D Congestion Rent Surplus Payments. The ISO shall allocate to Transmission Owners the net of all of these settlements as Net Congestion Rents as described in this Part 17.5 of this Attachment B.

Section 17.5.3 addresses the settlements in each round of each Centralized TCC Auction and in each Reconfiguration Auction. These settlements include, as applicable pursuant to this Part 17.5 of this Attachment B, charges or payments to purchasers of TCCs, charges or payments to Primary Holders selling TCCs, payments to Transmission Owners in a Centralized TCC Auction for ETCNL released into the Centralized TCC Auction, and payments to Transmission

Owners for Original Residual TCCs that are released into the Centralized TCC Auction. In addition, these settlements include, as applicable pursuant to this Part 17.5 of this Attachment B, O/R-t-S Auction Revenue Shortfall Charges, U/D Auction Revenue Shortfall Charges, O/R-t-S Auction Revenue Surplus Payments, and U/D Auction Revenue Surplus Payments. The ISO shall allocate to Transmission Owners the net of all of these settlements as Net Auction Revenue as described in this Part 17.5 of this Attachment B.

Section 17.5.4 addresses the allocation of revenue from the initial award and annual renewals of Historic Fixed Price TCCs. The ISO shall allocate such revenues to Transmission Owners as described in this Part 17.5 of this Attachment B.

Provisions of this Part 17.5 of this Attachment B applicable to a transmission facility outage or return-to-service shall not apply to a transmission facility derating or uprating. Charges and payments under this Part 17.5 of this Attachment B shall be made to a Transmission Owner for a transmission facility derating or uprating only as specified in Sections 17.5.2.4.3 and 17.5.3.6.3.

17.5.1.2 Defined Terms Used in Part 17.5 of this Attachment B

Capitalized terms used in this Part 17.5 of this Attachment B shall have the meaning specified below in this Section 17.5.1.2, and capitalized terms used in this Part 17.5 of this Attachment B but not defined below shall have the meaning given to them in Section 2 of the Services Tariff:

Actual Qualifying Auction Derating: As defined in Section 17.5.3.6.3.1.

Actual Qualifying Auction Outage: As defined in Section 17.5.3.6.2.1.

Actual Qualifying Auction Return-to-Service: As defined in Section 17.5.3.6.2.1.

Actual Qualifying Auction Uprating: As defined in Section 17.5.3.6.3.1.

Actual Qualifying DAM Derating: As defined in Section 17.5.2.4.3.1.

Actual Qualifying DAM Outage: As defined in Section 17.5.2.4.2.1.

Actual Qualifying DAM Return-to-Service: As defined in Section 17.5.2.4.2.1.

Actual Qualifying DAM Uprating: As defined in Section 17.5.2.4.3.1.

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

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

DAM Constraint Residual: The dollar value associated with a Constraint that is binding for an hour of the Day-Ahead Market, which is calculated pursuant to Section 17.5.2.4.1.

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

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

Deemed Qualifying Auction Derating: As defined in Section 17.5.3.6.3.1.

Deemed Qualifying Auction Outage: As defined in Section 17.5.3.6.2.1.

Deemed Qualifying Auction Return-to-Service: As defined in Section 17.5.3.6.2.1.

Deemed Qualifying Auction Uprating: As defined in Section 17.5.3.6.3.1.

Deemed ISO-Directed Auction Status Change: Any of the following: (1) an Actual Qualifying Auction Return-to-Service for a Reconfiguration Auction that occurs for a transmission facility that, in the last 6-month sub-auction held for TCCs valid during the month corresponding to the relevant Reconfiguration Auction, was a Qualifying Auction Outage that qualified as an ISO-Directed Auction Status Change; (2) an Actual Qualifying Auction Uprating for a Reconfiguration Auction that occurs as a result of an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service of a transmission facility that, in the last 6-month sub-auction held for TCCs valid during the month corresponding to the relevant Reconfiguration Auction, qualified as a Qualifying Auction Outage or Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change; or (3) an Actual Qualifying Auction Derating for a

Reconfiguration Auction that occurs as a result of an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service of a transmission facility that, in the last 6-month sub-auction held for TCCs valid during the month corresponding to the relevant Reconfiguration Auction, qualified as an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change.

Deemed ISO-Directed DAM Status Change: Any of the following: (1) an Actual Qualifying DAM Return-to-Service for an hour of the Day-Ahead Market that occurs for a transmission facility that, in the last Reconfiguration Auction held for TCCs valid for the relevant hour or the last 6-month sub-auction of a Centralized TCC Auction held for TCCs valid for the relevant hour, was an Actual Qualifying Auction Outage that qualified as an ISO-Directed Auction Status Change; (2) an Actual Qualifying DAM Uprating for an hour of the Day-Ahead Market that occurs for a transmission facility that, in the last Reconfiguration Auction held for TCCs valid for the relevant hour or the last 6-month sub-auction of a Centralized TCC Auction held for TCCs valid for the relevant hour, qualified as an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change; or (3) an Actual Qualifying DAM Derating for an hour of the Day-Ahead Market that occurs for a transmission facility that, in the last Reconfiguration Auction held for TCCs valid for the relevant hour or the last 6-month sub-auction of a Centralized TCC Auction held for TCCs valid for the relevant hour, qualified as an Actual Qualifying Auction Outage or an Actual Qualifying Auction Return-to-Service that was an ISO-Directed Auction Status Change. (The terms "Actual Qualifying Auction Outage" and "ISO-Directed Auction Status Change" shall, if not defined in this Section 17.5.1.2, have the meaning given in the ISO's March 17, 2006, filing.)

Deemed Qualifying DAM Derating: As defined in Section 17.5.2.4.3.1.

Deemed Qualifying DAM Outage: As defined in Section 17.5.2.4.2.1.

Deemed Qualifying DAM Return-to-Service: As defined in Section 17.5.2.4.2.1.

Deemed Qualifying DAM Uprating: As defined in Section 17.5.2.4.3.1.

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

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

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

Outage/Return-to-Service Auction Constraint Residual ("O/R-t-S Auction Constraint Residual"): The portion of an Auction Constraint Residual that is deemed to be attributable to Qualifying Auction Outages or Qualifying Auction Returns-to-Service, which O/R-t-S Auction Constraint Residual shall be calculated pursuant to Section 17.5.3.6.1.

Outage/Return-to-Service Auction Revenue Shortfall Charge ("O/R-t-S Auction Revenue Shortfall Charge"): A charge to a Transmission Owner that is created as a result of the allocation of an O/R-t-S Auction Constraint Residual pursuant to Section 17.5.3.6.2.

Outage/Return-to-Service Auction Revenue Surplus Payment ("O/R-t-S Auction Revenue Surplus Payment"): A payment to a Transmission Owner that is created as a result of the allocation of an O/R-t-S Auction Constraint Residual pursuant to Section 17.5.3.6.2.

Outage/Return-to-Service Congestion Rent Shortfall Charge ("O/R-t-S Congestion Rent Shortfall Charge"): A charge to a Transmission Owner that is created as a result of the allocation of an O/R-t-S DAM Constraint Residual pursuant to Section 17.5.2.4.2.

Outage/Return-to-Service Congestion Rent Surplus Payment ("O/R-t-S Congestion Rent Surplus Payment"): A payment to a Transmission Owner that is created as a result of the allocation of an O/R-t-S DAM Constraint Residual pursuant to Section 17.5.2.4.2.

Outage/Return-to-Service DAM Constraint Residual ("O/R-t-S DAM Constraint Residual"): The portion of a DAM Constraint Residual that is deemed to be attributable to Qualifying DAM Outages or Qualifying DAM Returns-to-Service, which O/R-t-S DAM Constraint Residual shall be calculated pursuant to Section 17.5.2.4.1.

Qualifying Auction Derating: As defined in Section 17.5.3.6.3.1.

Qualifying Auction Outage: As defined in Section 17.5.3.6.2.1.

Qualifying Auction Return-to-Service: As defined in Section 17.5.3.6.2.1.

Qualifying Auction Uprating: As defined in Section 17.53.6.3.1.

Qualifying DAM Derating: As defined in Section 17.5.2.4.3.1.

Qualifying DAM Outage: As defined in Section 17.5.2.4.2.1.

Qualifying DAM Return-to-Service: As defined in Section 17.5.2.4.2.1.

Qualifying DAM Uprating: As defined in Section 17.5.2.4.3.1.

Reconfiguration Auction Interface Uprate/Derate Table: The interface derate table posted on the ISO website prior to a Reconfiguration Auction specifying the impact on transfer limits of

Qualifying DAM Outages and Qualifying DAM Returns-to-Service for the Reconfiguration Auction.

Uprate/Derate Auction Constraint Residual ("U/D Auction Constraint Residual"): The portion of an Auction Constraint Residual that is deemed to be attributable to Qualifying Auction Deratings or Qualifying Auction Upratings, which U/D Auction Constraint Residual shall be calculated pursuant to Section 17.5.3.6.1.

Uprate/Derate Auction Revenue Shortfall Charge ("U/D Auction Revenue Shortfall Charge"): A charge to a Transmission Owner that is created as a result of the allocation of a U/D Auction Constraint Residual pursuant to Section 17.5.3.6.3.

Uprate/Derate Auction Revenue Surplus Payment ("U/D Auction Revenue Surplus Payment"): A payment to a Transmission Owner that is created as a result of the allocation of a U/D Auction Constraint Residual pursuant to Section 17.5.3.6.3.

