ATTACHMENT J

~~FORMULA FOR DETERMINING~~
~~DAY-AHEAD MARGIN ASSURANCE PAYMENT~~

~~I.~~
DETERMINATION OF DAY-AHEAD MARGIN ASSURANCE PAYMENTS

~~1.0 Payments~~
1.0 General Rule

Except as noted below, if an eligible Supplier is forced to buy out of a Day-Ahead Energy, Regulation Service or Operating Reserve schedule in a manner that reduces its Day-Ahead Margin, that Supplier shall receive a Day-Ahead Margin Assurance Payment. The purpose of such payments is to protect Suppliers' Day-Ahead Margins associated with real-time reductions after accounting for: (i) any real-time profits associated with offsetting increases in real-time Energy, Regulation Service, or Operating Reserve Schedules; and (ii) any Supplier-requested real-time de-rate granted by the ISO.

2.0 Eligibility for Receiving Day-Ahead Margin Assurance Payments

The following categories of Suppliers shall be eligible to receive Day-Ahead Margin Assurance Payments: (i) all Self-Committed Flexible and ISO-Committed Flexible Generators that are online and dispatched by RTD; (ii) any Supplier that is scheduled out of economic merit order by the ISO in response to an ISO or Transmission Owner system security need or to permit the ISO to procure additional Operating Reserves; and (iii) any Supplier that is derated or decommitted by the ISO in response to an ISO or Transmission Owner system security need or to permit the ISO to procure additional Operating Reserves.

3.0 Calculation of Day-Ahead Margin Assurance Payments

~~Except as noted in Section 1.3 of this Attachment J, Day-Ahead Margin assurance payments for generating units~~Day-Ahead Margin Assurance Payments for Suppliers shall be determined using the following equations:

~~and~~

$$DMAP_{hu} = \max\left(0, \sum_{i \in h} CDMAP_{iu}\right) \text{where:}$$

$$CDMAP_{iu} = CDMAPen_{iu} + \sum_{p} CDMAPres_{iup} + CDMAPreg_{iu} \pm$$

If the Supplier's real-time Energy schedule is lower than its Day-Ahead Energy schedule then:

$$CDMAPen_{iu} = \left\{ \begin{array}{c} [DASen_{hu} - LL_{iu}] \times RTPen_{iu} \\ - \int_{LL_{iu}}^{DASen_{hu}} DABen_{hu} \end{array} \right\} * \frac{Seconds_i}{3600} \pm$$

If the Supplier's real-time Energy schedule is greater than or equal to its Day-Ahead Energy schedule then:

$$CDMAPen_{iu} = MIN\left(\left\{ \begin{array}{c} [DASen_{hu} - UL_{iu})] \times RTPen_{iu} \\ + \int_{DASen_{hu}}^{UL_{iu}} DABen_{hu} \end{array} \right\} * \frac{Seconds_i}{3600}, 0 \right)$$

If the Supplier's real-time schedule for a given Operating Reserve product, p, is lower than its Day-Ahead Operating Reserve schedule for that product then:

$$CDMAPres_{iup} = \left[\left(DASres_{hup} - RTSres_{iup} \right) \times \left(RTPres_{iup} - DABres_{hup} \right) \right] * \frac{Seconds_i}{3600}$$

If the Supplier's real-time schedule for a given Operating Reserve product, p, is greater than or equal to its Day-Ahead Operating Reserve schedule for that product then:

$$CDMAPres_{iup} = \left[\left(DASres_{hup} - RTSres_{iup} \right) \times \left(RTPres_{iup} \right) \right] * \frac{Seconds_i}{3600}$$

If the Supplier's real-time Regulation Service schedule is less than its Day-Ahead Regulation Service schedule then:

$$\text{CDMAPreg}_{iu} = [(\text{DASreg}_{hu} - \text{RTSreg}_{iu}) \times (\text{RTPreg}_{iu} - \text{DABreg}_{hu})] * \frac{\text{Seconds}_i}{3600}$$

