

Manual 14B and 14F Conforming Language FERC Order Docket No. ER21-162-000

(Market Efficiency Process Enhancement Task Force Phase 3 – Window for Capacity Drivers)

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PJM Market Simulation

Markets & Reliability Committee June 23, 2021



MEPETF Background & Endorsement Timeline

- MEPETF Phase 3 Window for Capacity Drivers:
 - Two MEPETF packages, B1 and C1, were endorsed at the MRC and MC meetings on 08/20/2020 and 09/17/2020 respectively (see details on next slide).
 - FERC Order Docket No. ER21-162-000 (issued 2020-12-18).

- Endorsement timeline:
 - Manuals 14B and 14F conforming language endorsed at 05/11/2021 PC meeting.
 - MRC 1st read at 05/26/2021 meeting.
 - Seeking MRC endorsement for Manuals 14B and 14F conforming language today.



- Package B1 Capacity Drivers Benefits:
 - Benefits determined using RPM (3 years from current) and RTEP (5 years from current) years.
 - Capacity driver proposed solutions expected in service date before June 1 of Delivery Year.

- Package C1 Window for Capacity Drivers:
 - Separate 60-days RPM Drivers Window following annual BRA.
 - RPM drivers that are also Energy drivers will be posted in the Long-Term Window.
 - Capacity drivers criteria follow existing OATT Att. DD, Section 15 language.



Manual 14B:

- 2.6 RTEP Market Efficiency Planning
 - Added Reliability Pricing Model constraints to the list of constraints that also have an economic impact.
 - Clarified the definition for the Total Annual Enhancement Benefit.
 - Added language regarding capacity benefits being determined using simulations for RPM and RTEP years.
- Attachment E: Market Efficiency Analysis Economic Benefit / Cost Ratio Threshold Test
 - Updated obsolete B/C ratio language to match the OA Schedule 6 section 1.5.7(d) language.

Manual 14F:

- Section 1: Proposal Window Overview
 - Added information regarding the window type and duration for RPM economic constraints.
- Section 8.1: Reliability Criteria Project Evaluation
 - PJM identified congestion drivers may be energy market congestion or RPM economic constraints.
 - Eligibility criteria for RPM constraints to follow OATT Att. DD, Section 15 (see Appendix B).
 - Added language regarding the expected in-service date for projects that address RPM constraints.
 - Added language regarding when PJM will consider alternative solutions.



Timeline

FERC Order Issued December 2020 PC Endorsement May

2021

June 2021











MRC Endorsement

PC 1st Read Conforming Language Manuals 14B/14F April 2021 MRC 1st Read May 2021



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Appendix A Summary of Manual Sections Implementing the Conforming Language



MRC/MC Endorsed Package B1

Changes to the capacity benefit calculation

| Design Component | Status Quo | MRC/MC Endorsed Change | Justification | Manual Section Implementing the Conforming Language | |
|---|----------------------------|--|--|--|--|
| Capacity Benefit Calculation Simulation Years | RTEP, RTEP+3 and RTEP+6 | RPM and RTEP years | Addresses topology and CETL uncertainties beyond RTEP year | Manual 14B 2.6.5 Determination and evaluation of cost / benefit of potential RTEP projects specifically targeted for economic efficiency | |
| In-Service for RPM Market | No restrictions | To be in service prior to June 1 of the Delivery Year for which the Base Residual Auction is being conducted. In the event a transmission expansion cannot be placed in service by this date, PJM will consider capacity market solutions that can be in service before RTEP year. | Ensure projects address a capacity driver by the RPM year | Manual 14F 8.2.1.2 Eligible Reliability Pricing Model (RPM) economic constraints (new section) | |

PJM is <u>not</u> proposing changes to the existing energy benefit calculation or rules governing project cost commitments Summary available <u>here</u>



MRC/MC Endorsed Package C1

Separate capacity and energy driver studies

| Design Component | Status Quo | MRC/MC Endorsed Change | Justification | Manual Section Implementing the Conforming Language |
|--|--|---|--|--|
| Cycle Type | 24-Month | 24-Month for Energy drivers 12-Month for Capacity drivers | | Manual 14F 1.1 Proposal Window Type and Duration |
| Proposal Windows Type and Duration | for Energy, Capacity and multi-criteria drivers; | 120-day biennial window for Energy drivers 60-day annual short-term window for Capacity exclusive and multi-criteria drivers, when needed | Address capacity driver | Manual 14F 1.1 Proposal Window Type and Duration |
| Window Timing | January-April of odd years | Energy: January-April of odd years Capacity: Following the annual Base Residual Auction (BRA) | Address capacity driver in time for BRA delivery year | Manual 14F 1.1 Proposal Window Type and Duration |
| Capacity Driver Criteria | Tied to Eligible Energy Congestion Drivers | Follow existing OATT Att. DD, Section 15 language | Existing procedures outline when transmission solutions are appropriate in RPM | Manual 14B 2.6 RTEP Market Efficiency Planning Manual 14F 1.1 Proposal Window Type and Duration 8.2.1 Primary Considerations |
| Window Timing and Coordination Energy Drivers and Capacity Drivers | N/A | If the same congestion drivers are identified for both Energy and RPM, then the combined benefits will be evaluated during the 24-month process. Latest available ME base case used to evaluate proposals for such multi-criteria drivers. | | Manual 14F 1.1 Proposal Window Type and Duration |



