Non-Performance Assessment MSRS Reports

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Market Settlements Development

Market Settlements Subcommittee

January 16th, 2020

- 7 New MSRS reports will be added to support Non-Performance Charge and Bonus Performance Credit settlements and billing
- 5 detailed reports describe and support resource performance and shortfall MW / bonus MW calculations
  - Non-Performance Assessment Resource Outage Details
  - Non-Performance Assessment Unit Performance Details
  - Non-Performance Assessment Resource Charge Details
  - Non-Performance Assessment DSR Registration Performance Details
  - Non-Performance Assessment DSR Resource Charge Details
- 1 report to describe resource billing distribution
  - Non-Performance Assessment Resource Charge Distribution Summary
- 1 report to summarize Non-Performance Charges and Bonus Performance Credits for an individual billing month
  - Non-Performance Assessment Billing Month Summary

- Detailed MSRS reports presenting resource information combine data sources from multiple PJM tools and market areas with potentially different resource ownership (e.g. capacity resource ownership, energy market ownership and outage tool ownership).

- Because of concerns in exposing market sensitive information, PJM will limit the data displayed on Non-Performance Assessment reports to data owned by the market participant.

- In cases where the data on a report belongs to different owners, only the data belonging to the account logged into MSRS will be displayed. In cases where the logged in account is not the owner of a particular data element, that field will contain a null value.

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)
Date	DATE	4000.04	DATE (MM/DD/YYYY in online and CSV formats, YYYY-MM-DD in XML format)
Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Outage Tool Submitter Customer Code	OUTAGE_TOOL_CUST_CODE	4001.42	VARCHAR2(6)
Outage Tool Unit ID	OUTAGE_TOOL_UNIT_ID	4001.40	NUMBER
Outage Tool Unit Name	OUTAGE_TOOL_UNIT_NAME	4001.41	VARCHAR2(80)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Total Owned MW	TOTAL_OWNED_MW	1667.23	NUMBER
Installed Capacity MW	INSTALLED_CAPACITY_MW	1667.24	NUMBER
Forced Outage MW	FORCED_OUTAGE_MW	1667.25	NUMBER
Planned Outage MW	PLANNED_OUTAGE_MW	1667.26	NUMBER
Installed Capacity MW not on Outage	INSTALLED_CAP_NOT_ON_OUT	1667.27	NUMBER
Installed Capacity MW not on Planned Outage	INSTALLED_CAP_NOT_ON_PLAN	1667.28	NUMBER
Total Outage Adjustment MW	TOT_OUTAGE_ADJ_MW	1667.29	NUMBER
Allocated Outage Adjustment MW	ALLOC_OUTAGE_ADJ_MW	1667.30	NUMBER
Total Planned Outage MW	TOT_PLANNED_OUTAGE_MW	1667.31	NUMBER
Allocated Planned Outage MW	ALLOC_PLANNED_OUTAGE_MW	1667.32	NUMBER
Allocated Installed Capacity MW	ALLOC_INSTALLED_CAP_MW	1667.63	NUMBER
Version	VERSION	4000.07	NUMBER

Supporting Calculations

Installed Capacity MW not on Outage = Installed Capacity MW – (Forced Outage MW + Planned Outage MW)

$$1667.27 = 1667.24 – (1667.25 + 1667.26)$$

Installed Capacity MW not on Planned Outage = Installed Capacity MW – Planned Outage MW

$$1667.28 = 1667.24 – 1667.26$$

Total Outage Adjustment MW = MAX(Total Owned MW – Installed Capacity Not on Outage , 0)

$$1667.29 = MAX(1667.23 – 1667.27, 0)$$

Allocated Outage Adjustment MW = Total Outage Adjustment MW * (Owned MW / Total Owned MW)

$$1667.30 = 1667.29 * (1667.13 / 1667.23)$$

Total Planned Outage MW = MAX(Total Owned MW – Installed Capacity not on Planned Outage , 0)

$$1667.31 = MAX(1667.23 – 1667.28 , 0)$$

Allocated Planned Outage MW = Total Planned Outage MW * (Owned MW / Total Owned MW)

$$1667.32 = 1667.31 * (1667.13 / 1667.23)$$

Allocated Installed Capacity MW = Installed Capacity MW * (Owned MW / Total Owned MW)

$$1667.63 = 1667.24 * (1667.13 / 1667.23)$$

- Columns from perspective of Outage Tool Unit Owner:

