

# Supplemental Transaction Customer Settlements

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**Mathangi Srinivasan Kumar**

Market Training Program Lead, Market Training,  
*New York Independent System Operator*

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# Transaction Supplemental Payments

## Settlement Name:

- A. DAM Transaction Bid Production Cost Guarantee (BPCG)
- B. Transaction Import Curtailment Supplier Guarantee
  - Bilateral Import Curtailment
  - Market Energy [LBMP] Import Curtailment

# Objectives Per Settlement Name:

- Provide Settlement Description
- Identify Settlement Eligibility
- Name Settlement Determinants
- Name Settlement Intermediates
- Explain Settlement Algorithm
- Step Through Settlement Scenario
- Perform Settlement Example
- Note Settlement Reference Material

# Transaction Supplemental Payments – DAM Bid Production Cost Guarantee (BPCG)

## Settlement Description:

- Intended to guarantee a Transaction Customer, who is importing energy into the NYCA for sale into the NYISO DAM via a Market Energy [LBMP] Import or a Bilateral Import Transaction, does not incur a net DAM loss relative to the Transaction Contract's determined Bid Production Costs

## DAM BPCG

### Settlement Eligibility

- *Transaction Customers will receive a payment for Day Ahead Market (DAM) Transaction Bid Production Cost Guarantee (BPCG) (\$) if all of the following conditions exist:*
- **The Transaction Contract is a DAM Market Energy [LBMP] Import or a Bilateral Import Transaction**
  - Source Location is a NYISO external control area proxy bus
  - Sink Location is either the NYISO market reference proxy bus or an internal NYISO load bus
  - TransCnt Transaction Category = Import
- **The transaction contract is scheduled in the NYISO DAM**
  - **Hr DAM Sched Trans: Trans (MW) > 0**
- **The sum of all hours for the given day of the given transaction contract's determined DAM Bid Production Cost (\$) exceeds its DAM Energy Revenue (\$)**
  - Day DAM Trans BPCG (\$) > 0

# Transaction Supplemental Payments

## DAM BPCG

### Settlement Determinants:

- Hr DAM TransCnt Bid : Energy [1-11] (MW)
- Hr DAM TransCnt Bid : Price [1-11] (\$/MW)
- Hr DAM LBMP Energy (MWh)
- Hr DAM TUC Energy (MWh)
- Hr DAM Energy Price: Src (\$/MWh)
- Hr DAM Loss Price: Src (\$/MWh)
- Hr DAM Cong Price: Src (\$/MWh)

# Transaction Supplemental Payments

## DAM BPCG

### Settlement Intermediates:

- Hr DAM TransCnt Cost (\$)
- Hr DAM Total LBMP Stlmnt (\$) [LBMP Trans]
- Hr DAM Imputed LBMP Revenue (\$) [Bilaterals]
- Hr DAM Trans Net Cost (\$)

### Settlement Results:

- Day DAM Trans BPCG (\$)

# Transaction Supplemental Payments

## DAM BPCG

### Settlement Algorithm:

Day DAM Trans BPCG (\$) = Max [ Sum of all hours for the given day of Hr DAM Trans Net Cost (\$), 0]

Where Hr DAM Trans Net Cost (\$) is calculated as:

Hr DAM Trans Net Cost (\$) =

{Hr DAM TransCnt Cost (\$) - Hr DAM Total LBMP Stlmnt (\$)} *[For LBMP Imports]*

OR

{Hr DAM TransCnt Cost (\$) - Hr DAM Imputed LBMP Revenue (\$)} *[For Bilateral Imports]*

And

Hr DAM TransCnt Cost (\$) =

[ {Hr DAM TransCnt Bid: Energy 1 (MW) \* Hr Dam TransCnt Bid: Price 1 (\$/MW)} +

{ [Hr DAM TransCnt Bid: Energy 2 (MW) - Hr DAM TransCnt Bid: Energy 1 (MW) ] \* Hr Dam TransCnt Bid: Price 2 (\$/MW)} +

{ [Bid Energy 3 (MW) - Bid Energy 2 (MW)] \* Bid Price 3 (\$/MW) } + .....{ [Bid Energy 11 - Bid Energy 10] \* Bid Price 11} ]

