MSRS Report Format Documentation

Regulation Market Lost Opportunity Cost Credits

Version 2

Revision History

DATE	REVISION	DESCRIPTION
10/1/2025	1	Initial Distribution
12/1/2026	2	Updated for Regulation Phase 2 implementation • Additional details by product type (RegUp and RegDn) • Removal of Hydro specific opportunity cost details due to creation of new Regulation Hydro Opportunity Cost Details

1 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

2 Supported Billing Line Items

- Regulation and Frequency Response Service Credit (2340)

3 Report Content Summary

This report displays the customer account's 5-minute Regulation Market Lost Opportunity Cost Credits 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.

4 Summary of Changes and Special Logic

5 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_CODE	4000.02	VARCHAR2(6)
EPT Interval Ending	EPT_INTERVAL_ENDING	4001.40	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
Market Resource Name	MRKT_RESRC_NAME	4001.17	NUMBER(8,0)
Market Resource Type	MRKT_RESRC_TYPE	4001.18	VARCHAR2(75)

Resource Ownership Share	RESRC_OWN_SHARE	4001.19	NUMBER
PJM-Assigned RegUp MW	PJM_ASSIGNED_REGUP_MW	2340.68	NUMBER
PJM-Assigned RegDn MW	PJM_ASSIGNED_REGDN_MW	2340.69	NUMBER
RegUp Performance Score	REGUP_PERF_SCORE	2340.87	NUMBER
RegDn Performance Score	REGDN_PERF_SCORE	2340.88	NUMBER
Reg Weighted Avg Performance Score	REG_WEIGHTED_AVG_PERF_SCORE	2340.89	NUMBER
RegUp Offer Price ($/MWh)	REGUP_OFFER_PRICE	2340.90	NUMBER
RegDn Offer Price ($/MWh)	REGDN_OFFER_PRICE	2340.91	NUMBER
RegUp Offer Amount ($)	REGUP_OFFER_AMT	2340.92	NUMBER
RegDn Offer Amount ($)	REGDN_OFFER_AMT	2340.93	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
Intra-Commitment Adjusted Regulation Opportunity Cost ($)	ADJ_COMMITMENT_REG_OPP_COST	2340.94	NUMBER
Ramp-Out Regulation Opportunity Cost ($)	RAMP_OUT_REG_OPP_COST	2340.40	NUMBER
Total Regulation Opportunity Cost ($)	TOTAL_REG_OPP_COST	2340.60	NUMBER
Total Regulation Pool Scheduled Clearing Price Credits ($)	TOTAL_PJM_ASSIGNED_RMCP_CR	2340.95	NUMBER
Regulation Lost Opportunity Cost Credit ($)	REG_LOC_CREDIT	2340.24	NUMBER
Version	VERSION	4000.07	VARCHAR2(12)

Market Resource Types: GEN or LOADRESP

6 CSV Report Example

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

7 XML Report Example

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

8 Supporting Calculations

RegUp Offer Amount ($) = PJM-Assigned RegUp MW * RegUp Offer Price

2340.92 = 2340.68 * 2340.90

RegDn Offer Amount ($) = PJM-Assigned RegDn MW * RegDn Offer Price

2340.93 = 2340.69 * 2340.91

Reg Weighted Avg Performance Score = [RegUp Performance Score * (PJM-Assigned RegUp MW / (PJM-Assigned RegUp MW + PJM-Assigned RegDn MW))] + [RegDn Performance Score * (PJM-Assigned RegDn MW / (PJM-Assigned RegUp MW + PJM-Assigned RegDn MW))]

2340.89 = [2340.87 * (2340.68 / (2340.68 + 2340.69))] + [2340.88 * (2340.69 / (2340.68 + 2340.69))]

If PJM-Assigned RegUp MW (2340.68) > 0 and PJM-Assigned RegDn MW (2340.69) = 0 then:

Intra-Commitment Adjusted Regulation Opportunity Cost ($) = Intra-Commitment Regulation Opportunity Cost * RegUp Performance Score

2340.94 = 2340.59 * 2340.87

Else If PJM-Assigned RegUp MW (2340.68) = 0 and PJM-Assigned RegDn MW (2340.69) > 0

Intra-Commitment Adjusted Regulation Opportunity Cost ($) = Intra-Commitment Regulation Opportunity Cost * RegDn Performance Score

2340.94 = 2340.59 * 2340.88

Else PJM-Assigned RegUp MW (2340.68) > 0 and PJM-Assigned RegDn MW (2340.69) > 0

Intra-Commitment Adjusted Regulation Opportunity Cost ($) = Intra-Commitment Regulation Opportunity Cost * Reg Weighted Avg Performance Score

2340.94 = 2340.59 * 2340.89

Total Regulation Opportunity Cost ($) = Intra-Commitment Adjusted Regulation Opportunity Cost + Ramp-in Regulation Opportunity Cost + Ramp-Out Regulation Opportunity Cost

2340.60 = 2340.94 + 2340.38 + 2340.40

For Load Response resources and Regulation-only resources:

Ramp-In Regulation Opportunity Cost (2340.38) = 0

Intra-Commitment Regulation Opportunity Cost (2340.59) = 0

Intra-Commitment Adjusted Regulation Opportunity Cost (2340.94) = 0

Ramp-Out Regulation Opportunity Cost (2340.40) = 0

Total Regulation Opportunity Cost (2340.60) = 0

If PJM-Assigned RegUp MW (2340.68) > 0 and PJM-Assigned RegDn (2340.69) = 0 and RegUp Performance Score (2340.87) < 0.25

Regulation Lost Opportunity Cost Credit (2340.24) = 0

Else If PJM-Assigned RegUp MW (2340.68) = 0 and PJM-Assigned RegDn (2340.69) > 0 and RegDn Performance Score (2340.88) < 0.25

Regulation Lost Opportunity Cost Credit (2340.24) = 0

Else If PJM-Assigned RegUp MW (2340.68) > 0 and PJM-Assigned RegDn (2340.69) > 0 and Reg Weighted Avg Performance Score (2340.89) < 0.25

Regulation Lost Opportunity Cost Credit (2340.24) = 0

Else

Regulation Lost Opportunity Cost Credit = Max { (RegUp Offer Amount + RegDn Offer Amount + Total Regulation Opportunity Cost)/12 - Total Regulation Pool Scheduled Clearing Price Credits, 0}

(2340.24) = Max { (2340.92 + 2340.93 + 2340.60) / 12 – 2340.95, 0}