- Columns from perspective of Capacity Resource Owner:

Outage Tool Unit Owner:

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)
Date	DATE	4000.04	DATE (MM/DD/YYYY in online and CSV formats, YYYY-MM-DD in XML format)
Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Outage Tool Submitter Customer Code	OUTAGE_TOOL_CUST_CODE	4001.42	VARCHAR2(6)
Outage Tool Unit ID	OUTAGE_TOOL_UNIT_ID	4001.40	NUMBER
Outage Tool Unit Name	OUTAGE_TOOL_UNIT_NAME	4001.41	VARCHAR2(80)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Total Owned MW	TOTAL_OWNED_MW	1667.23	NUMBER
Installed Capacity MW	INSTALLED_CAPACITY_MW	1667.24	NUMBER
Forced Outage MW	FORCED_OUTAGE_MW	1667.25	NUMBER
Planned Outage MW	PLANNED_OUTAGE_MW	1667.26	NUMBER
Installed Capacity MW not on Outage	INSTALLED_CAP_NOT_ON_OUT	1667.27	NUMBER
Installed Capacity MW not on Planned Outage	INSTALLED_CAP_NOT_ON_PLAN	1667.28	NUMBER
Total Outage Adjustment MW	TOT_OUTAGE_ADJ_MW	1667.29	NUMBER
Allocated Outage Adjustment MW	ALLOC_OUTAGE_ADJ_MW	1667.30	NUMBER
Total Planned Outage MW	TOT_PLANNED_OUTAGE_MW	1667.31	NUMBER
Allocated Planned Outage MW	ALLOC_PLANNED_OUTAGE_MW	1667.32	NUMBER
Allocated Installed Capacity MW	ALLOC_INSTALLED_CAP_MW	1667.63	NUMBER
Version	VERSION	4000.07	NUMBER

Capacity Resource Owner:

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)
Date	DATE	4000.04	DATE (MM/DD/YYYY in online and CSV formats, YYYY-MM-DD in XML format)
Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Outage Tool Submitter Customer Code	OUTAGE_TOOL_CUST_CODE	4001.42	VARCHAR2(6)
Outage Tool Unit ID	OUTAGE_TOOL_UNIT_ID	4001.40	NUMBER
Outage Tool Unit Name	OUTAGE_TOOL_UNIT_NAME	4001.41	VARCHAR2(80)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Total Owned MW	TOTAL_OWNED_MW	1667.23	NUMBER
Installed Capacity MW	INSTALLED_CAPACITY_MW	1667.24	NUMBER
Forced Outage MW	FORCED_OUTAGE_MW	1667.25	NUMBER
Planned Outage MW	PLANNED_OUTAGE_MW	1667.26	NUMBER
Installed Capacity MW not on Outage	INSTALLED_CAP_NOT_ON_OUT	1667.27	NUMBER
Installed Capacity MW not on Planned Outage	INSTALLED_CAP_NOT_ON_PLAN	1667.28	NUMBER
Total Outage Adjustment MW	TOT_OUTAGE_ADJ_MW	1667.29	NUMBER
Allocated Outage Adjustment MW	ALLOC_OUTAGE_ADJ_MW	1667.30	NUMBER
Total Planned Outage MW	TOT_PLANNED_OUTAGE_MW	1667.31	NUMBER
Allocated Planned Outage MW	ALLOC_PLANNED_OUTAGE_MW	1667.32	NUMBER
Allocated Installed Capacity MW	ALLOC_INSTALLED_CAP_MW	1667.63	NUMBER
Version	VERSION	4000.07	NUMBER