Uprate/Derate Congestion Rent Shortfall Charge ("U/D Congestion Rent Shortfall Charge"): A charge to a Transmission Owner that is created as a result of the allocation of a U/D DAM Constraint Residual pursuant to Section 17.5.2.4.3.

Uprate/Derate Congestion Rent Surplus Payment ("U/D Congestion Rent Surplus Payment"): A payment to a Transmission Owner that is created as a result of the allocation of a U/D DAM Constraint Residual pursuant to Section 17.5.2.4.3.

Uprate/Derate DAM Constraint Residual ("U/D DAM Constraint Residual"): The portion of a DAM Constraint Residual that is deemed to be attributable to a Qualifying DAM Derating or a Qualifying DAM Uprating, which U/D DAM Constraint Residual shall be calculated pursuant to Section 17.5.2.4.1.

For purposes of this Part 17.5 of this Attachment B, the term "transmission facility" shall mean any transmission line, phase angle regulator, transformer, series reactor, circuit breaker, or other type of transmission equipment.

All references in this Part 17.5 of this Attachment B to sections shall be construed to be references to a section of this Part 17.5 of this Attachment B.

17.5.2 Congestion Settlements Related to the Day-Ahead Market

17.5.2.1 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 Part 17.5 of this Attachment B: (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 B-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 B-1.

Formula B-1

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

Where,

$Net\ Congestion\ Rents_h$	=	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 17.5.2.2
$TCC\ Payments_h$	=	The sum for all TCCs of all payments and charges made pursuant to Section 17.5.2.3 to Primary Holders of TCCs in hour *h*
$O/R\text{-}t\text{-}S\&U/D\ CRSC\&CRSP_h$	=	The sum of all O/R-t-S Congestion Rent Shortfall Charges ($O/R\text{-}t\text{-}S\ CRSC_{a,t,h}$), U/D Congestion Rent Shortfall Charges ($U/D\ CRSC_{a,t,h}$), O/R-t-S Congestion Rent Surplus Payments ($O/R\text{-}t\text{-}S\ CRSP_{a,t,h}$), 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 B-14), reduced by any zeroing out of such charges or payments pursuant to Section 17.5.2.4.5

The ISO shall allocate the Net Congestion Rents calculated in each hour to Transmission Owners pursuant to Section 17.5.2.5.

17.5.2.2 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 Part 17.1 of this Attachment B. The total Congestion Rents for all Energy Transactions scheduled in the Day-Ahead Market in hour *h* are calculated pursuant to Formula B-2.

Formula B-2

$$\sum_{W} \boldsymbol{MWh_{W,h} * CCPOW_{W,h}} - \sum_{I} \boldsymbol{MWh_{I,h} * CCPOI_{I,h}}$$

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 the OATT. Total Congestion Rents for all Bilateral Transactions scheduled in the Day-Ahead Market in hour *h* are calculated pursuant to Formula B-3.

Formula B-3

$$\sum_{B} \boldsymbol{MWh_{B,h} * CCTUC_{B,h}}$$

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*

17.5.2.3 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 B-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*

(See Part 17.1 of this Attachment B 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 17.5.2.5.

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.

17.5.2.4 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 17.5.2.4. 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 17.5.2.4.1. 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 17.5.2.4.2 and 17.5.2.4.4, each of which shall be subject to being reduced to zero pursuant to Section 17.5.2.4.5. 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 17.5.2.4.3 and 17.5.2.4.4, each of which shall be subject to being reduced to zero pursuant to Section 17.5.2.4.5.

17.5.2.4.1 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 B-5; *provided, however*, where $DCR_{a,h}$ calculated

using Formula B-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 B-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 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 in the last auction held for TCCs valid for hour *h*

$FLOW_{a,h,TCCAuction}$ = 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 used in the most recent auction in which TCCs valid in hour *h* were sold);

provided, however, special rules (1) through (3) below shall instead be used to calculate $FLOW_{a,h,TCC\ Auction}$ if they apply, and rule (4) below shall be used to calculate $FLOW_{a,h,TCC\ Auction}$ if $FLOW_{a,h,TCC\ Auction}$ cannot be calculated using any other rule set forth in this definition of $FLOW_{a,h,TCC\ Auction}$ because a simulated run of SCUC does not produce

[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.

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 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* 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 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 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 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* 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 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 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 in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the 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), $UprateDerate_{a,h}$ 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 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 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 in TCC auctions; 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 B-6. The amount of each U/D DAM Constraint Residual for hour *h* and for constraint *a* shall be determined by applying Formula B-7.

Formula B-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-t-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 B-5.

Formula B-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 B-5.

17.5.2.4.2 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 17.5.2.4.2. 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 17.5.2.4.2 is subject to being set equal to zero pursuant to Section 17.5.2.4.5.

17.5.2.4.2.1 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 17.5.2.4.4, 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 17.5.2.4.2.2 or 17.5.2.4.2.3.

17.5.2.4.2.1.1 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 Part 17.5 of this Attachment B, "*o*" shall refer to a single Qualifying DAM Outage.

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

(i) the facility exists but is not modeled as in-service for the Day-Ahead Market for hour *h*;

(ii) the facility existed and was modeled as in-service in the last auction held for TCCs valid for hour *h*; and

(iii) the facility was not Normally Out-of-Service Equipment 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 last auction held for TCCs valid for hour *h*;

(ii) the facility existed but was not modeled as in-service in hour *h* as a result of a DAM Status Change or external event described in Section 17.5.2.4.4.3 for which responsibility was assigned pursuant to Section 17.5.2.4.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 17.5.2.4.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as in-service for the last auction held for TCCs valid for hour *h*;

(iii) the facility was not Normally Out-of-Service Equipment 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.

17.5.2.4.2.1.2 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 Part 17.5 of this Attachment B, "*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 last auction held for TCCs valid for hour *h*; and

(iii) the facility was not Normally Out-of-Service Equipment 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 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 17.5.2.4.4.3 for which responsibility is assigned pursuant to Section 17.5.2.4.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 17.5.2.4.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as in-service for the last auction held for TCCs valid for hour *h*; and

(iii) the facility was not Normally Out-of-Service Equipment at the time of the last auction held for TCCs valid for hour *h*.

17.5.2.4.2.2 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 17.5.2.4.2.2 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 17.5.2.4.4, 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 17.5.2.4.4, 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, $O/R\text{-}t\text{-}S\ DCR_{a,h}$, to that Transmission Owner in the form of either: (i) an O/R-t-S Congestion Rent Shortfall Charge in the amount of $O/R\text{-}t\text{-}S\ DCR_{a,h}$ if $O/R\text{-}t\text{-}S\ DCR_{a,h}$ is negative, or (ii) an O/R-t-S Congestion Rent Surplus Payment in the amount of $O/R\text{-}t\text{-}S\ DCR_{a,h}$ if $O/R\text{-}t\text{-}S\ DCR_{a,h}$ is positive.

17.5.2.4.2.3 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 17.5.2.4.2.3 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 17.5.2.4.4, 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 17.5.2.4.4, 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 B-8, and then applying either Formula B-9 or Formula B-10, as specified herein, to assess O/R-t-S Congestion Rent Shortfall Charges and O/R-t-S Congestion Rent Surplus Payments.

Formula B-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 B-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 *FlowImpacta,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 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 schedule determined in the Optimal Power Flow solution for the final round of the last auction held for TCCs valid in hour

h; and (3) the Transmission System model for 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 schedule 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 schedule 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 B-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 B-5.

After calculating O/R-t-S $NetDAMImpact_{a,h}$ pursuant to Formula B-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 B-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 B-9 or Formula B-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 B-8 (or recalculated pursuant to Formula B-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 B-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 B-8 (or recalculated pursuant to Formula B-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 B-10.

Formula B-9

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

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 17.5.2.4.4.2, 17.5.2.4.4.3, or 17.5.2.4.4.4) for Qualifying DAM Outage *o* or Qualifying DAM Return-to-Service *o* in hour *h*, as determined pursuant to Section 17.5.2.4.4

and the variable *O/R-t-S DCR*$_{a,h}$ is defined as set forth in Formula B-6 and the variables *FlowImpact*$_{a,h,o}$ and O_h are defined as set forth in Formula B-8.

Formula B-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 B-5, the variables $O/R\text{-}t\text{-}S\ Allocation_{a,t,h}$ and $Responsibility_{h,q,o}$ are defined as set forth in Formula B-9, and the variables $FlowImpact_{a,h,o}$ and O_h are defined as set forth in Formula B-8.

17.5.2.4.3 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 17.5.2.4.3. Each U/D Congestion Rent Shortfall Charge and each U/D Congestion Rent Surplus Payment allocated to a Transmission Owner pursuant to this Section 17.5.2.4.3 is subject to being set equal to zero pursuant to Section 17.5.2.4.5.

17.5.2.4.3.1 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 17.5.2.4.4, 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 17.5.2.4.4, for the Qualifying DAM Uprating shall be allocated a U/D Congestion Rent Surplus Payment pursuant to Section 17.5.2.4.3.2.

17.5.2.4.3.1.1 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 Part 17.5 of this Attachment B, "*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 in the last auction held for TCCs valid for hour *h*;

(iv) this lower rating is included 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 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 17.5.2.4.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 17.5.2.4.4) other than the Transmission Owner responsible for the lower rating in the last auction held for TCCs valid for hour *h*;

(iv) this lower rating is included 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*.

