

Market Suspension

Stefan Starkov Sr. Engineer, Day-Ahead Market Operations Market Implementation Committee July 13, 2022

www.pjm.com | Public PJM©2022



Definition of Market Suspension – Approved at 6/9/2021 MIC

- Defined for suspensions <= 6* hours and > 6* hours
- For Day-Ahead: Status Quo, as currently defined in Tariff section 1.10.8(d)
- For Real-Time: Inability by Dispatch to provide Markets with Economic (Zonal) Dispatch results where at least a total of seven 5-minute intervals are missing within a market hour
 - For <= 6* hours: substitute missing hours with available DA or RT LMPs or average of adjacent hours
 - For > 6 hours: \$0/MWh LMPs and make whole to lesser of Dispatch
 MW or actual MW using cost-based offers*

*Revised proposal makes changes to these components (see slide 4)

www.pjm.com | Public 2 PJM©202



Long-term Market Suspension Proposal

- At 9/29/2021 MRC, stakeholders proposed returning to MIC to define rules for long-term suspensions
 - Compensate resources beyond their short-run marginal costs
 - Suspensions > 168 hours (7 days)*
 - New proposed market clearing mechanism

*Revised proposal makes changes to this component (see slide 4)

Revised Market Suspension Proposal

- Defined for suspensions <= 24 hours and > 24 hours
 - Remove intermediate-term suspension category
- For Day-Ahead: Status Quo, as currently defined in Tariff section 1.10.8(d)
- For Real-Time: Inability by Dispatch to provide Markets with Economic (Zonal) Dispatch results where at least a total of seven 5-minute intervals are missing within a market hour
 - For <= 24 hours: substitute missing hours with available DA or RT
 LMPs or average of adjacent hours
 - For > 24 hours: proposed long-term market clearing mechanism using aggregate supply curve



Proposed Market Clearing Mechanism (> 24 hours)

- Construct aggregate supply curve and price hourly at the intersection of supply and demand
 - Ignores constraints
 - Energy & Ancillary Services still calculated at 5-min intervals per Tariff
- Aggregate supply curve would be established from available offers (including available resources not running)
 - Use actual generation MW as proxy for demand
 - Find intersection of supply and demand
- Under existing rules, self-scheduled resources will still count towards supply stack but with \$0 price, and will not be eligible to set price
 - Resources that have been directed to not operate will not be eligible to set price

www.pjm.com | Public 5



Clarification on Determination of RT Prices

Grey Italics – Existing provisions

Black non-Italics – Approved at 6/9/2021 MIC

Green – Proposed long-term clearing mechanism

#	Design Components	<= 24 hours	> 24 hours
1	Determination of DA clearing prices during market suspension	Status Quo - Use RT	Status Quo - Use RT
2	Determination of RT clearing prices during market suspension	If DA is available, use DA If DA is unavailable, Avg. of RT preceding and subsequent hour	If DA is available, use DA If DA & RT unavailable, LMPs priced hourly based on aggregate supply curve (Energy LMP determined from supply curve, Loss LMP & Congestion LMP will be set to \$0)

www.pjm.com | Public PJM©2022



• MIC

- First Read: 6/8/2022 (solution package)
- Endorsement: 7/13/2022 (solution package)
- MRC
 - First Read: 9/21/2022 (OA revisions)
 - Endorsement: 10/24/2022 (OA revisions)
- MC
 - Approval: 10/26/2022



Facilitator:

Lisa Morelli, Lisa.Morelli@pjm.com

Secretary:

Nick DiSciullo, Nicholas.DiSciullo@pjm.com

SME/Presenter: Stefan Starkov, Stefan.Starkov@pjm.com

Market Suspension



Member Hotline

(610) 666 - 8980

(866) 400 - 8980

custsvc@pjm.com