# Transaction Supplemental Payments

## DAM BPCG

### Settlement Scenario:

#### Market Energy [LBMP] Import Transaction from PJM to NYISO Ref Bus

- HB 09 Bids
  - Bid Energy\_1: 1 MW Bid Price\_1: \$36.00/MWh
  - Bid Energy\_2: 2 MW Bid Price\_2: \$36.50/MWh
  - Bid Energy\_3: 7 MW and Bid Price\_3: \$38.00/MWh
  - Bid Energy\_4: 11 MW and Bid Price\_4: \$38.50/MWh
- HB 10 Trans Cnt Cost (\$) = \$ 496.65
- HB 11 Trans Cnt Cost (\$) = \$ 508.75
- DAM Schedule 11 MWs for HB 09-11
  - HB 09: Hr DAM Total LBMP Stlmnt (\$) = \$440.11
  - HB 10: Hr DAM Total LBMP Stlmnt (\$) = \$449.49
  - HB11: Hr DAM Total LBMP Stlmnt (\$) = \$474.79

# Transaction Supplemental Payments

## DAM BPCG

### Settlement Example:

$$\text{Day DAM Trans BPCG (\$)} = (-23.61) + 47.16 + 33.96 = \mathbf{\$ 57.51}$$

Where Hr DAM Trans Net Cost (\$) is calculated as:

Hr DAM Trans Net Cost (\$) =

$$\text{HB 09 Hr DAM Trans Net Cost (\$)} = \$ 416.50 - \$ 440.11 = \mathbf{\$ -23.61}$$

$$\text{HB 10 Hr DAM Trans Net Cost (\$)} = \$ 496.65 - \$ 449.49 = \mathbf{\$ 47.16}$$

$$\text{HB 11 Hr DAM Trans Net Cost (\$)} = \$ 508.75 - \$ 474.79 = \mathbf{\$ 33.96}$$

And

Hr DAM TransCnt Cost (\$) =

$$36.00 + 36.50 + 190.00 + 154.00 = \mathbf{\$ 416.50}$$

$$\text{Bid Block 1: } 1 \text{ MW} * \$36.00/\text{MWh} = \$ 36.00$$

$$\text{Bid Block 2: } (2-1) * \$ 36.50/\text{MWh} = \$ 36.50$$

$$\text{Bid Block 3: } (7-2) * \$ 38.00/\text{MWh} = \$ 190.00$$

$$\text{Bid Block 4: } (11-7) * \$ 38.50/\text{MWh} = \$ 154.00$$

# Transaction Supplemental Payments

## DAM BPCG

### ■ Reference Material

- MST
  - Attachment C, Section 18.3
- Accounting and Billing Manual
  - Section 4.3.2
  - Appendix E
- Advisory Billing File
  - Transaction Customer Section
    - *DAM Bid Cost Guarantee*
  - Hourly Bill Code: 528
  - Daily Bill Code: 768
- DSS Corporate Report
  - Settlement Details – Transaction Customer – Day Ahead Market Bid Production Cost Guarantee

# Transaction Supplemental Payments

## Settlement Name:

- A. DAM Transaction Bid Production Cost Guarantee (BPCG)
- B. Transaction Import Curtailment Supplier Guarantee
  - Bilateral Import Curtailment
  - Market Energy Import Curtailment

# Transaction Supplemental Payments – Transaction Import Curtailment Supplier Guarantee

## Settlement Description:

- Uplift payment intended to compensate Transaction Customers (TC) when NYISO curtails a Bilateral Import or a Market Energy [LBMP] Import Transaction below their DAM schedule in real-time for system reliability.
- Payment to the Transaction Customer, when the given transaction contract is cut by NYISO for reliability reasons.
- Determined at the Real Time Dispatch (RTD) dispatch interval (~5-minute) for each Bilateral Import and Market Energy [LBMP] Import Transaction.
- The Hr Imp ECA Suppl Guar Cr Stmt\$ is > 0

# Transaction Supplemental Payments

## Trans. Import Curtailment Supplier Guarantee

### Settlement Eligibility:

*Transaction Customers will receive a payment for NYISO Import Curtailment Guarantee for Bilateral Import Transactions (\$) if all of the following conditions exist:*