17.5.2.4.3.1.2 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 Part 17.5 of this Attachment B, "*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 in the last auction held for TCCs valid for hour *h*;

(iii) this higher rating is included 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 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 17.5.2.4.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner for the purpose of applying Section 17.5.2.4.4) other than the Transmission Owner responsible for the lower rating in the last auction held for TCCs valid for hour *h*;

(iv) this lower rating for hour *h* is included 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*.

17.5.2.4.3.2 Allocation of U/D DAM Constraint Residuals

This Section 17.5.2.4.3.2 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 B-11 and then applying either Formula B-12 or Formula B-13, as specified

herein, to assess U/D Congestion Rent Shortfall Charges and U/D Congestion Rent Surplus Payments.

Formula B-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 B-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 in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the 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 in the Reconfiguration Auction Interface Uprate/Derate Table in effect for the 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 B-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 B-5.

After calculating $U/D\ NetDAMImpact_{a,h}$ pursuant to Formula B-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 B-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 B-12 or Formula B-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 B-11 (or recalculated pursuant to Formula B-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 B-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 B-11 (or recalculated pursuant to Formula B-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 B-13.

Formula B-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 17.5.2.4.4.2, 17.5.2.4.4.3, or 17.5.2.4.4.4) for Qualifying DAM Derating *r* or Qualifying DAM Uprating *r* in hour *h*, as determined pursuant to Section 17.5.2.4.4

and the variable $U/D\ DCR_{a,h}$ is defined as set forth in Formula B-7 and the variables $RatingChange_{a,h,r}$ and $R_{a,h}$ are defined as set forth in Formula B-11.

Formula B-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 B-5, the variables $U/D\ Allocation_{a,t,h}$ and $Responsibility_{h,q,r}$ are defined as set forth in Formula B-12, and the variables $RatingChange_{a,h,r}$ and $R_{a,h}$ are defined as set forth in Formula B-11.

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

17.5.2.4.4.1 General Rule for Assigning Responsibility; Presumption of Causation

Unless the special rules set forth in Sections 17.5.2.4.4.2 through 17.5.2.4.4.4 apply, a Transmission Owner shall for purposes of this Section 17.5.2.4 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 17.5.2.4.6.1) 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 17.5.2.4.4.2, 17.5.2.4.4.3, or 17.5.2.4.4.4, 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 17.5.2.4.4.2, 17.5.2.4.4.3, or 17.5.2.4.4.4; or (iii) FERC orders otherwise.

17.5.2.4.4.2 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 17.5.2.4.2

and Section 17.5.2.4.3, 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 17.5.2.4.2 and Section 17.5.2.4.3; *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 17.5.2.4.4.2 shall ultimately be allocated to the Transmission Owners as Net Congestion Rents pursuant to Section 17.5.2.5.

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 in the last Reconfiguration Auction held for TCCs valid for the relevant hour or the last 6-month sub-auction of a Centralized TCC Auction held for TCCs valid for the relevant hour.

17.5.2.4.4.3 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 17.5.2.4.2 and Section 17.5.2.4.3 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 17.5.2.4.2 and Section 17.5.2.4.3; *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 17.5.2.4.4.3 shall ultimately be allocated to the Transmission Owners as Net Congestion Rents pursuant to Section 17.5.2.5.

17.5.2.4.4.4 Shared Responsibility For Returns-to-Service and Upratings During a Transitional Period

Notwithstanding any other provision of this Part 17.5 of this Attachment B, 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 Part 17.5 of this Attachment B 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 17.5.2.4.2 and Section 17.5.2.4.3, 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 17.5.2.4.2 and Section 17.5.2.4.3; *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 17.5.2.4.4.4 shall ultimately be allocated to the Transmission Owners as Net Congestion Rents pursuant to Section 17.5.2.5.

17.5.2.4.5 Exceptions: Setting Charges and Payments to Zero

17.5.2.4.5.1 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 B-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 B-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 17.5.2.4.4) 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 17.5.2.4.4) 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 17.5.2.4.5.1 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 17.5.2.4.4.2, an external event described in Section 17.5.2.4.4.3, or an event occurring during a transitional period as described in Section 17.5.2.4.4.4.

Formula B-14

$$NetDAMAllocations_{t,h} = \sum_{for\ all\ a} \left(O/R\text{-}t\text{-}SCRSC_{a,t,h} + U/DCRSC_{a,t,h} + O/R\text{-}t\text{-}SCRSP_{a,t,h} + U/DCRSP_{a,t,h} \right)$$

Where,

$NetDAMAllocations_{t,h}$ = The total of the O/R-t-S Congestion Rent Shortfall Charges, U/D Congestion Rent Shortfall Charges, O/R-t-S Congestion Rent Surplus Payments, and U/D Congestion Rent Surplus Payments allocated to Transmission Owner *t* in hour *h*

O/R-t-S CRSC$_{a,t,h}$ = An O/R-t-S Congestion Rent Shortfall Charge allocated to Transmission Owner *t* for binding constraint *a* in hour *h* of the Day-Ahead Market, calculated pursuant to Section 17.5.2.4.2

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 17.5.2.4.3

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 17.5.2.4.2

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 17.5.2.4.3.

17.5.2.4.5.2 Zeroing Out of Charges and Payments Resulting from Formula Failure

Notwithstanding any other provision of this Part 17.5 of this Attachment B, 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 17.5.2.4, 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 17.5.2.4.5.2 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 17.5.2.4.5.2 in the same hour of the Day-Ahead Market.

17.5.2.4.6 Information Requirements

17.5.2.4.6.1 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.

17.5.2.4.6.2 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.

17.5.2.5 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 B-15.

Formula B-15

$$\sim\sim Allocation\ Factor_{t,m} = \frac{\sim\sim(Original\ Residual_{t,m} + ETCNL_{t,m} + NARs_{t,m} + GFR\&GFTCC_{t,m})\sim\sim}{\sum_{q \in T}\sim\sim(Original\ Residual_{q,m} + ETCNL_{q,m} + NARs_{q,m} + GFR\&GFTCC_{q,m})\sim\sim}$$

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

Where,

$Allocation\ Factor_{t,m}$ = 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 one-month portion of the revenue imputed to the Direct Sale or the sale in any Centralized TCC Auction sub-auction of Original Residual TCCs 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 in the Reconfiguration Auction held for month *m* (or one-sixth of the average market clearing price in the stage 1 rounds of the 6-month sub-auction of the last Centralized TCC Auction if no Reconfiguration Auction was held for month *m*). 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 revenues the Transmission Owner has received as payment for the Direct Sale of ETCNL or for its ETCNL released in the Centralized TCC Auction sub-auctions held for

TCCs valid for month *m*. Each one-month portion of the revenue for ETCNL released in such 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 of the TCCs corresponding to that ETCNL in the Reconfiguration Auction held for month *m* (or one-sixth of the average market clearing price of such TCCs in stage 1 rounds of the 6-month sub-auction of the last Centralized TCC Auction if no Reconfiguration Auction was held for month *m*)

$NARs_{q,m}$ = The one-month portion of the Net Auction Revenues the Transmission Owner has received in Centralized TCC Auction sub-auctions and 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 in each Centralized TCC Auction sub-auction or Reconfiguration Auction from the allocation of Net Auction Revenue pursuant to Section 17.5.3.7, 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 $\text{NetAuctionAllocations}_{t,n}$ as calculated pursuant to Formula B-27 (as adjusted for any charges or payments that are zeroed out) for Transmission Owner *q* for all 6-month sub-auction stage 1 rounds *n* of all Centralized TCC Auctions held for TCCs valid in month *m*, divided in each case by the duration in months of the TCCs sold in each Centralized TCC Auction sub-auction (or, to the extent that the revenue impact of transmission facility outages, returns-to-service, upratings, and deratings were settled pursuant to a different methodology, the net of such revenue impacts for Transmission Owner *q*), minus (iii) $\text{NetAuctionAllocations}_{t,n}$ as calculated pursuant to Formula B-27 and as adjusted for any charges or payments that are zeroed out for Transmission Owner *q* for the Reconfiguration Auction *n* held for 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*)

$GFR\&GFTCC_{q,m}$ = The one-month portion of the imputed value of Grandfathered TCCs and Grandfathered Rights, valued at their market clearing prices in the Reconfiguration Auction for month *m* (or one-sixth of the average market clearing price in stage 1 rounds in the 6-month sub-auction of the last Centralized TCC Auction if no Reconfiguration Auction was held for month *m*), provided that the Transmission Owner is the selling party and

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

		the Existing Transmission Agreement related to each Grandfathered TCC and Grandfathered Right remains valid in month *m*
$HFPTCC_{q,m}$	=	The one-month portion of the Historic Fixed Price TCC revenues that Transmission Owner *q* has received for Historic Fixed Price TCCs valid for month *m*, valued at the sum of the share of revenues received by Transmission Owner *q* pursuant to Section 17.5.4 of this Attachment B for all Historic Fixed Price TCCs valid for month *m*, divided by twelve; provided, however that the value shall be zero for all Historic Fixed Price TCCs that took effect on or before November 1, 2016.
t	=	Transmission Owner *t*
T	=	The set of all Transmission Owners *q*.

