



EDRP/SCR Energy Settlement Automation Update

Presented by: Customer Settlements

January 2011

Basic Overview

- The Emergency Demand Response Program (EDRP) consists of wholesale or retail load serving entities who voluntarily reduce load when requested during an emergency event and are paid by the NYISO for the energy reduced.
- The Special Case Resource Program (SCR) consists of Demand Side Resources and Local Generators capable of being interrupted upon demand. They must reduce load during an emergency (or face penalties) and are paid for the energy reduced. In addition, the NYISO may pay them a BPCG.

Basic Overview (continued)

- The energy and BPCG payments in the EDRP/SCR program are charged to LSEs and allocated based on their load ratio share of the region indicated
 - Local events are allocated to the specific zone
 - NYISO-wide events are allocated NYISO-wide

Description of Automation

- Previously all settlements were calculated and applied to invoices with manual adjustments
- After January 19, 2011 all EDRP or SCR events and SCR tests will be settled through system generated invoices

Invoice Summary after Automation

| NYISO Market Participant Billing Summary - Invoice Date December 12, 2010 | | |
|---|----------------------|-------------------------------|
| Market Participant Name: | | Invoice Number: 1035-20101212 |
| | | |
| | Jul-10 | |
| Monthly Payments/(Charges) | Final Bill Close-out | Total |
| Power Supplier | \$0.00 | \$0.00 |
| Transmission Customer | \$100,242.26 | \$100,242.26 |
| Transmission Congestion Contract Holder | \$0.00 | \$0.00 |
| Transmission Owner | \$512.71 | \$512.71 |
| Demand Response Customer | \$3,041.84 | \$3,041.84 |
| Virtual Bidding Customer | \$0.00 | \$0.00 |
| Sub Total Payment to (Charge to) Market Participant | \$103,796.81 | \$103,796.81 |
| Adjustments - See Page 2 for details | (\$882.42) | (\$882.42) |
| Interest Payment to (Charge to) Market Participant | \$1,121.12 | \$1,121.12 |
| ICAP Payment to (Charge to) Market Participant | \$0.00 | \$0.00 |
| Working Capital Transactions | \$0.00 | \$0.00 |
| Current Invoice Payment to (Charge to) Market Participant | \$104,035.51 | \$104,035.51 |
| Balance Due on Prior Invoice(s) | \$0.00 | \$0.00 |
| Total Payment to (Charge to) Market Participant | \$104,035.51 | \$104,035.51 |

EDRP/SCR Energy Settlement Automation

Invoice Detail after Automation – Demand Response section

| Demand Response Statement - 07/01/2010 | Initial Settlement | 4 Month Settlement | Final Bill Close-out |
|---|--------------------|--------------------|----------------------|
| Billing Date | 8/6/2010 | 12/7/2010 | 12/12/2010 |
| 2012 Load Reduction | 0 | 0 | 0 |
| 2015 Load Reduction Uplift | 0 | 0 | 0 |
| 2013 Demand Response Penalty | 0 | 0 | 0 |
| 2011 Demand Response Incentive | 0 | 0 | 0 |
| 2014 Demand Reduction Load Balancing | 0 | 0 | 0 |
| 2025 EDRP Demand Reponse Reduction MWhr | | 0 | 3.03 |
| 2026 EDRP Demand Reponse Credit \$ | | 0 \$ | 1,275.03 |
| 2027 SCR Demand Reponse Reduction MWhr | | 0 | 4.26 |
| 2028 SCR Demand Reponse Credit \$ | | 0 \$ | 479.12 |
| 2029 SCR Demand Reponse Bid Cost Guarantee \$ | | 0 \$ | 1,287.69 |
| | | | \$ 1,754.15 |
| For Information Only: | | | |