Legend:
- Viewable
- Blank

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

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Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Unit ID	UNIT_ID	4000.63	NUMBER
Unit Name	UNIT_NAME	4000.64	VARCHAR2(80)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Allocated Outage Adjustment MW	ALLOC_OUTAGE_ADJ_MW	1667.30	NUMBER
Owned MW Adjusted by Outage	OWNED_MW_ADJ_BY_OUTAGE	1667.33	NUMBER
Total Owned MW Adjusted by Outage	TOT_OWNED_MW_ADJ_BY_OUTAGE	1667.34	NUMBER
RT Generation (MWh)	RT_GENERATION	3000.33	NUMBER(22,3)
Regulation Adjustment MW	REG_ADJUSTMENT_MW	1667.35	NUMBER
Synchronized Reserve Adjustment MW	SYNC_RES_ADJUSTMENT_MW	1667.36	NUMBER
Non-synchronized Reserve Adjustment MW	NON_SYNC_ADJUSTMENT_MW	1667.37	NUMBER
RT Export Adjustment MW	RT_EXPORT_ADJUSTMENT_MW	1667.39	NUMBER
Actual Performance MW	ACTUAL_PERFORMANCE_MW	1667.40	NUMBER
Allocated Actual Performance MW	ALLOCATED_ACTUAL_PERFORMANCE_MW	1667.41	NUMBER
Resource Max MW	RESOURCE_MAX_MW	1667.42	NUMBER
Allocated Resource Max MW	ALLOCATED_RESOURCE_MAX_MW	1667.43	NUMBER
Scheduled MW for Penalty	SCHEDULED_MW_PEN	1667.44	NUMBER
Allocated Scheduled MW for Penalty	ALLOCATED_SCHEDULED_MW_PEN	1667.45	NUMBER
Scheduled MW for Bonus	SCHEDULED_MW_BON	1667.46	NUMBER
Allocated Scheduled MW for Bonus	ALLOCATED_SCHEDULED_MW_BON	1667.47	NUMBER
Version	VERSION	4000.07	NUMBER

Supporting Calculations

Owned MW Adjusted by Outage = Owned MW – Allocated Outage Adjustment MW

$$1667.33 = 1667.13 - 1667.30$$

Actual Performance MW = RT Generation + Regulation Adjustment MW + Synchronized Reserve Adjustment MW + Non-synchronized Reserve Adjustment MW + RT Export Adjustment MW

$$1667.40 = 3000.33 + 1667.35 + 1667.36 + 1667.37 + 1667.39$$

Actual Performance MW Allocated = Actual Performance MW * (Owned MW Adjusted by Outage / Total Owned MW Adjusted by Outage)

$$1667.41 = 1667.40 * (1667.33 / 1667.34)$$

Allocated Resource Max MW = Resource Max MW for Penalty * (Owned MW Adjusted by Outage / Total Owned MW Adjusted by Outage)

$$1667.43 = 1667.42 * (1667.33 / 1667.34)$$

Allocated Scheduled MW for Penalty = Scheduled MW for Penalty * (Owned MW Adjusted by Outage / Total Owned MW Adjusted by Outage)

$$1667.45 = 1667.44 * (1667.33 / 1667.34)$$

Allocated Scheduled MW for Bonus = Scheduled MW for Bonus * (Owned MW Adjusted by Outage / Total Owned MW Adjusted by Outage)

$$1667.47 = 1667.46 * (1667.33 / 1667.34)$$

- Columns from perspective of Energy Market Owner:

- Columns from perspective of Capacity Resource Owner:

Energy Market Owner:

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)
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Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Unit ID	UNIT_ID	4000.63	NUMBER
Unit Name	UNIT_NAME	4000.64	VARCHAR2(80)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Allocated Outage Adjustment MW	ALLOC_OUTAGE_ADJ_MW	1667.30	NUMBER
Owned MW Adjusted by Outage	OWNED_MW_ADJ_BY_OUTAGE	1667.33	NUMBER
Total Owned MW Adjusted by Outage	TOT_OWNED_MW_ADJ_BY_OUTAGE	1667.34	NUMBER
RT Generation (MWh)	RT_GENERATION	3000.33	NUMBER(22,3)
Regulation Adjustment MW	REG_ADJUSTMENT_MW	1667.35	NUMBER
Synchronized Reserve Adjustment MW	SYNC_RES_ADJUSTMENT_MW	1667.36	NUMBER
Non-synchronized Reserve Adjustment MW	NON_SYNC_ADJUSTMENT_MW	1667.37	NUMBER
RT Export Adjustment MW	RT_EXPORT_ADJUSTMENT_MW	1667.39	NUMBER
Actual Performance MW	ACTUAL_PERFORMANCE_MW	1667.40	NUMBER
Allocated Actual Performance MW	ALLOCATED_ACTUAL_PERFORMANCE_MW	1667.41	NUMBER
Resource Max MW	RESOURCE_MAX_MW	1667.42	NUMBER
Allocated Resource Max MW	ALLOCATED_RESOURCE_MAX_MW	1667.43	NUMBER
Scheduled MW for Penalty	SCHEDULED_MW_PEN	1667.44	NUMBER
Allocated Scheduled MW for Penalty	ALLOCATED_SCHEDULED_MW_PEN	1667.45	NUMBER
Scheduled MW for Bonus	SCHEDULED_MW_BON	1667.46	NUMBER
Allocated Scheduled MW for Bonus	ALLOCATED_SCHEDULED_MW_BON	1667.47	NUMBER
Version	VERSION	4000.07	NUMBER