Each Transmission Owner's share of Net Congestion Rents allocated pursuant to this Section 17.5.2.5 shall be incorporated into its TSC or NTAC, as the case may be.

17.5.3 Settlement of TCC Auctions

17.5.3.1 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 Part 17.5 of this Attachment B: (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 B-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 B-16.

Formula B-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 stage 1 round of a 6-month sub-auction, a stage 1 round of a sub-auction in which TCCs with a duration greater than 6 months are sold, or a stage 2 round) 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 17.5.3.2
ETCNL$_n$	=	Either (i) if round *n* is a stage 1 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 17.5.3.3; (ii) if round *n* is a stage 2 round of a Centralized TCC Auction, 0; or (iii) 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 17.5.3.4
Original Residual TCCs$_n$	=	Either (i) if round *n* is a stage 1 round of a Centralized TCC Auction, the total payments the ISO makes in round *n* pursuant to Section 17.5.3.5 to Transmission Owners that release into round *n* Original Residual TCCs; (ii) if round *n* is a stage 2 round of a Centralized TCC Auction, 0; or (iii) for Reconfiguration Auction *n*, 0

O/R-t-S&U/D ARSC&ARSP$_n$	=	Either (i) if round *n* is a stage 1 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 B-27) for all Transmission Owners *t*, reduced by any zeroing out of such charges or payments pursuant to Section 17.5.3.6.5; (ii) if round *n* is a stage 2 round of a Centralized TCC Auction or a stage 1 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 B-27), reduced by any zeroing out of such charges or payments pursuant to Section 17.5.3.6.5

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 17.5.3.7.

17.5.3.2 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 Part 17.4 of this Attachment B, for the TCCs purchased.

17.5.3.3 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 released into the Centralized TCC Auction is insufficient to fund payments at market-clearing prices, the total payments to each Transmission Owner for ETCNL 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.

17.5.3.4 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.

In the event a Grandfathered TCC3 is terminated by mutual agreement of the parties to the grandfathered ETA prior to the conditions specified within Attachments K and L of the ISO OATT, 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

[3] These TCCs include TCCs, if any, associated with those rate schedules to which footnote 9 of Attachment L of the ISO OATT pertains, whether by mutual agreement or otherwise.

Transmission Owner identified in Attachment L of the ISO OATT, until such time as the conditions specified within Attachments K and L of the ISO OATT are met. Upon such time that the conditions within Attachments K and L of the ISO OATT are met, the ISO shall allocate the revenues from the sale of the TCCs that correspond to terminated Grandfathered TCCs in the Centralized TCC Auction as Net Auction Revenues in accordance with Section 17.5.3.7 of this Part 17.5 of this Attachment B.

17.5.3.5 Allocation of Revenues from the Sale of Original Residual TCCs

Revenues associated with Original Residual TCCs shall be distributed directly to each Primary Owner for the duration of the LBMP Transition Period. The Primary Owner 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 Residual TCCs. If the total value of the auction revenues available for payment to the Transmission Owners for 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 Original Residual TCCs 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.

17.5.3.6 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 17.5.3.6. To do so, the ISO shall calculate the Auction Constraint Residual for each constraint for each stage 1 round *n* of a Centralized TCC Auction 6-month sub-auction or Reconfiguration Auction *n*, as the case may be, pursuant to Section 17.5.3.6.1 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 17.5.3.6.1. 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 17.5.3.6.2 and 17.5.3.6.4, each of which shall be subject to being reduced to zero pursuant to Section 17.5.3.6.5. 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 17.5.3.6.3 and 17.5.3.6.4, each of which shall be subject to being reduced to zero pursuant to Section 17.5.3.6.5. 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 stage 1 rounds of the 6-month sub-auction.

17.5.3.6.1 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 stage 1 round *n* of a 6-month sub-auction of a Centralized TCC Auction or for Reconfiguration Auction *n*, as the case may be. For each binding constraint *a* and for each stage 1 round *n* of a 6-month sub-auction of a Centralized TCC Auction or Reconfiguration Auction *n*, the ISO shall calculate the Auction Constraint Residual, $ACR_{a,n}$, using Formula B-17; *provided, however*, the ISO shall recalculate $ACR_{a,n}$ using Formula B-18 if (i) $ACR_{a,n}$ is positive based on the calculation using Formula B-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 B-17.

Formula B-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 stage 1 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 stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, where *p* is a one-month period for Reconfiguration Auction *n* and *p* is a six-month period for stage 1 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 stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* as described in Part 17.4 of this Attachment B, 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 Reconfiguration Auction *n*, (i) the Transmission System model for Reconfiguration Auction *n*, (ii) the set of TCCs and Grandfathered Rights represented in the solution to Reconfiguration Auction *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 determined in the Optimal Power Flow solution for Reconfiguration Auction *n*; or

(b) For stage 1 round *n* of a 6-month sub-auction, (i) the Transmission System model for stage 1 round *n*, (ii) the set of TCCs (scaled appropriately) and Grandfathered Rights represented in the solution to stage 1 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 schedule produced in the Optimal Power Flow solution for stage 1 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 Reconfiguration Auction *n*, a Power Flow using the following base case data set: (i) the Transmission System model for Reconfiguration Auction *n*, (ii) the set of TCCs and Grandfathered Rights represented in the solution to the final round of the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n* (including those pre-existing TCCs (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 final round of the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*; or

(b) For stage 1 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 schedule produced in a single simulated TCC auction administered for all stage 1 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 stage 1 rounds of the sub-auction that includes round *n*

$ISORatingChange_{a,n}$ = The total change in the rating of constraint *a* for stage 1 round *n* or Reconfiguration Auction *n* resulting from ISO-Directed Auction Status Changes or Deemed ISO-Directed Auction Status Changes described in Section 17.5.3.6.4.2, external events described in Section 17.5.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction Returns-to-Service for stage 1 round *n* or Reconfiguration Auction *n*, which shall be calculated as follows:

(a) For 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 17.5.3.6.4.2, external events described in Section 17.5.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction

Returns-to-Service for stage 1 round *n* or 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*

(b) stage 1 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 17.5.3.6.4.2, external events described in Section 17.5.3.6.4.3, or reasons determined by the ISO to be unrelated to Qualifying Auction Outages or Qualifying Auction Returns-to-Service for stage 1 round *n* or 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 Centralized TCC Auction Interface Uprate/Derate Table applicable for stage 1 round *n*

$OPFSignChange_{a,n}$= 1 if $ShadowPrice_{a,n}$ is greater than zero; otherwise, -1

$\%Sold_n$= Either (i) for stage 1 round *n* of a 6-month sub-auction, the percentage of transmission Capacity sold in stage 1 round *n*, divided by the percentage of transmission Capacity sold in all stage 1 rounds of the sub-auction of which stage 1 round *n* is a part; or (ii) for Reconfiguration Auction *n*, 1.

Formula B-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 Reconfiguration Auction *n*, the rating limit for binding constraint *a* applied in the model used in the last Centralized TCC Auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*, minus the Energy flow, in MW-*p*, on binding constraint *a* produced in the Optimal Power Flow in the last round of that Centralized TCC Auction; or

(b) For stage 1 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 B-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 B-17

and each of the other variables is as set forth in Formula B-17; *provided, however,* if $ACR_{a,n}$ is less than zero when calculated using this Formula B-18, $ACR_{a,n}$ shall be set equal to zero.

Following calculation of the Auction Constraint Residual for each constraint *a* for each stage 1 round *n* of a 6-month sub-auction or each 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 stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be. The amount of each O/R-t-S Auction Constraint Residual for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be, for constraint *a* shall be determined by applying Formula B-19. The amount of each U/D Auction Constraint Residual for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be, for constraint *a* shall be determined by applying Formula B-20.

Formula B-19

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

Where:

$O/R\text{-}t\text{-}S\ ACR_{a,n}$ = The amount of the O/R-t-S Auction Constraint Residual for stage 1 round *n* of a 6-month sub-auction or 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 Reconfiguration Auction *n*, $TotalRatingChange_{a,n}$ shall be equal to (1) the rating limit, in MW-*p*, of constraint *a* in the last Centralized TCC Auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*, minus (2) the rating limit, in MW-*p*, of constraint *a* applicable in Reconfiguration Auction *n*

(b) For stage 1 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 stage 1 round *n*

and the variable $ACR_{a,n}$ is as calculated pursuant to Formula B-17 or, if required, pursuant to Formula B-18, and each of the other variables are as defined in Formula B-17.

Formula B-20

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

Where,

$U/D\ ACR_{a,n}$ = The amount of the U/D Auction Constraint Residual for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be, for constraint *a*

and the variable $ACR_{a,n}$ is as calculated pursuant to Formula B-17 or, if required, pursuant to Formula B-18, the variable $TotalRatingChange_{a,n}$ is defined as set forth in Formula B-19 and each of the other variables are defined as set forth in Formula B-17.

17.5.3.6.2 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 17.5.3.6.2. 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 17.5.3.6.2 is subject to being set equal to zero pursuant to Section 17.5.3.6.5.

17.5.3.6.2.1 Identification of Outages and Returns-to-Service Qualifying for Charges and Payments

For each stage 1 round of a 6-month sub-auction or 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 17.5.3.6.4, 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 17.5.3.6.2.2 or 17.5.3.6.2.3.

