25 Attachment J – Determination of Day-Ahead Margin Assurance Payments and Import Curtailment Guarantee Payments

25.1 Introduction

If a Supplier that is eligible pursuant to Section 25.2 of this Attachment J buys out of a Day-Ahead Energy, Regulation Service or Operating Reserve schedule in a manner that reduces its Day-Ahead Margin it shall receive a Day-Ahead Margin Assurance Payment, except as noted in Sections 25.2, 25.3, 25.4, and 25.5 of this Attachment J. 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.

In addition, a Supplier may be eligible to receive an Import Curtailment Guarantee Payment if its Import is curtailed at the request of the ISO as determined pursuant to Section 25.6 of this Attachment J.

25.2 Eligibility for Receiving Day-Ahead Margin Assurance Payments

25.2.1 General Eligibility Requirements for Suppliers to Receive Day-Ahead Margin Assurance Payments

Subject to Section 25.2.2 of this Attachment J, the following categories of Resources bid by Suppliers shall be eligible to receive Day-Ahead Margin Assurance Payments: (i) all Self-Committed Flexible and ISO-Committed Flexible Generators, other than Energy Storage Resources, that are either online and dispatched by RTD or available for commitment by RTC; (ii) Demand Side Resources committed to provide Operating Reserves or Regulation Service; (iii) any Resource, including an Energy Storage Resource, 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; (iv) any Resource, including Energy Storage Resources, internal to the NYCA 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; and (v) Energy Limited Resources with an ISO-approved real-time reduction in scheduled output from its Day-Ahead schedule.

25.2.2 Exceptions

Notwithstanding Section 25.2.1 of this Attachment J, no Day-Ahead Margin Assurance Payment shall be paid to:

25.2.2.1 a Resource, otherwise eligible for a Day-Ahead Margin Assurance Payment, in hours in which the NYISO has increased the Resource's real-time minimum operating level above the Resource's Day-Ahead Market Energy schedule either: (i) at the Resource's request including through an adjustment to the Resource's self-commitment schedule; or (ii) in order to reconcile the ISO's dispatch with the Resource's actual output or to address reliability concerns that

arise because the Resource is not following Base Point Signals; or (iii) an Intermittent Power Resource that depends on wind as its fuel.

25.2.2.2 a Resource, otherwise eligible for Day-Ahead Margin Assurance Payments, in hours in which the NYISO has increased the Resource's real-time minimum operating level at the Resource's request, including through an adjustment to the Resource's self-commitment schedule, above the MW level determined by subtracting the Resource's Day-Ahead Market Regulation Service schedule from its Day-Ahead Market Energy schedule.

25.2.2.3 a Resource, otherwise eligible for Day-Ahead Margin Assurance Payments, in hours in which the Resource reduces the MW quantity specified in its real-time Regulation Capacity Bid below its Day-Ahead Market Regulation Service schedule.

25.2.2.4 a Generator, otherwise eligible for Day-Ahead Margin Assurance Payments, for (i) any hour in which the Incremental Energy Bids submitted in the Real-Time Market for that Generator exceed the Incremental Energy Bids submitted in the Day-Ahead Market, or the mitigated Day-Ahead Incremental Energy Bids where appropriate, for the portion of that Generator's Capacity that was scheduled in the Day-Ahead Market; and (ii) the two hours immediately preceding and the two hours immediately following the hour(s) in which the Incremental Energy Bids submitted in the real-time market for that Generator exceed the Incremental Energy Bids submitted in the Day-Ahead Market, or the mitigated Day-Ahead Incremental Energy Bids where appropriate, for the portion of that Generator's Capacity that was scheduled in the Day-Ahead Market.

25.2.2.5 A Generator that is available for commitment by RTC and otherwise eligible for Day-Ahead Margin Assurance Payments, for (i) any hour in which the Start-Up Bids submitted in the real-time market for that Generator exceed the Start-Up Bids submitted in the Day-Ahead Market, or the mitigated Day-Ahead Start-Up Bids where appropriate, and that Generator was scheduled for Energy or Regulation Service in that hour in the Day-Ahead Market; and (ii) the two hours immediately preceding and the two hours immediately following the hour(s) in which the Start-Up Bids submitted in the real-time market for that Generator exceed the Start-Up Bids submitted in the Day-Ahead Market, or the mitigated Day-Ahead Start-Up Bids where appropriate, and that Generator was scheduled for Energy or Regulation Service in that hour in the Day-Ahead Market.

25.2.2.6 A Generator that is available for commitment by RTC and otherwise eligible for Day-Ahead Margin Assurance Payments, for (i) any hour in which the dollar component of the Minimum Generation Bids submitted in the real-time market for that Generator exceed the dollar component of the Minimum Generation Bids submitted in the Day-Ahead Market, or the dollar component of the mitigated Day-Ahead Minimum Generation Bids where appropriate, and that Generator was scheduled for Energy or Regulation Service in that hour in the Day-Ahead Market; and (ii) the two hours immediately preceding and the two hours immediately following the hour(s) in which the dollar component of the Minimum Generation Bids submitted in the real-time market for that Generator exceed the dollar component of the Minimum Generation Bids submitted in the

Day-Ahead Market, or the dollar component of the mitigated Day-Ahead Minimum Generation Bids where appropriate, and that Generator was scheduled for Energy or Regulation Service in that hour in the Day-Ahead Market.