Capacity Resource Owner:

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Resource Max MW	RESOURCE_MAX_MW	1667.42	NUMBER
Allocated Resource Max MW	ALLOCATED_RESOURCE_MAX_MW	1667.43	NUMBER
Scheduled MW for Penalty	SCHEDULED_MW_PEN	1667.44	NUMBER
Allocated Scheduled MW for Penalty	ALLOCATED_SCHEDULED_MW_PEN	1667.45	NUMBER
Scheduled MW for Bonus	SCHEDULED_MW_BON	1667.46	NUMBER
Allocated Scheduled MW for Bonus	ALLOCATED_SCHEDULED_MW_BON	1667.47	NUMBER
Version	VERSION	4000.07	NUMBER

Viewable
Blank

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

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Customer ID	CUSTOMER_ID	4000.01	INTEGER
Customer Code	CUSTOMER_CODE	4000.02	VARCHAR2(6)
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Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Performance Assessment Area	PERFORMANCE_ASSESSMENT_AREA	1667.12	VARCHAR2(4000)
LDA Name	LDA_NAME	4000.08	VARCHAR2(100)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Balancing Ratio	BALANCING_RATIO	1667.14	NUMBER
CP Committed MW	CP_COMMITTED_MW	1667.15	NUMBER
Expected Performance MW	EXPECTED_PERFORMANCE_MW	1667.16	NUMBER
Annual Committed MW	ANNUAL_COMMITTED_MW	1667.17	NUMBER
Allocated Actual Performance MW	ALLOCATED_ACTUAL_PERFORMANCE_MW	1667.41	NUMBER
Allocated Outage Adjustment MW	ALLOCATED_OUTAGE_ADJ_MW	1667.30	NUMBER
Allocated Planned Outage MW	ALLOCATED_PLANNED_OUTAGE_MW	1667.32	NUMBER
Allocated Resource Max MW	ALLOCATED_RESOURCE_MAX_MW	1667.43	NUMBER
Allocated Scheduled MW for Penalty	ALLOCATED_SCHEDULED_MW_PEN	1667.45	NUMBER
Allocated Scheduled MW for Bonus	ALLOCATED_SCHEDULED_MW_BON	1667.47	NUMBER
Excused MW for Planned Outage	EXCUSED_MW_PLANNED_OUTAGE	1667.18	NUMBER
Excused MW for not Scheduled	EXCUSED_MW_NOT_SCHEDULED	1667.19	NUMBER
Shortfall MW	SHORTFALL_MW	1667.20	NUMBER
Non-Performance Penalty Rate ($/MW)	NON_PERF_PENALTY_RATE	1667.21	NUMBER
Initial Non-Performance Charge ($)	INITIAL_NON_PERF_CHARGE	1667.11	NUMBER
Bonus MW	BONUS_MW	1667.22	NUMBER
FRR Shortfall MW	FRR_SHORTFALL_MW	1667.80	NUMBER
FRR Bonus MW	FRR_BONUS_MW	1667.81	NUMBER
Version	VERSION	4000.07	NUMBER

Supporting Calculations

Expected Performance MW = Balancing Ratio * CP Committed MW

$$1667.17 = 1667.14 * 1667.15$$

Excused MW for Planned Outage = MAX[Expected Performance MW – MAX(MAX(Owned MW – Allocated Planned Outage MW,0) , Allocated Actual Performance MW,0) , 0]

$$1667.18 = MAX[1667.16 – MAX(MAX(1667.13 – 1667.32,0) , 1667.41,0) , 0]$$

Excused MW for not Scheduled = MAX[MIN(Allocated Resource Max MW, Expected Performance MW, (Owned MW –Allocated Outage Adjustment MW)) – MAX(Allocated Actual Performance MW, Allocated Scheduled MW for Penalty), 0]

$$1667.19 = MAX[MIN(1667.43, 1667.16, (1667.13 – 1667.30)) – MAX(1667.41, 1667.45),0]$$

Shortfall MW = Expected Performance MW – (Allocated Actual Performance MW + Excused MW for Planned Outage + Excused MW for not Scheduled)