17.5.3.6.2.1.1 Definition of Qualifying Auction Outage

A "**Qualifying Auction Outage**" (which term shall apply to stage 1 round *n* of a 6-month sub-auction or 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 Part 17.5 of this Attachment B, "*o*" shall refer to a single Qualifying Auction Outage.

An "**Actual Qualifying Auction Outage**" (which term shall apply to stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be) shall be defined as a transmission facility that, for a given stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be:

(a) For Reconfiguration Auction *n*, meets each of the following requirements:

(i) the facility existed and was modeled as in-service in the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*; and

(ii) the facility exists but is not modeled as in-service for Reconfiguration Auction *n*;

(iii) the facility was not Normally Out-of-Service Equipment at the time of the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*; or

(b) For stage 1 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 stage 1 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 Reconfiguration Auction *n*) shall be defined as a transmission facility that, for Reconfiguration Auction *n*, meets each of the following requirements:

(i) the facility existed but was not modeled as in-service in the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*;

(ii) the facility existed but was not modeled as in-service in Reconfiguration Auction *n* as a result of an Auction Status Change or external event described in Section 17.5.3.6.4.3 in Reconfiguration Auction *n* for which responsibility was assigned pursuant to Section 17.5.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to 17.5.3.6.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as in-service in the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*;

(iii) the facility was not Normally Out-of-Service Equipment at the time of the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*.

17.5.3.6.2.1.2 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 Part 17.5 of this Attachment B, "*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 Reconfiguration Auction *n*, meets each of the following requirements:

(i) the facility existed but was not modeled as in-service for the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*; and

(ii) the facility exists and is modeled as in-service in Reconfiguration Auction *n*;

(iii) the facility was not Normally Out-of-Service Equipment at the time of the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*.

Notwithstanding any other provision of this Part 17.5 of this Attachment B, a transmission facility returning to service for stage 1 round *n* of a 6-month sub-auction shall not be an Actual Qualifying Auction Return-to-Service for that stage 1 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 stage 1 round *n*.

A "**Deemed Qualifying Auction Return-to-Service**" shall be defined as a transmission facility that, for a given Reconfiguration Auction *n*, meets each of the following requirements:

(i) the facility existed but was not modeled as in-service in the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*;

(ii) the facility existed but was not modeled as in-service in Reconfiguration Auction *n* as a result of an Auction Status Change or external event described in Section 17.5.3.6.4.3 in Reconfiguration Auction *n* for which responsibility was assigned pursuant to Section 17.5.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 17.5.3.6.4) other than the Transmission Owner assigned responsibility for the facility not being modeled as

in-service for the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*; and

(iii) the facility was not Normally Out-of-Service Equipment at the time of the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*.

17.5.3.6.2.2 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 17.5.3.6.2.2 describes the allocation of an O/R-t-S Auction Constraint Residual for a given stage 1 round of a 6-month sub-auction or Reconfiguration Auction, as the case may be, and a given constraint when only one Transmission Owner is responsible, as determined pursuant to Section 17.5.3.6.4, for all of the Qualifying Auction Outages and all of the Qualifying Auction Returns-to-Service for that stage 1 round of a 6-month sub-auction or Reconfiguration Auction that contribute to that constraint.

If the same Transmission Owner is responsible, as determined pursuant to Section 17.5.3.6.4, for all of the Qualifying Auction Outages *o* and Qualifying Auction Returns-to-Service *o* for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* that contribute to constraint *a*, then the ISO shall allocate the O/R-t-S Auction Constraint Residual for that stage 1 round *n* of a 6-month sub-auction or 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.

17.5.3.6.2.3 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 17.5.3.6.2.3 describes the allocation of an O/R-t-S Auction Constraint Residual for a given stage 1 round of a 6-month sub-auction or Reconfiguration Auction, as the case may be, and a given constraint when more than one Transmission Owner is responsible, as determined pursuant to Section 17.5.3.6.4, for the Qualifying Auction Outages and the Qualifying Auction Returns-to-Service for that stage 1 round of a 6-month sub-auction or Reconfiguration Auction that contribute to that constraint.

If more than one Transmission Owner is responsible, as determined pursuant to Section 17.5.3.6.4, for the Qualifying Auction Outages and the Qualifying Auction Returns-to-Service for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* that contribute to constraint *a*, the ISO shall allocate the O/R-t-S Auction Constraint Residual for constraint *a* for stage 1 round *n* of a 6-month sub-auction or for 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 stage 1 round *n* of a 6-month sub-auction or 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 stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* with an impact on the Energy flow across that constraint of 1 MW-*p* or more by applying Formula B-21, and then applying either Formula B-22 or Formula B-23, as specified herein, to assess O/R-t-S Auction Revenue Shortfall Charges and O/R-t-S Auction Revenue Surplus Payments.

Formula B-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-t-SNetAuctionImpact$_{a,n}$ = The net impact, in dollars, for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be, on constraint *a* of all Qualifying Auction Outages and Qualifying Auction Returns-to-Service for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* having an impact of more than 1 MW-*p* on Energy flow across constraint *a; provided, however, O/R-t-SNetAuctionImpact*$_{a,n}$ shall be subject to recalculation as specified in the paragraph immediately following this Formula B-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 Reconfiguration Auction *n* or stage 1 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 Reconfiguration Auction, 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 represented in the solution to the last 6-

month sub-auction held for TCCs valid during the 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 schedule determined in the Optimal Power Flow solution for the final round of the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*; and (3) the Transmission System model for the last 6-month sub-auction held for TCCs valid during the 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 schedule produced in the Optimal Power Flow used to calculate the Energy flow on constraint *a* for stage 1 round *n* of a 6-month sub-auction, as described in the definition of $FLOW_{a,n,basecase}$ in Formula B-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 stage 1 round *n* of a 6-month sub-auction or in 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 schedule 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 stage 1 round *n* of a 6-month sub-auction or in 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 schedule 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 B-21

O_n = The set of all Qualifying Auction Outages *o* and Qualifying Auction Returns-to-Service *o* in stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*

p = A one-month period for Reconfiguration Auction *n*, or a six-month period for stage 1 round *n* of a 6-month sub-auction

and the variable $ShadowPrice_{a,n}$ is defined as set forth in Formula B-17.

After calculating $O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$ pursuant to Formula B-21, the ISO shall determine whether $O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$ for constraint *a* in stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* has a different sign than O/R-t-S $ACR_{a,n}$ for constraint *a* in stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*. If the sign is different, the ISO shall (i) recalculate $O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$ pursuant to Formula B-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 $O/R\text{-}t\text{-}S\ ACR_{a,n}$, and then (ii) use this recalculated $O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$ 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 B-22 or Formula B-23, as specified below.

If the absolute value of the net impact ($O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$) on constraint *a* of all Qualifying Auction Outages and Qualifying Auction Returns-to-Service for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* as calculated using Formula B-21 (or recalculated pursuant to Formula B-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 ($O/R\text{-}t\text{-}S\ ACR_{a,n}$) for constraint *a* in stage 1 round *n* of a 6-month sub-auction or 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, $O/R\text{-}t\text{-}S\ ARSC_{a,t,n}$, or O/R-t-S Auction Revenue Surplus Payment, $O/R\text{-}t\text{-}S\ ARSP_{a,t,n}$, by using Formula B-22. If the absolute value of the net impact ($O/R\text{-}t\text{-}SNetAuctionImpact_{a,n}$) on constraint *a* of all Qualifying

Auction Outages and Qualifying Auction Returns-to-Service for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* as calculated using Formula B-21 (or recalculated pursuant to Formula B-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 ($O/R\text{-}t\text{-}S\ ACR_{a,n}$) for constraint *a* in stage 1 round *n* of a 6-month sub-auction or 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 B-23.

Formula B-22

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

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, $O/R\text{-}t\text{-}S\ ARSC_{a,t,n}$, charged to Transmission Owner *t* for binding constraint *a* in Reconfiguration Auction *n* or stage 1 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, $O/R\text{-}t\text{-}S\ ARSP_{a,t,n}$, paid to Transmission Owner *t* for binding constraint *a* in Reconfiguration Auction *n* or stage 1 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 17.5.3.6.4.2 or 17.5.3.6.4.3) for Qualifying Auction Outage *o* or Qualifying Auction Return-to-Service *o* in Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction, as determined pursuant to Section 17.5.3.6.4

and the variable $O/R\text{-}t\text{-}S\ ACR_{a,n}$ is defined as set forth in Formula B-19 and the variables $FlowImpact_{a,n,o}$ and O_n are defined as set forth in Formula B-21.

Formula B-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 B-17, the variables $O/R\text{-}t\text{-}S\ Allocation_{a,t,n}$ and $Responsibility_{n,q,o}$ are defined as set forth in Formula B-22, and the variables $FlowImpact_{a,n,o}$ and O_n are defined as set forth in Formula B-21.

17.5.3.6.3 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 17.5.3.6.3. Each U/D Auction Revenue Shortfall Charge and each U/D Auction Revenue Surplus Payment allocated to a Transmission Owner pursuant to this Section 17.5.3.6.3 is subject to being set equal to zero pursuant to Section 17.5.3.6.5.

17.5.3.6.3.1 Identification of Upratings and Deratings Qualifying for Charges and Payments

For each constraint for each stage 1 round of a 6-month sub-auction or 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 17.5.3.6.4, 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 17.5.3.6.3.2.