- The Transaction Contract is a Real-Time Bilateral Import Transaction or a Market Energy [LBMP] Import Transaction
  - Source Location is a NYISO external control area proxy bus
  - Sink Location is either an internal NYISO load bus or the NYISO market reference bus
  - TransCnt Transaction Category = Import
  - **Import Transactions at a CTS enabled Proxy Bus are NOT Eligible for an Import Curtailment Guarantee Payment**
- The transaction contract flows in the NYISO Real-Time Energy Market below that scheduled in the Day-Ahead Market
  - **Hr RTD Sched Trans: Trans (MW) < Hr DAM Sched Trans: Trans (MW)**

# Transaction Supplemental Payments

## Trans. Import Curtailment Supplier Guarantee

### Settlement Determinants:

- Trans Cut by Desc
- RTD RT Energy Price: Src (\$/MWh)
- RTD RT Loss Price: Src (\$/MWh)
- RTD RT Cong Price: Src (\$/MWh)
- Hr DAM TransCnt Bid: Price [1-11] (\$/MWh)
- Hr DAM TransCnt Bid: Energy [1-11] (MW)
- Hr RTD Sched Trans: Trans (MW)
- Hr DAM Sched Trans: Trans (MW)
- RTD Interval Seconds

# Transaction Supplemental Payments

## Trans. Import Curtailment Supplier Guarantee

### Settlement Intermediates:

- RTD RT Total Price: Src (\$/Mwh)

### Settlement Results:

- RTD Imp ECA Suppl Guar Cr. Stlmt(\$)
- **Hr Imp ECA Suppl Guar Cr Stlmt (\$)**

Note: Hr Imp ECA Suppl Guar Cr Stlmt (\$) = Max [sum of all RTD intervals of RTD Imp ECA Suppl Guar Cr. Stlmt(\$) for the given hour, 0]

# **Transaction Supplemental Payments**

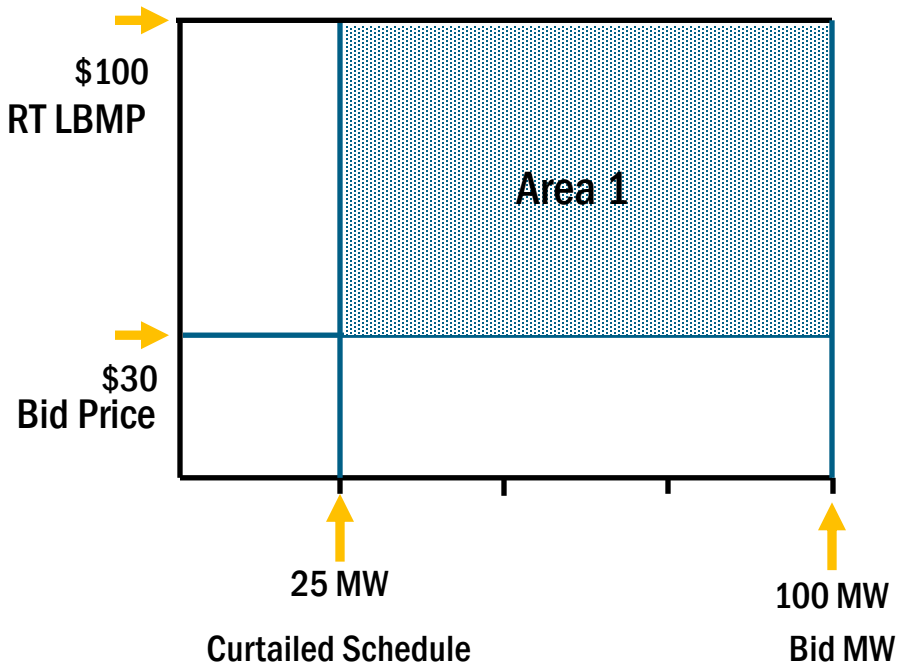
## **Trans. Import Curtailment Supplier**

### **Guarantee**

### **Settlement Algorithm:**

**Refer to examples on following slides**

# Trans. Import Curtailment Supplier Guarantee



**Example #1 - Single Bid Point**  
 DAM Schedule: 100 MWs  
 RTD Schedule : 25 MWs ( Curtailment by NYISO due to reliability)  
 RT LBMP = \$100/MWh

Bid MW	100 MW	Transaction Bid
Bid \$	\$30/MWh	

**Imp Suppl Guar Payment = Area 1**

[Area\_1 is always calculated from the point on the bid curve where the curtailment falls. In this example Area\_1 falls in the first (and only) bid block]