$$1667.20 = 1667.16 – (1667.41 + 1667.18 + 1667.19)$$

Initial Non-Performance Charge = Shortfall MW * Non-Performance Penalty Rate

$$1667.11 = 1667.20 * 1667.21$$

Bonus MW = MAX[MIN(Allocated Actual Performance MW , Allocated Scheduled MW for Bonus) – (Expected Performance MW + Annual Committed MW) , 0]

$$1667.22 = MAX[MIN(1667.41 , 1667.47 – (1667.16 + 1667.17)), 0]$$

- Columns from perspective of Capacity Resource Owner:

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)
Date	DATE	4000.04	DATE (MM/DD/YYYY in online and CSV formats, YYYY-MM-DD in XML format)
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Performance Assessment Area	PERFORMANCE_ASSESSMENT_AREA	1667.12	VARCHAR2(4000)
LDA Name	LDA_NAME	4000.08	VARCHAR2(100)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Balancing Ratio	BALANCING_RATIO	1667.14	NUMBER
CP Committed MW	CP_COMMITTED_MW	1667.15	NUMBER
Expected Performance MW	EXPECTED_PERFORMANCE_MW	1667.16	NUMBER
Annual Committed MW	ANNUAL_COMMITTED_MW	1667.17	NUMBER
Allocated Actual Performance MW	ALLOCATED_ACTUAL_PERFORMANCE_MW	1667.41	NUMBER
Allocated Outage Adjustment MW	ALLOCATED_OUTAGE_ADJ_MW	1667.30	NUMBER
Allocated Planned Outage MW	ALLOCATED_PLANNED_OUTAGE_MW	1667.32	NUMBER
Allocated Resource Max MW	ALLOCATED_RESOURCE_MAX_MW	1667.43	NUMBER
Allocated Scheduled MW for Penalty	ALLOCATED_SCHEDULED_MW_PEN	1667.45	NUMBER
Allocated Scheduled MW for Bonus	ALLOCATED_SCHEDULED_MW_BON	1667.47	NUMBER
Excused MW for Planned Outage	EXCUSED_MW_PLANNED_OUTAGE	1667.18	NUMBER
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FRR Shortfall MW	FRR_SHORTFALL_MW	1667.80	NUMBER
FRR Bonus MW	FRR_BONUS_MW	1667.81	NUMBER
Version	VERSION	4000.07	NUMBER

- Potentially non-viewable columns are carried from Non-Performance Assessment Outage Details report and Non-Performance Assessment Unit Performance Details report.

- A version of this report will not be produced for the outage owner or energy market owner to the extent those owners differ from the capacity resource owner.

Viewable	
Blank	

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)
Date	DATE	4000.04	DATE (MM/DD/YYYY in online and CSV formats, YYYY-MM-DD in XML format)
Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Registration ID	REGISTRATION_ID	4000.93	NUMBER
Registration Name	REGISTRATION_NAME	4000.95	VARCHAR2(80 byte)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80 byte)
Registration Nominated ICAP MW	REG_NOM_ICAP_MW	1667.60	NUMBER
Total Resource Nominated ICAP MW	TOT_RES_NOM_ICAP_MW	1667.61	NUMBER
RT Reduction MW	RT_REDUCTION_MW	1667.62	NUMBER
Regulation Adjustment MW	REG_ADJUSTMENT_MW	1667.35	NUMBER
Synchronized Reserve Adjustment MW	SYNC_RES_ADJUSTMENT_MW	1667.36	NUMBER
Actual Performance MW	ACTUAL_PERFORMANCE_MW	1667.40	NUMBER
Version	VERSION	4000.07	NUMBER

Supporting Calculations

Actual Performance MW = RT Reduction MW + Regulation Adjustment MW + Synchronized Reserve Adjustment MW

1667.40 = 1667.62 + 1667.35 + 1667.36

Columns from perspective of Energy Market Owner:

