



# Quadrennial Review of the VRR Curve Parameters

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Market Design

Market Implementation Committee  
July 10, 2024

No later than every fourth Delivery Year the Office of the Interconnection shall perform a review of:

## 1) Shape of the Variable Resource Requirement (VRR) Curve

- Demand Curve used for the Reliability Pricing Model (RPM)
- Set of Price and MW quantities that shape the curve

## 2) Cost of New Entry (CONE) for each LDA

- Selection of the Reference Resource for each LDA to set CONE
- Reference Resource may vary by LDA

## 3) Methodology for determining the Net Energy and Ancillary Services Revenue Offset (EAS Offset)

- Calculated for the PJM region and each Zone
- EAS Offset is subtracted from the Gross CONE value to calculate Net CONE

Updated VRR Curve Parameters will be effective with the 2029/2030 Delivery Year

PJM is conducting the Quadrennial Review one year early, to be effective starting with the 2029/2030 Delivery Year

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- There is a growing need to evaluate other technologies, as a Reference Resource candidate, especially in areas of the PJM footprint where fossil fuel resources are either prohibited by law or de facto, based on permitting practices, or uneconomic due to policies encouraging clean energy resources and/or retiring fossil resources by a future date certain.
- The EAS Offset methodology may also be impacted by the need to evaluate other technologies as a Reference Resource Candidate.
- PJM shared an RFP for the scope of the Quadrennial Review, with the intent on selecting a vendor mid August.

**Quadrennial Review meetings will occur at the MIC and MIC Special Sessions.** PJM is planning on scheduling listening sessions with stakeholders to understand the Reference Resource and VRR Curve selection process.

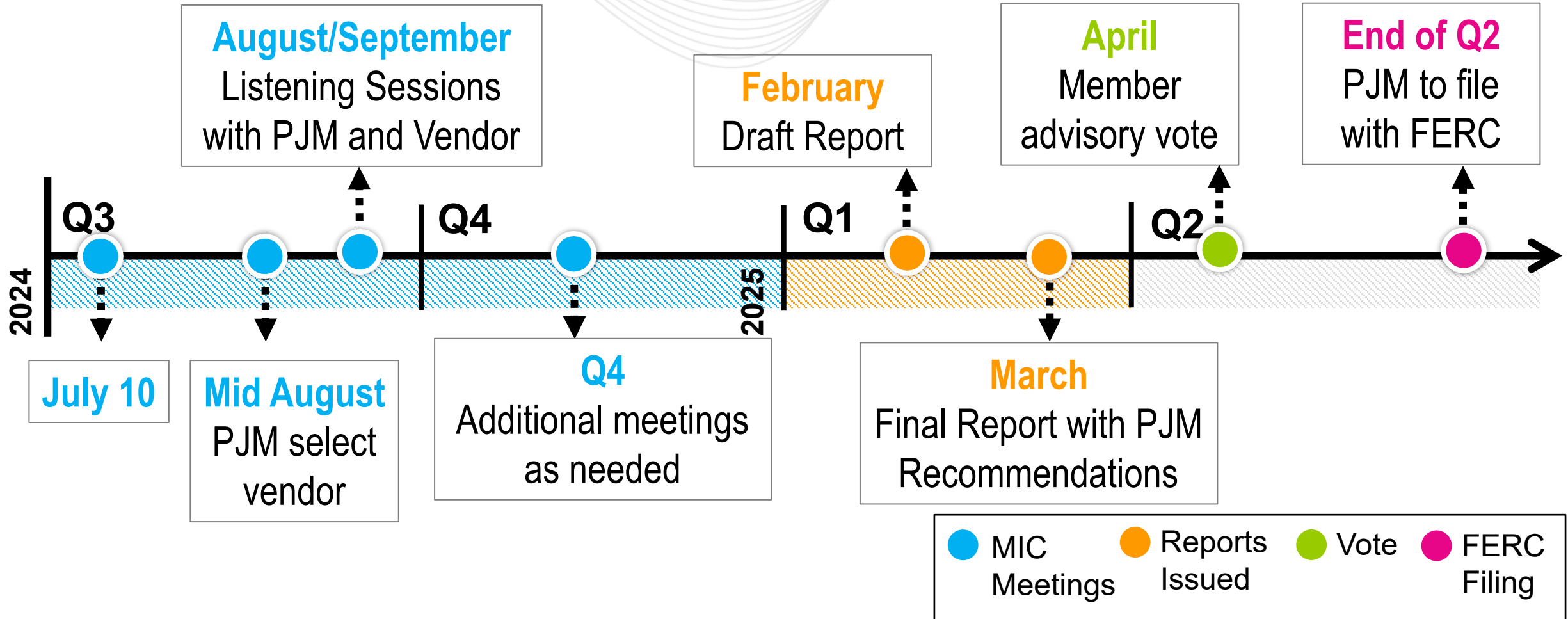
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## Stakeholder Sessions:

- **July 10 MIC:** Introduction
- **Q3 and Q4 MIC Special Session:** Listening sessions with PJM and Vendor once selected, as well as preliminary results from Vendor
- **Q1 2025:** Share draft and final reports with PJM recommendations

**Advisory vote for Quadrennial Review in April 2025**

**PJM to file with FERC at the end of Q2 2025**



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<p>This Quadrennial Review will set the VRR Curve parameters starting with the 29/30 Delivery Year</p>	<p>MIC Special Sessions will start soon for listening sessions with PJM and selected Vendor</p>	<p>The Quadrennial Review is aimed to be filed at the end of Q2, 2025</p>

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## Quadrennial Review of the VRR Curve Parameters



### Member Hotline

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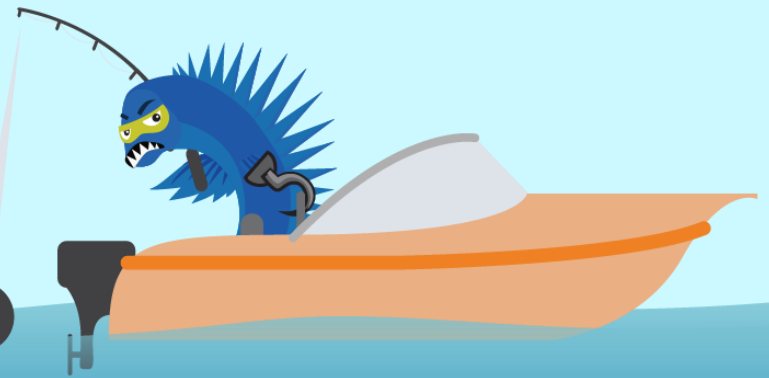
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# Appendix

## VRR Curve

Defined by three points

1)	$Price = \text{Max}(\text{Gross } CONE, 1.75 \times \text{Net } CONE)$	$UCAP \text{ MW} = RR \times 99\%$
2)	$Price = 0.75 \times \text{Net } CONE$	$UCAP \text{ MW} = RR \times 101.5\%$
3)	$Price = 0$	$UCAP \text{ MW} = RR \times 104.5\%$

## CONE

- Reference Resource is a Combined cycle generating station, configured with a double train 1x1 single shaft General Electric Frame 7HA.02
- Calculated with a levelized approach over the asset life

## EAS Offset

- Forward-looking EAS methodology using
- Public available data
  - Projected EAS Dispatch Model
  - Adding cost-based reactive service revenue