If the Supplier's real-time Regulation Schedule is greater than or equal to the Day-Ahead Regulation Service schedule then:

$$\text{CDMAPreg}_{iu} = [(\text{DASreg}_{hu} - \text{RTSreg}_{iu}) \times MAX((\text{RTPreg}_{iu} - \text{RTBreg}_{iu}),0)] * \frac{\text{Seconds}_i}{3600};$$

where:

h is the hour that includes interval i;

$DMAP_{hu}$ = the Day-Ahead Margin Assurance Payment attributable in any hour *h* to any ~~generating unit~~Supplier *u*;

$CDMAP_{iu}$ = the contribution of ~~SCD~~RTD interval *i* to the Day-Ahead Margin Assurance Payment for ~~unit~~Supplier *u*;
~~DAS_{hu} = day-ahead energy~~

$CDMAPen_{iu}$ = the Energy contribution of RTD interval *i* to the Day-Ahead Margin Assurance Payment for Supplier *u*;

$CDMAPreg_{iu}$ = the Regulation Service contribution of RTD interval *i* to the Day-Ahead Margin Assurance Payment for Supplier *u*;

$CDMAPres_{iup}$ = the Operating Reserve contribution of RTD interval *i* to the Day-Ahead Margin Assurance Payment for Supplier *u* determined separately for each Operating Reserve product p;

$DASen_{hu}$ = Day-Ahead Energy schedule for ~~unit~~Supplier *u* in hour *h*;
~~$RTBP_{iu}$ = average 6-second ramped SCD basepoint for unit *u* in interval *i*;~~

$DASreg_{hu}$ = Day-Ahead schedule for Regulation Service for Supplier *u* in hour *h*;

$DASres_{hup}$ = Day-Ahead schedule for Operating Reserve product p, for Supplier *u* in hour *h* determined separately for each Operating Reserve product;

$DABen_{hu}$ = Day-Ahead Energy bid curve for Supplier *u* in hour *h*;

$DABreg_{hu}$ = Day-Ahead Availability Bid for Regulation Service for Supplier *u* in hour *h*;

$DABres_{hup}$ = Day-Ahead Availability Bid for Operating Reserve product p for Supplier *u* in hour *h* for each Operating Reserve product;

$RTSen_{iu}$ = Real-time Energy scheduled for Supplier *u* in interval *i*, and calculated as the arithmetic average of the 6-second AGC Base Point Signals sent to Supplier *u* during the course of interval *i*;

$RTSreg_{iu}$ = Real-time schedule for Regulation Service for Supplier *u* in interval *i*.

$RTSres_{iup}$ = Real-time schedule for Operating Reserve for Supplier *u* in interval *i* for each Operating Reserve product p.

$RTBreg_{iu}$ = Real-time Availability Bid for Regulation Service for Supplier *u* in interval *i.*

AEI_{iu} = average ~~actual energy injection by unit~~Actual Energy Injection by Supplier *u* in interval *i*;

~~$RTPiu$~~$RTPen_{iu}$ = real-time price of Energy at the location of ~~unit~~Supplier *u* in interval *i*;

$RTPreg_{iu}$ = real-time price of Regulation Service at the location of Supplier *u* in interval *i*;
$RTPres_{iup}$ = real-time price of Operating Reserve at the location of Supplier *u* in interval *i* defined for each Operating Reserve product p;

LL_{iu} = max (~~$RTBP_{iu}$~~$RTSen_{iu}$, $min(AEI_{iu},EOP_{iu})$), but not more than $DASen_{hu}$;

UL_{iu} = max ($RTSen_{iu}$, $min(AEI_{iu},EOP_{iu})$) but not less than $DASen_{hu}$ ~~,~~;

EOP_{iu} = the Economic Operating Point of Supplier *u* in interval *i*

~~DAB_{hu} = Bid curve for unit *u* submitted in the Day-Ahead Market for hour *h*;~~ and

$Seconds_i$ = number of seconds in interval *i.*

The value of ~~$RTBP_{iu}$~~RTS_{iu}, in the equation above shall be determined using an arithmetic average of the AGC Base Point Signals sent to a ~~unit~~Supplier over the course of a given ~~SCD~~RTD interval~~, *i.e.*, the~~