Online and CSV Column Name	XML Column Name	Column Number	Data Type
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Customer Code	CUSTOMER_CODE	4000.02	VARCHAR2(6)
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Registration ID	REGISTRATION_ID	4000.93	NUMBER
Registration Name	REGISTRATION_NAME	4000.95	VARCHAR2(80 byte)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80 byte)
Registration Nominated ICAP MW	REG_NOM_ICAP_MW	1667.60	NUMBER
Total Resource Nominated ICAP MW	TOT_RES_NOM_ICAP_MW	1667.61	NUMBER
RT Reduction MW	RT_REDUCTION_MW	1667.62	NUMBER
Regulation Adjustment MW	REG_ADJUSTMENT_MW	1667.35	NUMBER
Synchronized Reserve Adjustment MW	SYNC_RES_ADJUSTMENT_MW	1667.36	NUMBER
Actual Performance MW	ACTUAL_PERFORMANCE_MW	1667.40	NUMBER
Version	VERSION	4000.07	NUMBER

Columns from perspective of Capacity Resource Owner:

Online and CSV Column Name	XML Column Name	Column Number	Data Type
Customer ID	CUSTOMER_ID	4000.01	INTEGER
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Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Registration ID	REGISTRATION_ID	4000.93	NUMBER
Registration Name	REGISTRATION_NAME	4000.95	VARCHAR2(80 byte)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80 byte)
Registration Nominated ICAP MW	REG_NOM_ICAP_MW	1667.60	NUMBER
Total Resource Nominated ICAP MW	TOT_RES_NOM_ICAP_MW	1667.61	NUMBER
RT Reduction MW	RT_REDUCTION_MW	1667.62	NUMBER
Regulation Adjustment MW	REG_ADJUSTMENT_MW	1667.35	NUMBER
Synchronized Reserve Adjustment MW	SYNC_RES_ADJUSTMENT_MW	1667.36	NUMBER
Actual Performance MW	ACTUAL_PERFORMANCE_MW	1667.40	NUMBER
Version	VERSION	4000.07	NUMBER

Viewable
Blank

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)
Date	DATE	4000.04	DATE (MM/DD/YYYY in online and CSV formats, YYYY-MM-DD in XML format)
Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Performance Assessment Area	PERFORMANCE_ASSESSMENT_AREA	1667.12	VARCHAR2(4000)
LDA Name	LDA_NAME	4000.08	VARCHAR2(100)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Owned MW	OWNED_MW	1667.13	NUMBER
Total Owned MW	TOT_OWNED_MW	1667.23	NUMBER
Resource Nominated ICAP MW	RES_NOM_ICAP_MW	1667.67	NUMBER
Total Resource Nominated ICAP MW	TOT_RES_NOM_ICAP_MW	1667.61	NUMBER
Capacity Performance Committed ICAP MW	CP_COMMITTED_ICAP_MW	1667.66	NUMBER
Total Allocated Actual Performance MW	TOT_ALLOC_ACTUAL_PERF_MW	1667.69	NUMBER
Allocated Actual Performance MW	ALLOCATED_ACTUAL_PERFORMANCE_MW	1667.41	NUMBER
Initial Shortfall MW	INITIAL_SHORTFALL_MW	1667.63	NUMBER
Total Portfolio Initial Shortfall MW	TOT_PORT_INIT_SHORTFALL_MW	1667.70	NUMBER
Net Performance Shortfall MW	NET_PERFORMANCE_SHORTFALL_MW	1667.64	NUMBER
Allocated Shortfall MW	ALLOCATED_SHORTFALL_MW	1667.65	NUMBER
Non-Performance Penalty Rate ($/MW)	NON_PERF_PENALTY_RATE	1667.21	NUMBER(22,2)
Initial Non-Performance Charge ($)	INITIAL_NON_PERF_CHARGE	1667.11	NUMBER(22,2)
Initial Bonus MW	INITIAL_BONUS_MW	1667.71	NUMBER
Total Portfolio Initial Bonus MW	TOT_PORT_INITIAL_BONUS_MW	1667.72	NUMBER
Allocated Bonus MW	ALLOCATED_BONUS_MW	1667.22	NUMBER
Version	VERSION	4000.07	NUMBER

Supporting Calculations

Initial Shortfall MW = Capacity Performance Committed ICAP MW – Allocated Actual Performance MW

$1667.63 = 1667.66 - 1667.41$

Net Performance Shortfall MW = Total Portfolio Initial Shortfall MW – Total Portfolio Initial Bonus MW

$1667.64 = 1667.70 - 1667.72$

Allocated Shortfall MW = MAX(Net Performance Shortfall MW , 0) * (Initial Shortfall MW / Total Portfolio Shortfall MW)

$1667.65 = MAX(1667.64, 0) * (1667.63 / 1667.70)$

Initial Non-Performance Charge = Allocated Shortfall MW * Non-Performance Penalty Rate