25.3 Calculation of Day-Ahead Margin Assurance Payments

25.3.1 Formula for Day-Ahead Margin Assurance Payments for Generators, Except for Limited Energy Storage Resources

Subject to Sections 25.4 and 25.5 of this Attachment J, Day-Ahead Margin Assurance Payments for Generators, except for Limited Energy Storage Resources, shall be determined by applying the following equations to each individual Generator using the terms as defined in Section 25.3.4:

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

where:

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

25.3.1.1 Energy Contribution for Day-Ahead Margin Assurance Payments

If the Generator's (i) Day-Ahead schedule is to inject Energy (*i.e.*, greater than zero MW) and its real-time Energy schedule is lower than its Day-Ahead Energy schedule; or (ii) Day-Ahead schedule is to withdraw Energy (*i.e.*, less than zero MW) and its real-time Energy schedule is greater than its Day-Ahead Energy schedule, then:

$$CDMAPen_{iu} = \left((DASen_{hu} - LL_{iu}) * RTPen_{iu} - \int_{LL_{iu}}^{DASen_{hu}} DABen_{hu} \right) * \frac{Seconds_i}{3600}$$

If the Generator's (i) Day-Ahead Energy schedule is to inject Energy (*i.e.*, greater than zero MW) and its real-time Energy schedule is greater than or equal to its Day-Ahead Energy schedule; or (ii) Day-Ahead Energy schedule is to withdraw Energy (*i.e.*, less than zero MW), and its real-time Energy schedule is less than or equal to its Day-Ahead Energy schedule; or (iii) Day-Ahead Energy schedule is for zero MW, then:

$$CDMAPen_{iu} = min\left[\left((DASen_{hu} - UL_{iu}) * RTPen_{iu} + \int_{DASen_{hu}}^{UL_{iu}} RTBen_{iu}\right) * \frac{Seconds_i}{3600}, 0\right]$$

25.3.1.2 Operating Reserve Contribution for Day-Ahead Margin Assurance Payments

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

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

If the Generator'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:

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

25.3.1.3 Regulation Service Contribution for Day-Ahead Margin Assurance Payments

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

$$CDMAPreg_{iu} = \left[\left(DASreg_{hu} - RTSreg_{iu}\right) * \left(RTPreg_{iu} - DABreg_{hu}\right)\right] * \frac{Seconds_i}{3600} + \left[\left(-1 * RTMreg_{iu}\right) * max\left(0, RTPregm_{iu} - RTBregm_{iu}\right)\right]$$

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

$$CDMAPreg_{iu} = \left[(DASreg_{hu} - RTSreg_{iu}) * max\left((RTPreg_{iu} - RTBreg_{iu}), 0\right)\right] * \frac{Seconds_i}{3600} + \left[(-1 * RTMreg_{iu}) * max(0, RTPregm_{iu} - RTBregm_{iu})\right]$$

25.3.4 Terms Used in this Attachment J

The terms used in the formulas in this Attachment J shall be defined as follows:

h is the hour that includes interval i;

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

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

$CDMAPen_{iu}$ = 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 Supplier u in hour h;

$DASreg_{hu}$ = 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;

$DABen_{hu}$ = Day-Ahead Energy Bid cost for Supplier u in hour h, including the Minimum Generation Bid and Incremental Energy Bids;

$DABreg_{hu}$ = Day-Ahead Regulation Capacity Bid price for Supplier u in hour h;

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

$RTSen_{iu}$ = 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 product p for Supplier u in interval i.

$RTBreg_{iu}$ = real-time Regulation Capacity Bid price for Supplier u in interval i.

$RTBen_{iu}$ = real-time Energy Bid cost for Supplier u in interval i, including the Minimum Generation Bid and Incremental Energy Bids.

$RTBregm_{iu}$ = real-time Regulation Movement Bid price for Supplier u in interval i.