~~period between the NYISO's issuance of two successive SCD Base Point Signals.~~ The AGC Base Point Signal for a ~~unit~~Generator that is not providing Regulation Service during a given ~~SCD~~RTD interval shall be initialized by either: (i) the ~~unit~~Generator's last AGC Base Point Signal from the prior ~~SCD~~RTD interval; or (ii) the ~~unit~~Generator's actual metered generation at the time new ~~SCD~~RTD Base Point Signals are received by the ISO's AGC software, whichever is closer to the ~~unit~~Generator's new ~~SCD~~RTD Base Point Signal. AGC Base Point Signals for a ~~unit~~Generator that is not providing Regulation Service will ramp evenly over the course of the ~~SCD~~RTD interval starting at the initialized AGC Base Point Signal and ending at the level of its new ~~SCD~~RTD Base Point Signal. AGC Base Point Signals for ~~units~~Generators providing Regulation Service during a given ~~SCD~~RTD interval are determined based on the ISO's need to minimize the NYCA area control error.

~~II. EXCEPTIONS TO DAY-AHEAD MARGIN ASSURANCE PAYMENTS~~

~~1.0 Generators~~ 4.0 Exception for Suppliers Lagging Behind ~~SCD~~RTD Base Point Signals

~~Generators~~Suppliers that do not respond to, or that lag behind, the ISO's ~~Security Constrained Dispatch~~RTD Base Point Signals in a given ~~SCD~~ interval, as determined below, shall not be eligible for Day-Ahead Margin ~~assurance~~Assurance ~~payments~~Payments for that interval. If a ~~Generator~~Supplier's average ~~actual~~Actual Energy ~~injection~~Injection in an ~~SCD~~RTD interval (*i.e.*, its ~~actual energy injections~~ Actual Energy Injections averaged over the ~~SCD~~RTD interval) is less than or equal to its penalty limit for under-generation value for that interval, as computed below, it shall not be eligible for Day-Ahead Margin ~~assurance payments for~~Assurance Payments in that ~~SCD~~ interval.

~~1.0.1 The Penalty Limit for Under-Generation Value~~

~~The Penalty~~The penalty limit for under-generation value is the tolerance described in Section ~~4.0a~~1.0 of Rate Schedule ~~3~~-A of this ISO Services Tariff, which is ~~set pursuant to ISO Procedures, and~~ used in the calculation of the persistent under-generation charge applicable to Suppliers that are not providing Regulation Service.

~~1.1 Class B Units~~

~~Class B Units are not eligible for Day-Ahead Margin assurance payments unless they are scheduled by the NYISO out of economic merit order in response to an ISO or TO system security need or to permit the ISO to procure additional Operating Reserves.~~

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5.0 Rules Applicable to Generator Derates

~~**1.2** Generators **Scheduled to Supply Ten-Minute Spinning Reserves**~~

~~If a Class A Generator is scheduled to supply 10-Minute Spinning Reserves in real-time and is scheduled by the NYISO out-of-economic-merit order in response to an ISO or TO system security need, or to permit the ISO to procure additional Operating Reserves, it may~~ shall ~~be eligible for both~~ either a ~~real-time Lost Opportunity Cost payments and~~ or a ~~Day-Ahead Margin assurance payments. Such a Generator may~~ will ~~be eligible for a Day-Ahead margin assurance payment between (i) the higher of its average six-second ramped SCD Base Point Signal or its average actual Energy injection and (ii) its Day-Ahead Energy schedule. Such a Generator may~~ shall ~~also be eligible for real-time Lost Opportunity Cost Payments~~ to the extent that it supplied Spinning Reserves~~between its Day-Ahead Energy schedule and its Day-Ahead Operating Capacity. Such a~~ No ~~Generator, however, shall receive both~~ will not be eligible for Day-Ahead ~~Margin assurance payments and real-time Lost Opportunity Cost payments for the same portion of its Day-Ahead bid curve.~~ In the event that a Generator is eligible to receive both payments for a given portion of its bid curve, it will receive only the real-time Lost ~~Opportunity Cost payment.~~