EDRP/SCR Energy Settlement Automation

Invoice Detail after Automation – Ancillary Service Charges section

| | | | |
|--|------------|------------|-------------|
| Ancillary Service Charges | | | |
| 805 809 832 835 Scheduling System Control & Dispatch Service - Withdrawals - LSE & Exp Load & Whl Thru | -569917.05 | -540416.72 | -539214.29 |
| 1105 Scheduling System Control & Dispatch Service - Withdrawals - 3rd Party Station Service Load | 0 | 0 | 0 |
| 828 829 830 833 Scheduling System Control & Dispatch Service - Injections | -58505.03 | -58505.03 | -58505.03 |
| 812 NYISO-wide Uplift - LSE Load | -263295.97 | -250461.66 | -249824.27 |
| 1112 NYISO-wide Uplift - 3rd Party Station Service Load | 0 | 0 | 0 |
| 1117 3rd Party Station Service NYISO-wide Uplift Rebate | 0 | 2.8 | |
| 810 Local Reliability Related Uplift - LSE Load | -127978.38 | -125070.87 | -125070.87 |
| 1110 Local Reliability Related Uplift - 3rd Party Station Service Load | 0 | 0 | 0 |
| 1118 3rd Party Station Service Local Reliability Related Uplift Rebate | 0 | 0 | |
| 813 Residual Adjustments - LSE & Exp Load & Whl Thru | 335299.07 | 315180.57 | 313534.24 |
| 1113 Residual Adjustments - 3rd Party Station Service Load | 0 | 0 | 0 |
| 1119 3rd Party Station Service Residual Adjustments Rebate | 0 | -3.93 | |
| 814 Demand Response Program Uplift - LSE Load | -88.51 | 0 | 0 |
| 1114 Demand Response Program Uplift - 3rd Party Station Service Load | 0 | 0 | 0 |
| 1120 3rd Party Station Service Demand Response Program Uplift Rebate | 0 | 0 | |
| 836 Ramapo Par Charge - LSE & Exp Load & Whl Thru | -10223.44 | -9640.84 | -9622.3 |
| 1136 Ramapo Par Charge - 3rd Party Station Service Load | 0 | 0 | 0 |
| 1139 3rd Party Station Service Ramapo PAR Rebate | | 0.11 | |
| 837 Station 80 Charge - LSE & Exp Load & Whl Thru | -1032.51 | -973.67 | -971.79 |
| 1137 Station 80 Charge - 3rd Party Station Service Load | 0 | 0 | 0 |
| 1140 3rd Party Station Service Station 80 Rebate | | 0.01 | |
| 839 Margin Restoration (MOB) Charge \$ | 0 | 0 | 0 |
| 840 Local EDRP/SCR Demand Response Charge - LSE Load \$ | | 0 \$ | (10.30) |
| 841 NYISO-wide EDRP/SCR Demand Response Charge - LSE Load \$ | | 0 \$ | (18,585.57) |

EDRP/SCR Energy Settlement Automation

EDRP/SCR Data

- Load side resources report their reduction data to the Auxiliary Market Operations group via the Demand Response Information System (DRIS) within 75 days of the event
- This data is validated, aggregated at the organization level and then submitted to BSS for processing onto the invoice.

EDRP/SCR Energy Settlement Automation

EDRP Basics

- During EDRP events the resources are paid the greater of the LBMP or \$500 for their actual reduction for at least 2 hours, and the LBMP for at least 4
- Scenario 1: Event last 4 or more hours – resource receives the greater of LBMP or \$500 for the duration of the event
- Scenario 2: Event last more then 2 but no more than 3 hours – resource receives the greater of LBMP or \$500 for 3 hours and then just the LBMP for the forth hour
- Scenario 3: Event last 2 hours or less – resource receives the greater of LBMP or \$500 for a minimum of 2 hours and then LBMP for the additional hours needed to reach 4 hours total

EDRP Calculation

Energy Payment/hr = Settlement MWs/hour *
Max(Hourly Zonal LBMP, \$500/MWh)

Or

Energy Payment/hr = Settlement MWs/hour *
Hourly Zonal LBMP

Bill Code 2021 – Hourly

Rolls up to Bill Code 2026 – Daily

EDRP/SCR Energy Settlement Automation

SCR Basics

- During SCR events the resources are paid the LBMP for their actual reduction for at least 4 hours.
- If over all the hours of the SCR event a resources is not compensated enough to cover all their costs, they are eligible to receive an additional BPCG settlement for the hours of the event
- Resources are not eligible for BPCG during SCR tests

SCR Energy Payment Calculation

Energy Payment/hr = Settlement MWs/hour * Hourly Zonal
LBMP

Bill Code 2023 – Hourly

Rolls up to Bill Code 2028 – Daily

EDRP/SCR Energy Settlement Automation

SCR BPCG Payment Calculation

$$\text{BPCG Payment/hr} = (\text{Resource Strike Price} * \text{Settlement MWs/hour}) - \text{SCR Energy Payment/hr}$$

The results of this calculation are then summed for all hours of the day. If there is a shortfall in the energy payments versus the strike price for the day, that amount is paid to the resource.

Bill Code 2029

Energy Payment Allocation

- Events can be called for Targeted zones or be called NYISO-wide
- Energy payment allocation is based on the *hourly* load ratio share for the particular area of the event
- If more than one type of event is called on a given day, the energy payments will be allocated separately

BPCG Payment Allocation

- **BPCG payment allocation is based on the *daily* load ratio share for the particular area of the event**
- **If more than one type of event is called on a given day, the BPCG will also be allocated to the separate events**
 - **The BPCG calculations will be subtotaled based on the hours of the particular event type and allocated accordingly.**
 - **If overall BPCG is a positive amount, but one event results in a negative BPCG while the other event results in a positive BPCG, the net BPCG amount will be allocated according to the event that resulted in positive BPCG.**
 - **If overall BPCG is a negative amount, but one event results in a positive BPCG while the other results in negative BPCG, no BPCG will be allocated because no BPCG is due.**

Questions?