$RTMreg_{iu}$ = real-time Regulation Movement MWs for Supplier u in interval i;

AE_{iu} = either, (1) when $RTSen_{iu}$ is greater than zero MW, average ~~A~~actual Energy ~~I~~injections or withdrawals by Supplier u in interval i but not more than $RTSen_{iu}$ plus Compensable Overgeneration; or (2) when $RTSen_{iu}$ is less than or equal to zero MW, average ~~A~~actual Energy injections or ~~W~~withdrawals by Supplier u in interval i;

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

$RTPreg_{iu}$ = real-time price of Regulation Capacity at the location of Supplier u in interval i;

$RTPres_{iup}$ = real-time price of Operating Reserve product p at the location of Supplier u in interval i;

$RTPregm_{iu}$ = real-time Regulation Movement Market Price at the location of Supplier u in interval i;

LL_{iu} = When the Day-Ahead Energy schedule is to inject, given that $RTSen_{iu} < DASen_{hu}$, either:

(a) $if\ RTSen_{iu} < EOP_{iu}, then\ LL_{iu} = max(min(max(RTSen_{iu}, min(AE_{iu}, EOP_{iu})), DASen_{hu}), 0)$; or

(b) $if\ RTSen_{iu} \geq EOP_{iu}, then\ LL_{iu} = max(min(RTSen_{iu}, max(AE_{iu}, EOP_{iu}), DASen_{hu}), 0)$

When the Day-Ahead Energy schedule is to withdraw, given that $RTSen_{iu} > DASen_{hu}$, ~~either~~:

$LL_{iu} = min(max(DASen_{hu}, AE_{iu}, EOP_{iu}), RTSen_{iu}, 0)$

~~(a) if $RTSen_{iu} \geq EOP_{iu} \geq DASen_{hu}$~~

~~(1) $if\ AE_{iu} \leq EOP_{iu}, then\ LL_{iu} = min(max(DASen_{hu}, min(AE_{iu}, EOP_{iu})), RTSen_{iu}, 0)$; or~~

~~(2) $if\ AE_{iu} > EOP_{iu}, then\ LL_{iu} = min(max(DASen_{hu}, AE_{iu}, EOP_{iu}), RTSen_{iu}, 0)$~~

~~(b) otherwise~~

~~$LL_{iu} = min(max(DASen_{hu}, min(AE_{iu}, EOP_{iu})), RTSen_{iu}, 0)$~~

UL_{iu} = When the Day-Ahead Energy schedule is to inject, or the Day-Ahead Energy schedule is zero MW and the real-time Energy schedule is to inject, or Day-Ahead Energy schedule and real-time Energy schedule are both zero MW and AEiu ≥ 0 MW, given that $RTSen_{iu} \geq DASen_{hu}$, either:

(a) $if\ RTSen_{iu} \geq EOP_{iu} \geq DASen_{hu}, then\ UL_{iu} = min(RTSen_{iu}, max(AE_{iu}, EOP_{iu}))$ ~~$max\ (min\ (RTSen_{iu}, max\ (AE_{iu}, EOP_{iu})), DASen_{hu})$~~; or

(b) otherwise, then $UL_{iu} = max(RTSen_{iu}, min(AE_{iu}, EOP_{iu}))$ ~~$, DASen_{hu}$~~)

When the Day-Ahead Energy schedule is to withdraw, or the Day-Ahead Energy schedule is zero MW and the real-time Energy schedule is to withdraw or is zero MW, or Day-Ahead Energy schedule and real-time Energy schedule are both zero MW and $AE_{iu} < 0$ MW, given that $RTSen_{iu} \leq DASen_{hu}$, ~~either~~:

$$UL_{iu} = min\left(RTSen_{iu}, max\left(AE_{iu}, EOP_{iu}\right)\right)$$ ~~$min(max(AE_{iu}, EOP_{iu}), RTSen_{iu}, DASen_{iu})$~~

~~(a) if $RTSen_{iu} < EOP_{iu}$~~

~~(1) if $AE_{iu} < RTSen_{iu}$, then $UL_{iu} = min\left(RTSen_{iu}, AE_{iu}, EOP_{iu}, DASen_{iu}\right)$;~~

~~(2) if $RTSen_{iu} < AE_{iu} < EOP_{iu}$, then $UL_{iu} = min\left(max\left(RTSen_{iu}, min\left(AE_{iu}, EOP_{iu}\right)\right), DASen_{iu}\right)$; or~~

~~(3) if $AE_{iu} > EOP_{iu}$, then $UL_{iu} = min(max\left(RTSen_{iu}, AE_{iu}, EOP_{iu}\right), DASen_{iu})$;~~

~~(b) if $RTSen_{iu} \geq EOP_{iu}$~~

~~(1) if $AE_{iu} \leq EOP_{iu}$, then $UL_{iu} = min\left(RTSen_{iu}, AE_{iu}, EOP_{iu}, DASen_{iu}\right)$;~~

~~(2) if $EOP_{iu} < AE_{iu} \leq RTSen_{iu}, RTSen_{iu}$, then $UL_{iu} = min(RTSen_{iu}, max\left(AE_{iu}, EOP_{iu}\right), DASen_{iu})$; or~~

~~(3) if $AE_{iu} > RTSen_{iu}$, then $UL_{iu} = min(max\left(RTSen_{iu}, AE_{iu}, EOP_{iu}\right), DASen_{iu})$;~~

EOP_{iu} = the Economic Operating Point of Supplier *u* in interval *i* calculated without regard to ramp rates;

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

KPI_{pi} = the factor derived from the Regulation Service Performance index for Resource *u* for interval *i* as defined in Rate Schedule 3 of this Services Tariff.