$1667.11 = 1667.65 * 1667.21$

Allocated Bonus MW = ABS(Net Performance Shortfall MW , 0) * (Initial Bonus MW / Total Portfolio Bonus MW)

$1667.22 = ABS(1667.64, 0) * (1667.71 / 1667.72)$

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)
Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Performance Assessment Area	PERFORMANCE_ASSESSMENT_AREA	1667.12	VARCHAR2(255)
Resource ID	RESOURCE_ID	4001.21	NUMBER
Resource Name	RESOURCE_NAME	4001.22	VARCHAR2(80)
Initial Non-Performance Charge ($)	INITIAL_NON_PERF_CH	1667.11	NUMBER(22,2)
Delivery Year Stop Loss ($)	DELIVERY_YEAR_STOP_LOSS	1667.50	NUMBER(22,2)
Adjusted Non-Performance Charge ($)	ADJUSTED_NON_PERF_CH	1667.51	NUMBER(22,2)
Accumulated Adjusted Non-Performance Charge ($)	ACCUMULATED_ADJ_NON_PERF_CH	1667.52	NUMBER(22,2)
Accumulated Resource Deficiency Charge ($)	ACCUMULATED_RES_DEF_CH	1667.53	NUMBER(22,2)
Non-Performance Charge ($)	NON_PERFORMANCE_CHARGE	1667.54	NUMBER(22,2)
Number of Billing Months Allocated	NUM_BILLING_MONTHS_ALLOC	3001.05	INTEGER
Non-Performance Monthly Charge ($)	NON_PERF_MONTHLY_CH	1667.01	NUMBER(22,2)
Version	VERSION	4000.07	NUMBER

Supporting Calculations

Adjusted Non-Performance Charge = MIN(Initial Non-Performance Charge, MAX(Delivery Year Stop Loss - Accumulated Adjusted Non-Performance Charge,0))

1667.47 = MIN(1667.11, MAX(1667.46 - 1667.48), 0)

Non-Performance Charge = MAX (Adjusted Non-Performance Charge - Accumulated Resource Deficiency Charge, 0)

1667.50 = MAX(1667.47 – 1667.49, 0)

Non-Performance Monthly Charge = Non-Performance Charge / Number of Billing Months Allocated

1667.01 = 1667.50 / 3001.05

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)
Performance Assessment Interval (EPT)	PA_INTERVAL_EPT	4001.13	Date (MM/DD/YYYY HH24)
Performance Assessment Interval (GMT)	PA_INTERVAL_GMT	4001.14	Date (MM/DD/YYYY HH24)
Billing Month	BILLING_MONTH	4000.03	Date (Mon, YYYY)
Performance Assessment Area	PERFORMANCE_ASSESSMENT_AREA	1667.12	VARCHAR2(4000)
Total Non-Performance Charge ($)	TOT_NON_PERF_CH	1667.54	NUMBER(22,2)
Non-Performance Monthly Charge ($)	NON_PERF_MONTHLY_CH	1667.01	NUMBER(22,2)
Total Elapsed Non-Performance Monthly Charge ($)	TOT_ELAPSE_NON_PERF_CH	1667.55	NUMBER(22,2)
Total Bonus Performance MW	TOT_BONUS_PERFORMANCE_MW	2667.11	NUMBER
Total PJM Bonus Performance MW	TOT_PJM_BONUS_PERFORMANCE_MW	2667.12	NUMBER
Total PJM Non-Performance Monthly Charge ($)	TOT_PJM_NON_PERF_MONTHLY_CH	2667.13	NUMBER(22,2)
Total Available Bonus Performance Credits ($)	TOT_AVAIL_BONUS_PERF_CR	2667.14	NUMBER(22,2)
Bonus Performance Monthly Credit ($)	BONUS_PERFORMANCE_MONTHLY_CR	2667.01	NUMBER(22,2)
Total Elapsed Bonus Performance Monthly Credit ($)	TOT_ELAPSE_BONUS_PERF_CR	2667.15	NUMBER(22,2)
Version	VERSION	4000.07	NUMBER

Supporting Calculations

Bonus Performance Monthly Credit = (Total Bonus Performance MW / Total PJM Bonus Performance MW) * Total PJM Non-Performance Monthly Charge

2667.01 = (2667.11 / 2667.12) * 2667.13