17.5.3.6.3.1.1 Definition of Qualifying Auction Derating

A "**Qualifying Auction Derating**" (which term shall apply to stage 1 round *n* of a 6-month sub-auction or 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 Part 17.5 of this Attachment B, "*r*" shall refer to a single Qualifying Auction Derating.

An "**Actual Qualifying Auction Derating**" (which term shall apply to stage 1 round *n* of a 6-month sub-auction or 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 stage 1 round *n* or Reconfiguration Auction *n* meets each of the following requirements:

For Reconfiguration Auction *n*:

(i) the constraint has a lower rating in Reconfiguration Auction *n* than it would have if all transmission facilities were modeled as in-service 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 Reconfiguration Auction *n*;

(iii) the lower rating resulting from Actual Qualifying Auction Outage *o* or Actual Qualifying Auction Return-to-Service *o* for Reconfiguration Auction *n* was not modeled in the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*;

(iv) this lower rating is included in the Reconfiguration Auction Interface Uprate/Derate Table in effect for Reconfiguration Auction *n*; and

(v) the constraint was binding in Reconfiguration Auction *n*.

For stage 1 round *n* of a 6-month sub-auction:

(i) the constraint has a lower rating in stage 1 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 stage 1 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 stage 1 round *n* of the 6-month sub-auction; and

(iv) the constraint is binding in stage 1 round *n* of the 6-month sub-auction.

A "**Deemed Qualifying Auction Derating**" (which term shall apply to Reconfiguration Auction *n*) shall be defined as a change in the rating of a constraint that, for a given constraint *a* and a given Reconfiguration Auction *n* meets each of the following requirements:

(i) the constraint has a lower rating in Reconfiguration Auction *n* than it would have if all transmission facilities were modeled as in-service 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 Reconfiguration Auction *n*;

(iii) this lower rating resulting from Deemed Qualifying Auction Outage *o* or Deemed Qualifying Auction Return-to-Service *o* for Reconfiguration Auction *n* was modeled in the last 6-month sub-auction held for TCCs valid during the 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 Reconfiguration Auction *n* is assigned pursuant to Section 17.5.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 17.5.3.6.4) other than the Transmission Owner responsible for the lower rating in the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*;

(iv) this lower rating is included in the Reconfiguration Auction Interface Uprate/Derate Table in effect for Reconfiguration Auction *n*; and

(v) the constraint is binding in Reconfiguration Auction *n*.

17.5.3.6.3.1.2 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 Part 17.5 of this Attachment B, "*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 Reconfiguration Auction *n*, as the case may be, meets each of the following requirements:

(i) the constraint has a higher rating for Reconfiguration Auction *n* than it would have absent an Actual Qualifying Auction Outage *o* or Actual Qualifying Auction Return-to-Service *o* for Reconfiguration Auction *n*;

(ii) this higher rating resulting from Actual Qualifying Auction Outage *o* or Actual Qualifying Auction Return-to-Service *o* for Reconfiguration Auction *n* was not modeled in the last 6-month sub-auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*;

(iii) this higher rating is included in the Reconfiguration Auction Interface Uprate/Derate Table in effect for Reconfiguration Auction *n*; and

(iv) the constraint is binding in Reconfiguration Auction *n*.

Notwithstanding any other provision of this Part 17.5 of this Attachment B, a transmission facility uprating for a stage 1 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 Reconfiguration Auction *n*, as the case may be, meets each of the following requirements:

(i) the constraint has a lower rating in Reconfiguration Auction *n* than it would have if all transmission facilities were modeled as in-service 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 Reconfiguration Auction *n*;

(iii) this lower rating resulting from Deemed Qualifying Auction Outage *o* or Deemed Qualifying Auction Return-to-Service *o* for Reconfiguration Auction *n* was modeled in the last 6-month sub-auction held for TCCs valid during the 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 Reconfiguration Auction *n* is assigned pursuant to Section 17.5.3.6.4 to a Transmission Owner (including the ISO when it is deemed a Transmission Owner pursuant to Section 17.5.3.6.4) other than the Transmission Owner responsible for the lower rating in the last auction held for TCCs valid for hour *h*;

(iv) this lower rating in 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 Reconfiguration Auction *n*.

17.5.3.6.3.2 Allocation of U/D Auction Constraint Residuals

This Section 17.5.3.6.3.2 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 Reconfiguration Auction *n* or stage 1 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 stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* of all Qualifying Auction Deratings *r* and Qualifying

Auction Upratings *r* for constraint *a* in Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction pursuant to Formula B-24 and then applying either Formula B-25 or Formula B-26, as specified herein, to assess U/D Auction Revenue Shortfall Charges and U/D Auction Revenue Surplus Payments.

Formula B-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 Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction of all Qualifying Auction Deratings or Qualifying Auction Upratings for constraint *a* in Reconfiguration Auction *n* or stage 1 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 B-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 Reconfiguration Auction *n* or stage 1 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 Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction, which in the case of 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 stage 1 round *n* of a 6-month sub-auction shall be as

shown in the Centralized TCC Auction Interface Uprate/Derate Table in effect for stage 1 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, $\text{RatingChange}_{a,n,r}$ shall be equal to the amount, in MW-*p*, of the decrease or increase in the rating of binding constraint *a* in Reconfiguration Auction *n* or stage 1 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 Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction, which in the case of 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 stage 1 round n of a 6-month sub-auction shall be as shown in the Centralized TCC Auction Interface Uprate/Derate Table in effect for stage 1 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 B-24

$R_{a,n}$ = The set of all Qualifying Auction Deratings *r* or Qualifying Auction Upratings *r* for binding constraint *a* in Reconfiguration Auction *n* or stage 1 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 B-17.

After calculating U/D $\text{NetAuctionImpact}_{a,n}$ pursuant to Formula B-24, the ISO shall determine whether U/D $\text{NetAuctionImpact}_{a,n}$ for constraint *a* in stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n* has a different sign than U/D $\text{ACR}_{a,n}$ for constraint *a* in stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*. If the sign is

different, the ISO shall (i) recalculate U/D $\text{NetAuctionImpact}_{a,n}$ pursuant to Formula B-24 after setting equal to zero each $\text{RatingChange}_{a,n,r}$ for which $\text{RatingChange}_{a,n,r}$ * $\text{ShadowPrice}_{a,n}$ * $\text{OPFSignChange}_{a,n}$ has a different sign than U/D $\text{ACR}_{a,n}$, and then (ii) use this recalculated U/D $\text{NetAuctionImpact}_{a,n}$ and reset value of $\text{RatingChange}_{a,n,r}$ to allocate U/D Auction Revenue Shortfall Charges and U/D Auction Revenue Surplus Payments pursuant to Formula B-25 or Formula B-26, as specified below.

If the absolute value of the net impact (U/D $\text{NetAuctionImpact}_{a,n}$) on constraint *a* for Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction of all Qualifying Auction Deratings or Qualifying Auction Upratings for constraint *a* in Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction as calculated using Formula B-24 (or recalculated pursuant to Formula B-24 using a reset value of $\text{RatingChange}_{a,n,r}$ as described in the prior paragraph) is greater than the absolute value of the U/D Auction Constraint Residual (U/D $\text{ACR}_{a,n}$) for constraint *a* in Reconfiguration Auction *n* or stage 1 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 $\text{ARSC}_{a,t,n}$, or U/D Auction Revenue Surplus Payment, U/D $\text{ARSP}_{a,t,n}$, by using Formula B-25. If the absolute value of the net impact (U/D $\text{NetAuctionImpact}_{a,n}$) on constraint *a* for Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction of all Qualifying Auction Deratings or Qualifying Auction Upratings for constraint *a* in Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction as calculated using Formula B-24 (or recalculated pursuant to Formula B-24 using a reset value of $\text{RatingChange}_{a,n,r}$ as described in the prior paragraph) is less than or equal to the absolute value of the U/D Auction Constraint Residual (U/D $\text{ACR}_{a,n}$) for constraint *a* in Reconfiguration Auction *n* or stage 1 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 B-26.

Formula B-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 Reconfiguration Auction *n* or stage 1 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 Reconfiguration Auction *n* or stage 1 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 17.5.3.6.4.2 or 17.5.3.6.4.3) for Qualifying Auction Derating *r* or Qualifying Auction Uprating *r* in Reconfiguration Auction *n* or stage 1 round *n* of a 6-month sub-auction, as determined pursuant to Section 17.5.3.6.4

and the variable $U/D\ ACR_{a,n}$ is defined as set forth in Formula B-20 and the variables $RatingChange_{a,n,r}$ and $R_{a,n}$ are defined as set forth in Formula B-24.

Formula B-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 B-25, the variable $ShadowPrice_{a,n}$ is defined as set forth in Formula B-17, and the variables $RatingChange_{a,n,r}$ and $R_{a,n}$ are defined as set forth in Formula B-24.

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

17.5.3.6.4.1 General Rule for Assigning Responsibility; Presumption of Causation

Unless the special rules set forth in Sections 17.5.3.6.4.2 or 17.5.3.6.4.3 apply, a Transmission Owner shall for purposes of this Section 17.5.3.6 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 17.5.3.6.6.3) 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 17.5.3.6.4.2 or 17.5.3.6.4.3, 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 17.5.3.6.4.2 or Section 17.5.3.6.4.3; or (iii) FERC orders otherwise.