Conforming Language Summary - Manual 14B

2.6 RTEP Market Efficiency Planning

- Added Reliability Pricing Model constraints to the list of constraints that also have an economic impact.
- 2.6.5 Determination and evaluation of cost / benefit of potential RTEP projects specifically targeted for economic efficiency
 - Added clarification that the Total Annual Enhancement Benefit could consist of an energy market benefit, a Reliability Pricing Model (RPM) benefit, or both if the project addresses both energy market and RPM constraints.
- Split section 2.6.5 Determination of Market Benefits in three subsections to allow insertion of new subsection
 2.6.5.2 Determination of Reliability Pricing Model (RPM) Benefits:
 - 2.6.5.1 Determination of Energy Market Benefits (existing language).
 - 2.6.5.2 Determination of Reliability Pricing Model (RPM) Benefits (new subsection)
 Added language regarding capacity benefits being determined using simulations for RPM and RTEP years.
 - 2.6.5.3 Determination of Benefits/Cost ratio (existing language).

^{*} RPM year is defined as 3 years from current year, and RTEP year is defined as 5 years from current year.



Conforming Language Summary - Manual 14B (MEPETF clean-up)

- Attachment E: Market Efficiency Analysis Economic Benefit / Cost Ratio Threshold Test
 - Updated obsolete B/C ratio language to match the OA Schedule 6 section 1.5.7(d) language.

Conforming Language Summary - Manual 14F

Section 1: Proposal Window Overview

- 1.1 Proposal Window Type and Duration
 - Added information regarding the window type and duration for RPM economic constraints.

Section 8.1: Reliability Criteria Project Evaluation

- 8.2.1 Primary Considerations
 - Added clarification that PJM identified congestion drivers may be either energy market congestion or Reliability Pricing Model (RPM) economic constraints.
- 8.2.1.1 Eligible Energy Market Congestion Drivers
 - Added clarification that this section refers to energy market congestion drivers only.
- 8.2.1.2 Eligible Reliability Pricing Model (RPM) economic constraints (new subsection)
 - Eligibility criteria for RPM constraints to follow OATT Att. DD, Section 15 (see Appendix B).
 - Added language regarding the expected in-service date for projects that address RPM constraints.
 - Added language regarding when PJM will consider alternative solutions.
- Renumbered sections 8.2.1.3, 8.2.1.4, 8.2.1.5



Conforming Language Summary - Manual 14F (MEPETF clean-up)

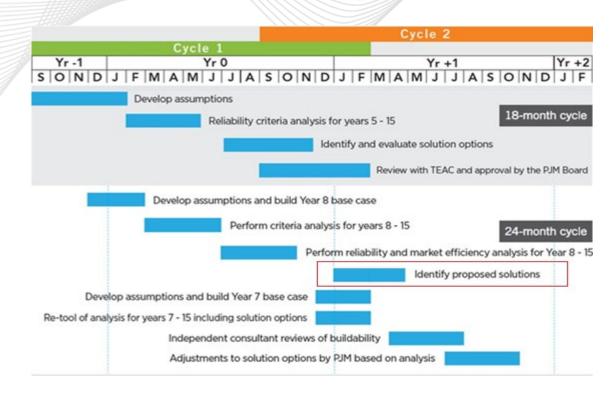
Section 1: Proposal Window Overview

- 1.1 Proposal Window Type and Duration
 - Updated Exhibit 1: 24-Month Reliability Planning Cycle to reflect the start of the long-term proposal window in January.

Section 8.1: Reliability Criteria Project Evaluation

- 8.2.1.4 Benefit/Cost (B/C) clean-up
 - Removed obsolete language conflicting with the OA:

"Consistent with Schedule 6 of the PJM Operating Agreement, a Market Efficiency proposal addressing one or more identified congestion driver must meet a B/C ratio threshold of at least 1.25:1, calculated over the first 15 years of the life of the proposal. The B/C ratio is calculated using the procedure described in Manual 14B, section 2.6.5."





Appendix B Market Efficiency Capacity Drivers Criteria (OATT, Att. DD, Section 15)



OATT, Att. DD, Section 15

Following each Base Residual Auction, the Office of the Interconnection shall review each LDA that has a Locational Price Adder to determine if Planned Generation Capacity Resources, Planned Demand Resources, or Qualifying Transmission Upgrades submitted Sell Offers that cleared in such auction. If a Locational Price Adder results from the clearing of an LDA for two consecutive Base Residual Auctions, and no such planned resources or upgrades clear in such auctions for such LDA, then the Office of the Interconnection shall evaluate in the RTEP process the costs and benefits of a transmission upgrade that would reduce to zero the Locational Price Adder for such LDA.