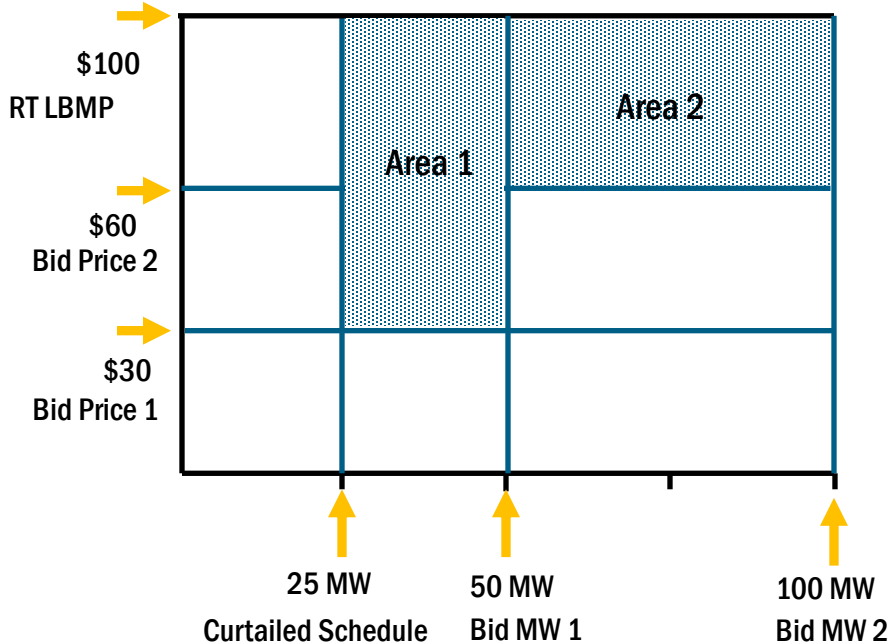
$$\text{Area}_1 = \{ \text{Hr DAM TransCnt Bid: Energy}_1 \text{ (MW)} - \text{Hr RTD Sched Trans: Trans (MW)} \} * \{ (\text{RTD RT Total Price: Src } (\$/\text{MWh}) - \text{Hr DAM TransCnt Bid: Price}_1) \} * \{ \text{RTD interval Sec}/3600 \}$$

$$= \{ 100 - 25 \} * \{ \$100 - \$30 \} * \{ 300/3600 \} = \{ 75 * 70 * .0833 \} = \$437.33$$

Imp Suppl Guar Payment = \$437.33

Note: MP was also paid for the 100 MWs (@DAM LBMP), but bought back 75 MWs (@RT LBMP)

# Trans. Import Curtailment Supplier Guarantee



## Example #2 - Multiple Bid Points

DAM Schedule: 100 MWs

RTD Schedule : 25 MWs ( Curtailment by NYISO due to reliability)

RT LBMP = \$100/MWh

Bid MW	50 MW	100 MW
Bid \$	\$30/MWh	\$60/MWh

Transaction Bid

Area\_1: Calculated from the point on the bid curve where the curtailment falls. In this example Area\_1 falls in the first bid block.

Area\_2: Next bid block following the bid block associated with the curtailment. For Areas\_2 and beyond, the applicable MWs are those for that applicable Bid Block minus the previous Bid block.

