

Effective Date	10.1.2022
Impacted Manual #(s)/Manual Title(s):	
Manual 11: Energy & Ancillary Services Market Operations	
Conforming Order(s): Docket No. EL19-58-000 & ER19-1486-000	
EL19-58-000 Tariff Revision Concerning Reserve Price Formation ER19-1486-000 Tariff Revision Concerning Reserve Price Formation	
Associated Issue Tracking Title:	Energy Price Formation
Committee Approval Path - What committee(s) have already seen these changes?	
MIC First Read: 8.10.2022 MIC Endorsement: 9.7.2022 MRC First Read: 8.24.2022 MRC Endorsement: 9.21.2022	
MRC 1st read date:	8.24.2022
MRC voting date:	9.21.2022
Impacted Manual sections:	
Reason for change:	
Changes to support the filed changes at FERC associated with Reserve Price Formation	
Summary of the changes:	
<p>Existing Sections Merged:</p> <ul style="list-style-type: none"> • Current section 4: Overview of the PJM Synchronized Reserve Market • Current section 4b: Overview of the PJM Non-Synchronized Reserve Market • Current section 11: Overview of the Day-ahead Scheduling Reserve Market <p>New Reserve Sections:</p> <ul style="list-style-type: none"> • Section 4: PJM Reserve Markets <ul style="list-style-type: none"> ○ 4.1 Overview of the PJM Reserve Markets ○ 4.2 PJM Reserve Markets Offer Business Rules <ul style="list-style-type: none"> ▪ 4.2.1 Reserve Markets Resource Eligibility <ul style="list-style-type: none"> • 4.2.1.1 Requests for Eligibility for Nuclear, Wind, Solar Resources • 4.2.1.2 Economic Load Response Reserve Eligibility ▪ 4.2.2 Reserve Resource Offer Requirements <ul style="list-style-type: none"> • 4.2.2.1 Communication for Reserve Capability Limitation ▪ 4.2.3 Reserve Markets Resource Offer Structure ▪ 4.2.4 Offer Period Timing ▪ 4.2.5 Reserve Markets Resource Capability <ul style="list-style-type: none"> • 4.2.5.1 Reserve Markets Capability for Online Generation Resources 	

- 4.2.5.2 Reserve Markets Capability for Offline Generation Resources
- 4.2.5.3 Reserve Markets Capability for Synchronous Condensers
- 4.3 Reserve Requirement Determination
 - 4.3.1 Locational Aspect of Reserves
 - 4.3.2 Creation of New Reserve Subzones
 - 4.3.3 Reserve Demand Curves and Penalty Factors
- 4.4 Reserve Markets Clearing
 - 4.4.1 Product and Locational Substitution
 - 4.4.2 Day-Ahead Reserve Market Clearing
 - 4.4.3 Real-Time Reserve Market Clearing
 - 4.4.4 Opportunity Costs for Condensers
 - 4.4.5 Determination of Reserve Clearing Prices
- 4.5 Event Performance
 - 4.5.1 Performance Verification
 - 4.5.2 Non-Performance
- 4.6 Reserve Obligations
- 4.7 Bilateral Transactions
- 4.8 Settlements

Edits to Existing Sections

- 1 – Overview
- 1.1 – PJM Responsibilities
- 2.3.3.2 – Generation Schedules
- 2.3.7 - Mechanical/Technical Rules
- 2.7 – Locational Pricing Calculator (LPC)
- 2.8 – The Calculation of Locational Marginal Prices (LMPs) During Emergency Procedures
- 2.9 – Shortage Pricing
- 2.14 – Balancing Operating Reserve Cost Analysis
- 3.1 – Overview of the PJM Regulation Market
- 3.2.1 – Regulation Market Eligibility
- 3.2.7 – Regulation Market Clearing
- 3.2.7.5 – Total Offer
- 5.2.4 – Markets Database System
- 10.1 – Overview of Demand Resource Participation
- 10.2 – Demand Resource Registration Requirements
- 10.2.1 – Registration Combinations
- 10.2.2 – Curtailment Service Providers
- 10.4.1 – Metered Data
- 10.5 – Aggregation for Economic, Pre-Emergency and Emergency Demand Resources

Additional Changes:

- Section 2.5.3.3 - Real-time Security Constrained Economic Dispatch Methodology
 - Updated Achievable Target MW calculation
 - Updated definition of up/down ramp rate used
 - Updated diagram to reflect these changes
- Updated DA Market Ops owner from Mike Ward to Joe Ciabattoni