|  |  |
| --- | --- |
|  |  |

**MSRS Report Format Documentation**

**Regulation Market Lost Opportunity Cost Credits**

**Version 1**

Revision History

|  |  |  |
| --- | --- | --- |
| **DATE** | **Revision** | **Description** |
| 10/1/2025 | 1 | Initial Distribution |

# Report

**MSRS** Report Name: Regulation Market Lost Opportunity Cost Credits

Report short name for User Interface: Regulation Market Lost Opportunity Cost Credits

Download File Name Abbreviation: RegLOCCr

Data Granularity: Sub-hourly

Frequency: Updated daily

Range Displayed on Report: Start Date through End Date

# Supported Billing Line Items

* Regulation and Frequency Response Service Credit (2340)

# Report Content Summary

This report displays the customer account’s 5-minute Regulation Market Lost Opportunity Cost Credit for generation units and load response registrations. The credits in this report do not reflect the customer account’s share of jointly owned resources. All owners will see the full credit assigned to the resource.

# Summary of Changes and Special Logic

# Report Columns

The following columns will appear in the body of the report:

|  |  |  |  |
| --- | --- | --- | --- |
| **Online and CSV Column Name** | **XML Column Name** | **Column Number** | **Data Type** |
| Customer ID | CUSTOMER\_ID | 4000.01 | INTEGER |
| Customer Code | CUSTOMER\_SHORT | 4000.02 | VARCHAR2(6) |
| EPT Interval Ending | EPT\_INTERVAL\_ENDING | 4001.4 | VARCHAR2(40)  mm/dd/yyyy HH24:MM format  (Displays first interval of the day as hour 0 minute 05 and last interval of the day as hour 24 minute 00) |
| GMT Interval Ending | GMT\_INTERVAL\_ENDING | 4001.41 | VARCHAR2(40)  mm/dd/yyyy HH24:MM format  (Displays first interval of the day in relation to EPT interval as hour 04 minute 05 or hour 05 minute 05 (EDT/EST depending) and last interval of the day as hour 04 minute 00 of the next day or hour 05 minute 00 of the next day (EDT/EST depending)) |
| Market Resource Id | MRKT\_RESRC\_ID | 4001.16 | NUMBER(15,0) |
| Market Resource Name | MRKT\_RESRC\_NAME | 4001.17 | VARCHAR2(75) |
| Market Resource Type | MRKT\_RESRC\_TYPE | 4001.18 | VARCHAR2(10)  See possible values below |
| Resource Ownership Share | RESRC\_OWN\_SHARE | 4001.19 | NUMBER |
| PJM-Assigned Reg MW | PJM\_ASSIGNED\_REG\_MW | 2340.63 | NUMBER |
| Performance Score | PERF\_SCORE | 2340.35 | NUMBER |
| Bias Factor | BIAS\_FACTOR | 2340.2 | NUMBER |
| Hydro Spill Indicator | HYDRO\_SPILL\_INDICATOR | 4000.67 | VARCHAR2(1)  See possible values below |
| Reg Offer Price ($/MWh) | REG\_OFFER\_PRICE | 2340.21 | NUMBER |
| RT LMP Used ($/MWh) | RT\_LMP\_USED | 2340.61 | NUMBER |
| Hydro Average LMP ($/MWh) | HYDRO\_AVG\_LMP | 2340.62 | NUMBER |
| Reg Offer Amount ($) | REG\_OFFER\_AMT | 2340.22 | NUMBER |
| Ramp-In Regulation Opportunity Cost ($) | RAMP\_IN\_REG\_OPP\_COST | 2340.38 | NUMBER |
| Intra-Commitment Regulation Opportunity Cost ($) | COMMITMENT\_REG\_OPP\_COST | 2340.59 | NUMBER |
| Ramp-Out Regulation Opportunity Cost ($) | RAMP\_OUT\_REG\_OPP\_COST | 2340.4 | NUMBER |
| Regulation Opportunity Cost ($) | REG\_OPPORTUNITY\_COST | 2340.6 | NUMBER |
| Total Regulation Clearing Price Credits ($) | TOT\_REG\_RMCP\_CR | 2340.67 | NUMBER |
| Regulation Lost Opportunity Cost Credit ($) | REG\_LOC\_CREDIT | 2340.24 | NUMBER |
| Version | VERSION | 4000.07 | VARCHAR2(12) |

Market Resource Types: GEN or LOADRESP

Hydro Spill Indicator: Y or N

# CSV Report Example

See Excel file titled “Regulation Market Lost Opportunity Cost Credits CSV Format.csv”

# XML Report Example

See XML file titled “Regulation Market Lost Opportunity Cost Credits XML Format.xml”

# Supporting Calculations

Reg Offer Amount = PJM-Assigned Reg MW \* Reg Offer Price

2340.22 = 2340.63 \* 2340.21

The calculation for Regulation Opportunity Cost (2340.60) is based on the type of resource as defined below.

For Hydro generation resources:

If Hydro Spill Indicator (4000.67) = N then

     If DA MW > 0 for the hour corresponding to the 5-Minute Interval, then

Regulation Opportunity Cost = MAX ([(1-Bias Factor) \* PJM-Assigned Reg MW \* Performance Score] \* (RT LMP Used – Hydro Average LMP), 0)

2340.60 = MAX([(1 – 2340.20) \* 2340.63 \* 2340.35] \* (2340.61 – 2340.62) ,0)

Else

Regulation Opportunity Cost = MAX ([(1-Bias Factor) \* PJM-Assigned Reg MW \* Performance Score] \* (Hydro Average LMP – RT LMP Used), 0)

2340.60 = MAX([(1 – 2340.20) \* 2340.63 \* 2340.35] \* (2340.62 – 2340.61) ,0)

     Else (Hydro Spill Indicator (4000.67) = Y)

     Regulation Opportunity Cost = [(1-Bias Factor) \* PJM-Assigned Reg MW \*Performance Score] \* RT LMP Used

     2340.60 = [(1 – 2340.20) \* 2340.63 \* 2340.35] \* 2340.61

For all other generation resources:

Regulation Opportunity Cost = Intra-Commitment Regulation Opportunity Cost + Ramp-in Regulation Opportunity Cost + Ramp-Out Regulation Opportunity Cost

2340.60 = 2340.59 + 2340.38 + 2340.40

For Load Response resources:

Regulation Opportunity Cost (2340.60) = 0

If Performance Score (2340.35) < 0.25, then

Regulation Lost Opportunity Cost Credit (2340.24) = 0

Else Performance Score (2340.35) >= 0.25, then

Regulation Lost Opportunity Cost Credit = Max ((Reg Offer Amount + Regulation Opportunity Cost)/12 - Total Regulation Clearing Price Credits, 0)

2340.24 = MAX((2340.22 + 2340.60)/12 – (2340.67), 0)