~~**1.3 Generator Requested Derates** Generator~~ that request and are granted a derate of their real-time Operating Capacity, but that are otherwise ~~meet all other eligibility requirements pursuant~~ eligible to ~~this Attachment J may~~ receive a Day-Ahead Margin ~~assurance payments~~ Assurance Payment may receive a payment up to a Capacity level consistent with their

revised Emergency Upper Operating Limit or Normal Upper Operating Limit, which ever is applicable. If a Generator's

derated real-time Operating Capacity ~~less its real-time 10-Minute Spinning Reserve or real-time Regulation schedule, if any,~~ is ~~less~~lower than the sum of its Day-Ahead Energy ~~schedule, then the Generator's derated real-time~~ Regulation Services and Operating ~~Capacity less its real-time 10-Minute Spinning Reserve or real-time Regulation schedule, shall be used in place of~~Reserve schedules then when the ISO conducts the ~~Day-Ahead Energy schedule in the equations set forth~~calculations described in Section ~~I of this Attachment J~~3.0 above, the DASen, DASreg and $DASres_p$ variables will be reduced by REDen, REDreg and $REDres_p$ respectively. REDen, REDreg and $REDres_p$ shall be calculated using the formulas below: $REDtot_{iu} = max(RTUOL_{iu} - DASen_{hu} - DASreg_{hu} - \Sigma_p DASres_{hup}, 0)$

$POTREDen_{iu} = max(DASen_{hu} - RTSen_{iu}, 0)$

$POTREDreg_{iu} = max(DASreg_{hu} - RTSreg_{iu}, 0)$

$POTREDres_{iup} = max(DASres_{hup} - RTSres_{iup}, 0)$

$REDen_{iu} = ((POTREDen_{iu}/(POTREDen_{iu} + POTREDreg_{iu} + \Sigma_p POTREDres_{iup}))*REDtot_{iu}$

$REDreg_{iu} = ((POTREDreg_{iu}/(POTREDen_{iu} + POTREDreg_{iu} + \Sigma_p POTREDres_{iup}))*REDtot_{iu}$

$REDres_{iup} = ((POTREDres_{iup}/(POTREDen_{iu} + POTREDreg_{iu} + \Sigma_p POTREDres_{iup}))*REDtot_{iu}$

where:

$RTUOL_{iu}$ = The applicable real-time Emergency Upper Operating Limit or Normal Upper Operating Limit of Supplier u in interval i

$REDtot_{iu}$ = The total amount in MW that Day-Ahead schedules need to be reduced to account for the derate of Supplier u in interval i;

$REDen_{iu}$ = The amount in MW that the Day-Ahead Energy schedule is reduced for the purposes of calculating the Day-Ahead Margin Assurance Payment for Supplier u in interval i;

$REDreg_{iu}$ = The amount in MW that Supplier u's Day-Ahead Regulation Service schedule is reduced for the purposes of calculating the Day-Ahead Margin Assurance Payment in interval i;

$REDres_{iup}$ = The amount in MW that Supplier u's Day-Ahead Operating Reserve schedule product is reduced for the purposes of calculating the Day-Ahead Margin Assurance Payment in interval i determined separately for each Operating Reserve product, p;

$POTREDen_{iu}$ = The potential amount in MW that Supplier u's Day-Ahead Energy schedule could be reduced for the purposes of calculating the Day-Ahead Margin Assurance Payment for Supplier u in interval i;

$POTREDreg_{iu}$ = The potential amount in MW that Supplier u's Day-Ahead Regulation Service Schedule could be reduced for the purposes of calculating the Day-Ahead Margin Assurance Payment for Supplier u in interval i;

$POTREDres_{iup}$ = The potential amount in MW that Supplier u's Day-Ahead Operating Reserve Schedule for a given operating reserve product could be reduced for the purposes of calculating the Day-Ahead Margin Assurance Payment for Supplier u in interval i determined separately for each Operating Reserve product, p;

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