17.5.3.6.4.2 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 stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*. To do so, the ISO shall be treated as a Transmission Owner when allocating Auction Constraint Residuals pursuant to Section 17.5.3.6.2 and Section 17.5.3.6.3, 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 17.5.3.6.2 and Section 17.5.3.6.3; *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 17.5.3.6.4.2 shall ultimately be allocated to the Transmission Owners as Net Auction Revenues pursuant to Section 17.5.3.7.

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 6-month sub-auction held for TCCs valid during the 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 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 17.5.3.6.4.2.

17.5.3.6.4.3 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 stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*. To do so, the ISO shall be treated as a Transmission Owner when allocating Auction Constraint Residuals pursuant to Section 17.5.3.6.2 and Section 17.5.3.6.3 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 17.5.3.6.4.3 shall ultimately be allocated to the Transmission Owners as Net Auction Revenues pursuant to Section 17.5.3.7.

17.5.3.6.5 Exceptions: Setting Charges and Payments to Zero

17.5.3.6.5.1 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 B-27 to calculate the total O/R-t-S Auction Revenue Shortfall Charges, U/D Auction Revenue Shortfall Charges, O/R-t-S Auction Revenue Surplus Payments, and U/D Auction Revenue Surplus Payments, $\text{NetAuctionAllocations}_{t,n}$, for Transmission Owner *t* in stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, as the case may be. Based on this calculation, the ISO shall set equal to zero all O/R-t-S $\text{ARSC}_{a,t,n}$, U/D $\text{ARSC}_{a,t,n}$, O/R-t-S $\text{ARSP}_{a,t,n}$, and U/D $\text{ARSP}_{a,t,n}$ (each as defined in Formula B-27) for Transmission Owner *t* for all constraints for stage 1 round *n* of a 6-month sub-auction or Reconfiguration Auction *n*, as the case may be, if (i) $\text{NetAuctionAllocations}_{t,n}$ is positive and Transmission Owner *t* is not responsible (as determined pursuant to Section 17.5.3.6.4) for any Qualifying Auction Returns-to-Service or Qualifying Auction Upratings in stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, as the case may be, or (ii) $\text{NetAuctionAllocations}_{t,n}$ is negative and Transmission Owner *t* is not responsible (as determined pursuant to Section 17.5.3.6.4) for any Qualifying Auction Outages or Qualifying Auction Deratings in stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, as the case may be; *provided, however*, the ISO shall not set equal to zero pursuant to this Section 17.5.3.6.5.1 any O/R-t-S $\text{ARSC}_{a,t,n}$, U/D $\text{ARSC}_{a,t,n}$, O/R-t-S $\text{ARSP}_{a,t,n}$, or U/D $\text{ARSP}_{a,t,n}$

arising from an ISO-Directed Auction Status Change or Deemed ISO-Directed Auction Status Change described in Section 17.5.3.6.4.2 or external events described in Section 17.5.3.6.4.3.

Formula B-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 stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*

$O/R\text{-}t\text{-}S\ ARSC_{a,t,n}$ = An O/R-t-S Auction Revenue Shortfall Charge allocated to Transmission Owner *t* for binding constraint *a* in stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, calculated pursuant to Section 17.5.3.6.2

$U/D\ ARSC_{a,t,n}$ = A U/D Auction Revenue Shortfall Charge allocated to Transmission Owner *t* for binding constraint *a* in stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, calculated pursuant to Section 17.5.3.6.3

$O/R\text{-}t\text{-}S\ ARSP_{a,t,n}$ = An O/R-t-S Auction Revenue Surplus Payment allocated to Transmission Owner *t* for binding constraint *a* in stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, calculated pursuant to Section 17.5.3.6.2

$U/D\ ARSP_{a,t,n}$ = A U/D Auction Revenue Surplus Payment allocated to Transmission Owner *t* for binding constraint *a* in stage 1 round *n* of a 6-month sub-auction or in Reconfiguration Auction *n*, calculated pursuant to Section 17.5.3.6.3.

17.5.3.6.5.2 Zeroing Out of Charges and Payments Resulting from Formula Failure

Notwithstanding any other provision of this Part 17.5 of this Attachment B, 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 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 17.5.3.6, 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 17.5.3.6.5.2 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 17.5.3.6.5.2 in the same round of a Centralized TCC Auction or the same Reconfiguration Auction, as the case may be.

17.5.3.6.6 Information Requirements

17.5.3.6.6.1 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 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.

17.5.3.6.6.2 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.

17.5.3.6.6.3 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.

17.5.3.7 Allocation of Net Auction Revenue to Transmission Owners

In Centralized TCC Auction round *n* or in 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 Reconfiguration Auction; *provided, however*, where the Net Auction Revenue is negative for 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 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 Reconfiguration Auction *n* is calculated pursuant to Formula B-28.

Formula B-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 Reconfiguration Auction *n*, as the case may be

L_n = The set of all transmission facilities modeled in the Transmission System model for round *n* or for 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 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 and Grandfathered Rights represented in the solution to round *n* or to 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 Reconfiguration Auction *n*, as the case may be, (ii) ETCNL not sold in prior Centralized TCC Auctions or through a Direct Sale, and (iii) Original Residual TCCs not sold in prior Centralized TCC Auctions 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 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 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 Reconfiguration Auction *n*

p = A one-month period for 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 Reconfiguration Auction n is calculated pursuant to Formula B-29.

Formula B-29

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

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

Where,

$NNAR_{t,n}$ = The negative Net Auction Revenue coefficient for Transmission Owner *t* for Reconfiguration Auction *n*

$Original\ Residual_{q,n}$ = The one-month portion of the revenue imputed to the Direct Sale or the sale in any Centralized TCC Auction sub-auction of Original Residual TCCs that are valid during the month corresponding to 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 stage 1 rounds of the 6-month sub-auction of the last Centralized TCC Auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*. 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

$ETCNL_{q,n}$ = The sum of the one-month portion of the revenues the Transmission Owner has received as payment for the Direct Sale of ETCNL or for its ETCNL released in the Centralized TCC Auction sub-auctions held for TCCs valid for the month corresponding to Reconfiguration Auction *n*. Each one-month portion of the revenue for ETCNL released in such 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.[1] 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 stage 1 rounds of the 6-month sub-auction of the last Centralized TCC Auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*

$NARs_{q,n}$ = The one-month portion of the Net Auction Revenues the Transmission Owner has received in Centralized TCC Auction sub-auctions and Reconfiguration Auctions held for TCCs valid for the month corresponding to Reconfiguration Auction *n* (which shall not include any revenue from the sale of Original Residual TCCs). The one-month portion of the revenues shall be calculated by summing (i) the revenue Transmission Owner *q* received in each Centralized TCC Auction sub-auction from the allocation of Net Auction Revenue pursuant to Section 17.5.3.7, divided by the duration in months of the TCCs sold in the Centralized TCC Auction sub-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 B-27 (as adjusted for any charges or payments that are zeroed out) for Transmission Owner *q* for all stage 1 rounds *n* of a 6-month sub-auction for all Centralized TCC Auctions held for TCCs valid in the month corresponding to Reconfiguration Auction *n*, divided in each case by the duration in months of the TCCs sold in each Centralized TCC Auction sub-auction (or, to the extent that the revenue impact of transmission facility outages, returns-to-service, upratings, and deratings were settled pursuant to a different methodology, the net of such revenue impacts for Transmission Owner *q*), minus (iii) $NetAuctionAllocations_{t,n}$ as calculated

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

pursuant to Formula B-27 and as adjusted for any charges or payments that are zeroed out for Transmission Owner *q* for Reconfiguration Auction *n*

$GFR\& GFTCC_{q,n}$= The one-month portion of the imputed value of Grandfathered TCCs and Grandfathered Rights, valued at one-sixth of the market clearing price in the last Centralized TCC Auction held for TCCs valid during the month corresponding to Reconfiguration Auction *n*, provided that the Transmission Owner is the selling party and the Existing Transmission Agreement related to each Grandfathered TCC and Grandfathered Right remains valid in the month corresponding to Reconfiguration Auction *n*

$HFPTCC_{q,n}$ = The one-month portion of the Historic Fixed Price TCC revenues that Transmission Owner *q* has received for Historic Fixed Price TCCs valid during a given month covered by Reconfiguration Auction *n*, valued at the sum of the share of revenues received by Transmission Owner *q* pursuant to Section 17.5.4 of this Attachment B for all Historic Fixed Price TCCs valid in the relevant month covered by Reconfiguration Auction *n*, divided by twelve; provided, however that the value shall be zero for all Historic Fixed Price TCCs that took effect on or before November 1, 2016

t = Transmission Owner *t*

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

Each Transmission Owner's share of Net Auction Revenues allocated pursuant to this Section 17.5.3.7 shall be incorporated into its TSC or NTAC, as the case may be.

17.5.4 Allocation of Historic Fixed Price TCC Revenues

17.5.4.1 Defined Terms and Overview

17.5.4.1.1 Defined Terms

1. **Set of Historic Fixed Price TCCs (HFPTCCs):** Historic Fixed Price TCCs that have the same POI and POW and which take, or took, effect in the same Capability Period.

