

AD21-10 Modernizing Wholesale Electricity Market Design – Order Directing Reports Stakeholder Feedback

PJM is seeking stakeholder feedback to the Order Directing Reports in FERC Docket No. AD21-10-000 on Modernizing Wholesale Electricity Market Design, providing the following questions as focus areas:

- 1 |** What system needs (type and magnitude) has the RTO/ISO experienced that are attributable to changes in the resource mix and customer load profiles? (FERC Q1)
 - (a) How do these system needs, including types and magnitudes of net load variability and uncertainty, vary over different time horizons in the E&AS markets? (FERC Q1)
 - (b) For example, does a particular need exist within a real-time market interval, within an operating day, between day-ahead and real-time markets, across multiple days, and between seasons? Please include any references. (FERC Q1)
 - (c) What specific resource capabilities could address these needs (e.g., dispatchable generation)? (FERC Q1)
 - (d) What time horizons, such as times of day (e.g., minutes, hours), days, or seasons, are expected to present the biggest challenges with respect to net load variability and uncertainty? Why? (FERC Q2.2)
- 2 |** Referring to the changing system needs discussed in the questions above, to what extent are current RTO/ISO E&AS market products and compensation schemes not designed to procure the resource capabilities needed to meet these expected changing system needs? To what extent are such prices and products unable to adequately compensate the resources possessing the capabilities necessary to meet these expected changing system needs? To what extent does the risk of disorderly retirements of resources with capabilities that are needed to address such needs (e.g., fast ramping dispatchable resources) increase if E&AS markets are not reformed? Why? (FERC Q4)
- 3 |** Over the next five years, and over the next 10 years, how well will existing RTO/ISO market designs adequately incentivize resource behaviors that will enable the RTO/ISO to meet its changing system needs? (FERC Q6)
- 4 |** Parties presented different views on whether the widespread use of opportunity cost-based ancillary service pricing will continue to sufficiently incent and compensate resources for meeting system needs as the resource mix and system needs evolve in the future. Given the critical role RTO/ISO resources play in meeting system needs, more information on how E&AS markets will provide adequate compensation for these costs is needed. Will existing E&AS market designs create sufficient fixed cost recovery under existing pricing methods (i.e., opportunity costs, shortage pricing, etc.) for resources to make needed investments, remain in service, and continue to offer the capabilities necessary to meet changing system needs? (FERC Q6.2)
- 5 |** Will existing E&AS market designs create an efficient long-run price signal for investment in new resources with the capabilities necessary to meet changing system needs? (FERC Q6.2.1)
- 6 |** Should ancillary service products be co-optimized with energy so that the assignments and prices for ancillary services align with energy prices? (*variation of FERC Q6.4*)

- 7 |** Referring to the changing system needs discussed in question 1, are there any operational practices in PJM that should be reviewed/ altered to successfully manage changing system needs over the next five years and over the next 10 years? (FERC Q7)
- 8 |** Beyond those already asked, are there other E&AS market reforms necessary? (FERC Q8)
- 9 |** What is the capacity market's role in incentivizing resources with specific attributes vs solely procuring to meet a total reliability requirement? (FERC Q9.2)
- 10 |** Are there actions outside of the Tariff that should be considered? (FERC Q10)
 - (a) NERC standards
 - (b) Gas market
 - (c) JOAs
- 11 |** Please provide any additional comments or responses to FERC questions you believe PJM should consider.

Please provide all feedback to Rebecca.carroll@pjm.com and Dennis.hough@pjm.com by July 8, 2022