

Underperformance Risk Management Senior Task Force Charter

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- 2 separate issue charges approved by the MRC
 - Underperformance Risk Management in RPM/CP approved in December 2015
 - Address the concern that the current Capacity Performance rules may not provide adequate options to manage the risk of underperformance during Capacity Performance compliance hour(s)
 - External Capacity Performance Enhancements approved in May 2016
 - Address the operational, markets and planning challenges associated with the integration of external Capacity Performance resources in PJM
- Solutions to be implemented prior to the 2020/2021 Base Residual Auction



Underperformance Risk Management – Key Work Activities

Methods to manage underperformance risk

- Evaluate the opportunities for all Capacity Resources, including Capacity Generation Resources, Capacity Demand Resources, and FRR Resources, to manage the risk of underperformance during CP Performance Assessment Hours.
- Evaluate opportunities for individual Market Participants with resources in separate accounts and corporate families to directly offset performance shortfalls with Bonus Performance within its own portfolio utilizing both committed and uncommitted resources.
- Evaluate potential opportunities to enable valuation of capacity, shortfalls, and bonus
 performance at a market price and to facilitate bilateral cures of penalty exposure after a CP
 Compliance Hour.
- Evaluate defining or redefining Available Capacity to reflect Actual Performance above a
 resource's Expected Performance in a Performance Assessment Hour as available to cure a
 CP performance shortfall though a bilateral transaction. In the alternative, develop and
 define a new term to facilitate these transactions.



Underperformance Risk Management – Key Work Activities

Cost/Settlement impacts associated with underperformance

 Evaluate the timing associated with collection and allocation of the associated Non Performance Credits.

Impacts associated with Performance Assessment Hour events

- Evaluate the risk imposed by a CP Performance Assessment Hour being declared in a footprint that
 is smaller than/inconsistent with an LDA footprint (the smallest market area recognized by RPM).
 Review the existing tariff language governing this situation. Identify and evaluate strategies to
 mitigate this risk.
- Evaluate the difference in risk to resource owners for imposing CP Non-Performance Assessments for the current definition of Performance Assessment Hours rather than only capacity shortage events.

Metrics

- Develop a metric(s) to identify the benefits of any proposal to PJM market participants, including customers.
- Evaluate the benefits of any proposal developed under this Problem Statement using the metric(s)
 developed above.



Underperformance Risk Management - Deliverables

- Education and analysis on the ability for Capacity Resources to manage the risk of underperformance during CP Performance Assessment Hours.
- Analysis of alternatives for solutions addressing rules and requirements to manage underperformance risk during Performance Assessment Hours.
- Tariff (OATT), Reliability Assurance Agreement, and Manual 18 (Capacity Market Operations) updates to reflect any decisions taken that would modify the status quo.



Underperformance Risk Management - Deadlines

 Complete work and make recommendations to the MRC by the October 2016 MRC meeting.



External Capacity Performance Enhancements – Key Work Activities

- Provide education regarding:
 - Existing external CP resource construct; and
 - Existing internal and external resource capacity eligibility; and
 - Planning, Markets and Operations challenges and compliance requirements associated with external capacity resources; and
 - Concerns expressed by external entities.
- Determine what changes are necessary, if any, to align the requirements for internal and external capacity resources.
- Develop a detailed solution to implement any necessary changes



External Capacity Performance Enhancements – Out of Scope

- Redesign of PJM's Energy Management System (EMS)
- Relaxing current PJM Tariff or Manual Requirements, NERC Standard Requirements, and other FERC/NAESB approved reliability requirements
- Issues associated with the operation of the markets at the seam will be governed by existing Joint Operating Agreements and the Joint Reliability Coordination Agreements.
 - Therefore, any solution has to be limited to a set of requirements that PJM can unilaterally enforce.



External Capacity Performance Enhancements - Deliverables

- Education and analysis on the current challenges associated with pseudo tied External Capacity Resources.
- Analysis of alternatives for solutions addressing External Capacity Performance Enhancements that better align the requirements for internal and external capacity resources.
- Consider transition mechanism for current External Capacity Performance Resources that have already been committed.
- Tariff (OATT), Reliability Assurance Agreement, and PJM Manual updates to reflect any decisions taken that would modify the status quo.



External Capacity Performance Enhancements - Deadlines

- Complete work and make recommendations to the MRC by the September 2016 MRC meeting in order to impact the 2020/2021 Base Residual Auction to be held in May 2017.
- RPM Planning Parameters for the 2020/2021 Base Residual Auction are posted by February 1, 2017.
- Potential impacts to volume and timeline associated with planning studies required for participation in the 2020/2021 Base Residual Auction are posted by February 1, 2017.



URMSTF Work Plan – Informational Only

Underperformance Risk Management Work Plan

| April | May | June | July | August | September | Octobe | r Novembei | r December | Jan. 2017 Feb. 2017 | Mar. 2017 Apr. 2017 | May. 2017 |
|--|---------|--------------------|-------------|---------------|------------------|--------|------------|------------|---------------------|---------------------|-----------|
| C | reate | | | | | | | | | | |
| Cl | narter/ | | | Package | URMSTF Voting | MRC | | PJM | | | |
| Pi | rovide | Education/ Package | Package | narrowing and | Ortiviori voting | 1st | MRC/MC | FERC | FERC | | 2020/2021 |
| Ed | ucation | development | development | polling | | Read | Voting | Filing | Decision | | BRA |
| URMSTF Stakeholder Parent Committee and FERC Process | | | | | | | | | RPM Deadl | ines | |
| Proce | ess | | | | | | | | | | |

External Capacity Performance Enhancements Work Plan

| June | July Augu | ıst | September | | October | November | December | Jan. 2017 | Feb. 2017 | Mar. 2017 Apr. 201 | 7 May. 2017 |
|----------------------------|--------------------|-------------------|-----------|-----------------------------------|---------|----------|----------|-----------|-------------------|--------------------|-------------|
| Create | | | | | | | | | | | - |
| Charter/ | | Package Narrowing | | MRC/MC | MRC/MC | PJM FERC | | FERC | BRA Planning | | 2020/2021 |
| Provide | | and Polling | URMSTF | 1st Read | Voting | Filing | | Decision | Parameters Posted | | BRA |
| Education | Package developmer | nt | Voting | | | | | | | | |
| URMSTF Stakeholder Process | | | | Parent Committee and FERC Process | | | | | RPM Deadlines | | |

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