17.5.4.1.2 Overview

The ISO shall allocate the revenues from the initial award and renewal of Historic Fixed Price TCCs as follows:

1. following the effective date of this Section 17.5.4, the ISO shall allocate to the Transmission Owners the revenue paid by LSEs for Historic Fixed Price TCCs that

took effect on or before November 1, 2016 by using the methodology described in this Section 17.5.4 and by using the data and results of the last Centralized TCC Auction completed prior to the respective Capability Period in which each such Historic Fixed Price TCC took effect; and

2. following the completion of each Centralized TCC Auction after the effective date of this Section 17.5.4, the ISO shall allocate to the Transmission Owners the revenue paid by LSEs for Historic Fixed Price TCCs that take effect in the Capability Period immediately following such Centralized TCC Auction using the methodology described in this Section 17.5.4 and by using the data and results of the last Centralized TCC Auction completed prior to the respective Capability Period in which each such Historic Fixed Price TCC takes effect.

To do so, for each Set of HFPTCCs, the ISO shall:

1. determine the Historic Fixed Price TCC revenue deemed to be associated with each round of the one-year Sub-Auction of the relevant Centralized TCC Auction pursuant to Section 17.5.4.2 of this Attachment B;

2. determine the applicable Historic Fixed Price TCC facility flow-based methodology coefficient for each Transmission Owner for each round of the one-year Sub-Auction of the relevant Centralized TCC Auction pursuant to Section 17.5.4.3 of this Attachment B; and

3. allocate, among the Transmission Owners, the Historic Fixed Price TCC revenue deemed to be associated with each round of the one-year Sub-Auction of the relevant Centralized TCC Auction in accordance with Section 17.5.4.4 of this Attachment B.

17.5.4.2 Calculation of Historic Fixed Price TCC Revenue Deemed to be Associated with a Round of a One-Year Sub-Auction

For each Set of HFPTCCs, the ISO shall calculate the revenue deemed to be associated with a round of the one-year Sub-Auction for the relevant Centralized TCC Auction in accordance with Formula B-30.

Formula B-30

$$HFPTCCRevenue_{s,n} = \left[\sum_{k \in s} HFPTCCPmt_{k,s}\right] * RoundPct_n$$

Where,

$HFPTCCRevenue_{s,n}$	= For Set of HFPTCCs *s*, the Historic Fixed Price TCC revenue that is deemed to be associated with round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction
s	= A Set of HFPTCCs
$HFPTCCPmt_{k,s}$	= The revenue received for each Historic Fixed Price TCC *k* that is part of Set of HFPTCCs *s*, as payable by an LSE in accordance with Section 19.2.1.3 of Attachment M of the ISO OATT
$RoundPct_n$	= The percentage of transmission capacity made available for round *n* of the relevant Centralized TCC Auction to support the sale of one-year TCCs, calculated as the ratio of (i) the percentage of transmission capacity made available to support the sale of one-year TCCs in round *n* of the relevant Centralized TCC Auction; to (ii) the percentage of transmission capacity made available to support the sale of one-year TCCs in the one-year Sub-Auction of the relevant Centralized TCC Auction, each as determined by the ISO prior to the relevant Centralized TCC Auction.

17.5.4.3 Calculation of Historic Fixed Price TCC Facility Flow-Based Methodology Coefficient

For each Set of HFPTCCs, the ISO shall use the Historic Fixed Price TCC facility flow-based methodology coefficient to allocate, among the Transmission Owners, the Historic Fixed Price TCC revenue deemed to be associated with a round of the one-year Sub-Auction for the relevant Centralized TCC Auction. The applicable coefficient for each Set of HFPTCCs and

each round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction shall be calculated in accordance with Formula B-31.

Formula B-31

$$HFPTCCFFB_{t,s,n} = \frac{\sum_{L \in L_{t,n}} \left| \left(1YrFlow_{L,n} - ModlYrFlow_{L,n,s}\right)\left(Price_{y,L,n} - Price_{x,L,n}\right) * Share_{n,t,L} \right|}{\sum_{L \in L_{n}} \left| \left(1YrFlow_{L,n} - ModlYrFlow_{L,n,s}\right)\left(Price_{y,L,n} - Price_{x,L,n}\right) \right|}$$

Where,

$HFPTCCFFB_{t,s,n}$	= For Set of HFPTCCs *s*, the Historic Fixed Price TCC facility flow-based methodology coefficient for Transmission Owner *t* for round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction
s	= As defined in Formula B-30
L_n	= The set of all transmission facilities owned by Transmission Owners that are modeled in the Transmission System model for round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction
$L_{t,n}$	= The set of all transmission facilities owned by Transmission Owner *t* that are modeled in the Transmission System model for round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction
L	= A transmission facility from bus *x* to bus *y*
$1YrFlow_{L,n}$	= The Energy flow on transmission facility *L* in the Optimal Power Flow solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction that includes all injections and withdrawals corresponding to the set of TCCs (including Fixed Price TCCs) and Grandfathered Rights represented in such Optimal Power Flow
$Mod1YrFlow_{L,n,s}$	= The Energy flow on transmission facility *L* in a Power Flow that includes all injections and withdrawals corresponding to the set of TCCs (including Fixed Price TCCs) and Grandfathered Rights represented in the solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction, except for the injections and withdrawals corresponding to Set of HFPTCCs *s*. For purposes of this Power Flow: (i) the phase angle settings for optimized phase angle regulators, as identified in ISO Procedures, will be set equal to the phase angle settings for such phase angle regulators as determined in the Optimal Power Flow solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction, but the schedules for such phase angle regulators will be allowed to vary from the schedules determined in the Optimal Power Flow solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction;

	and (ii) for all other phase angle regulators internal to the NYCA or on external borders, as identified in ISO Procedures, the schedules for such phase angle regulators will be set equal to the schedules as determined in the Optimal Power Flow solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction, but the phase angle settings for such phase angle regulators will be allowed to vary from the phase angle settings determined in the Optimal Power Flow solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction. Notwithstanding anything to the contrary herein, if the Power Flow results in Energy flow on transmission facility *L* that violates any limit applicable to the amount of Energy that may flow on transmission facility *L* for round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction, the ISO shall adjust the resulting value of the Energy flow on transmission facility *L*, as determined by the Power Flow, to avoid consideration of such incremental flows above the applicable limit for transmission facility *L* and use such adjusted Energy flow value for purposes of calculating $HFPTCCFFB_{t,s,n}$
$Price_{y,L,n}$	= The market-clearing price at bus *y* on transmission facility *L* in the Optimal Power Flow solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction. Notwithstanding anything to the contrary herein, for Historic Fixed Price TCCs with a POW on Long Island that took effect on November 1, 2013 and remained valid through October 31, 2014, the applicable market-clearing price at bus *y* on transmission facility *L* shall be the sum of (i) the market-clearing prices at bus *y* on transmission facility *L* determined in the Optimal Power Flow solution for each of the Reconfiguration Auctions for November 2013 through April 2014; and (ii) the weighted average market-clearing price at bus *y* on transmission facility *L* determined from the Optimal Power Flow solution for each of the six-month Sub-Auction rounds for the Centralized TCC Auction that included six-month TCCs valid for the Summer 2014 Capability Period (*i.e.*, May 1, 2014 through October 31, 2014)
$Price_{x,L,n}$	= The market-clearing price at bus *x* on transmission facility *L* in the Optimal Power Flow solution to round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction. Notwithstanding anything to the contrary herein, for Historic Fixed Price TCCs with a POW on Long Island that took effect on November 1, 2013 and remained valid through October 31, 2014, the applicable market-clearing price at bus *x* on transmission facility *L* shall be the sum of (i) the market-clearing prices at bus *x* on transmission facility *L* determined in the Optimal Power Flow solution for each of the Reconfiguration Auctions for November 2013 through April 2014; and (ii) the weighted average market-clearing price at bus *x* on transmission facility *L* determined from the Optimal Power Flow solution for each of the six-month Sub-Auction rounds for the Centralized TCC Auction that included six-

month TCCs valid for the Summer 2014 Capability Period (*i.e.*, May 1, 2014 through October 31, 2014)

$Share_{n,t,L}$ = The percentage of transmission facility *L* owned by Transmission Owner *t* on the effective date of the TCCs sold in round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction

17.5.4.4 Allocation of Historic Fixed Price TCC Revenue Deemed to be Associated with a Round of a One-Year Sub-Auction

For each Set of HFPTCCs, each Transmission Owner's share of the Historic Fixed Price TCC revenue deemed to be associated with a round of the one-year Sub-Auction for the relevant Centralized TCC Auction shall be calculated in accordance with Formula B-32.

Formula B-32

$$HFPTCCRevAlloc_{t,s,n} = HFPTCCRevenue_{s,n} * HFPTCCFFB_{t,s,n}$$

Where,

$HFPTCCRevAlloc_{t,s,n}$ = For Set of HFPTCCs *s*, the Historic Fixed Price TCC revenue deemed to be associated with round *n* of the one-year Sub-Auction of the relevant Centralized TCC Auction that is allocated to Transmission Owner *t*

s = As defined in Formula B-30

$HFPTCCRevenue_{s,n}$ = As defined in Formula B-30

$HFPTCCFFB_{t,s,n}$ = As defined in Formula B-31.

Each Transmission Owner's share of Historic Fixed Price TCC revenue allocated pursuant to this Section 17.5.4 shall be incorporated into, or otherwise accounted for as part of, its TSC, or NTAC or other applicable rate mechanism under the ISO Tariffs used to assess charges for Transmission Service provided by the Transmission Owner pursuant to the ISO Tariffs, as the case may be.