**Imp Suppl Guar Payment = Area 1 + Area 2**

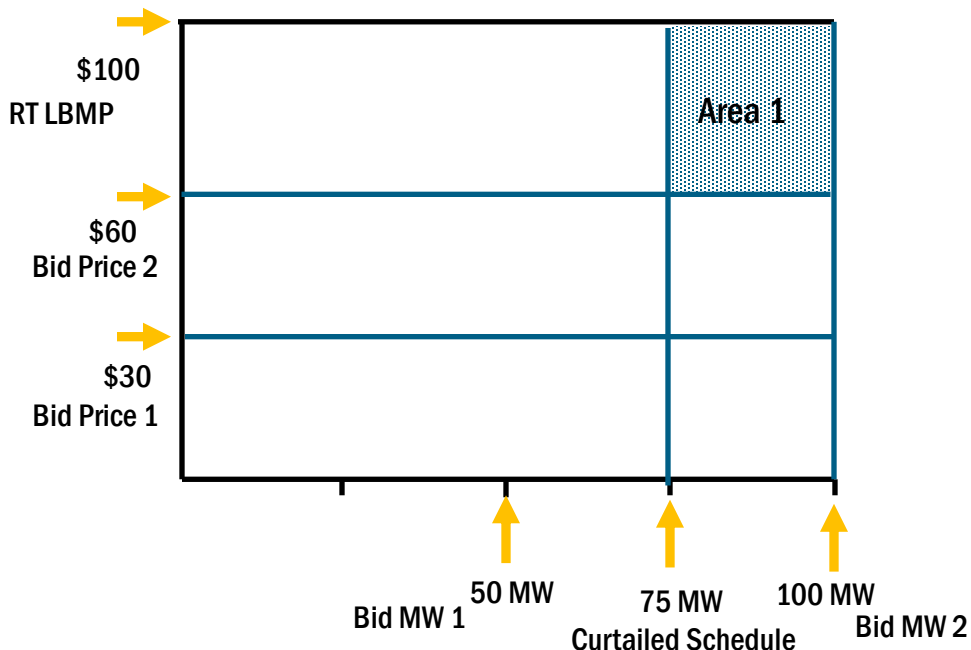
$$\begin{aligned} \text{Area}_1 &= \{ \text{Hr DAM TransCnt Bid: Energy}_1 \text{ (MW)} - \text{Hr RTD Sched Trans: Trans (MW)} \} * \{ (\text{RTD RT Total Price: Src (\$/MWh)} - \text{Hr DAM TransCnt Bid: Price}_1) * \{ \text{RTD interval Sec}/3600 \} \\ &= \{ 50 - 25 \} * \{ \$100 - \$30 \} * \{ 300/3600 \} = \{ 25 * 70 * .0833 \} = \$145.78 \end{aligned}$$

$$\begin{aligned} \text{Area}_2 &= \{ \text{Hr DAM TransCnt Bid: Energy}_2 \text{ (MW)} - \text{Hr DAM TransCnt Bid: Energy}_1 \text{ (MW)} \} * \{ (\text{RTD RT Total Price: Src (\$/MWh)} - \text{Hr DAM TransCnt Bid: Price}_2) * \{ \text{RTD interval Sec}/3600 \} \\ &= \{ 100 - 50 \} * \{ \$100 - \$60 \} * \{ 300/3600 \} = \{ 50 * 40 * .0833 \} = \$166.60 \end{aligned}$$

$$\$145.78 + \$166.60 = \$312.38 = \text{Imp Suppl Guar Payment}$$

Note: MP was also paid for the 100 MWs (@DAM LBMP), but bought back 75 MWs (@RT LBMP)

# Trans. Import Curtailment Supplier Guarantee



**Imp Suppl Guar Payment = Area 1**

**Example #2 - Multiple Bid Points**  
 DAM Schedule: 100 MWs  
 RTD Schedule : 75 MWs ( Curtailment by NYISO due to reliability)  
 RT LBMP = \$100/MWh

<b>Bid MW</b>	50 MW	100 MW
<b>Bid \$</b>	\$30/MWh	\$60/MWh

Transaction Bid

Area\_1 is always calculated from the point on the bid curve where the curtailment falls. In this example Area\_1 falls in the second bid block.

$$\text{Area}_1 = \{ \text{Hr DAM TransCnt Bid: Energy}_2 \text{ (MW)} - \text{Hr RTD Sched Trans: Trans (MW)} \} * \{ (\text{RTD RT Total Price: Src (\$/MWh)} - \text{Hr DAM TransCnt Bid: Price}_2) * \{ \text{RTD interval Sec}/3600 \} \}$$

$$= \{ 100 - 75 \} * \{ \$100 - \$60 \} * \{ 300/3600 \} = \{ 25 * \$40 * 0.0833 \} = \$83.30$$

Imp Suppl Guar Payment = \$83.30

Note: MP was also paid for the 100 MWs (@DAM LBMP), but bought back 25 MWs (@RT LBMP)

# Transaction Supplemental Payments

## Transaction Import Curtailment Supplier Guarantee

### ■ Reference Material

- MST
  - Article 4
  - Section 4.5.3.2
- Accounting and Billing Manual
  - Section 7.2.2.1
- Advisory Billing File
  - Transaction Customer Section
    - *R/T Bid Cost Guarantee [Imp ECA Suppl Guar (\$)]*
  - Hourly Bill Code: 529
  - Daily Bill Code: 769
- DSS Corporate Report
  - Currently under development