

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Essential Reliability Services and the Evolving)	
Bulk-Power System—Primary Frequency)	Docket No. RM16-6-000
Response)	
)	

ANSWER OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rule 213 of the Commission’s Rules and Regulations,¹ Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM (“Market Monitor”), submits this answer to the request for clarification or, in the alternative, request for rehearing of PJM Interconnection, L.L.C. (“PJM”), and to the motion for reconsideration on policy grounds of the AES Companies (“AES”), of Order No. 842, which issued on February 15, 2018.²

I. COMMENTS

A. The PJM Market Monitor Supports PJM’s Request for Clarification or Rehearing.

The Market Monitor supports PJM’s request for clarification or rehearing regarding the need for the provision of primary frequency response resources from existing resources that currently have the ability to provide primary frequency response, rather than just new resources, as indicated in the Commission’s Order No. 842. Clarification is also needed that

¹ 18 CFR §§ 385.213 (2017).

² See *Essential Reliability Services and the Evolving Bulk-Power System—Primary Frequency Response*, Order No. 842, 162 FERC ¶ 61,128 (2018).

the requirement to have the capability to provide primary frequency response applies uniformly to all existing resources, regardless of whether the existing resources currently have the capability to provide the service. In order to provide uniform treatment for all resources in the PJM market, the requirement to have and maintain the capability to provide primary frequency response must apply to all resources, including all new resources and all existing resources, regardless of whether the existing resources currently have the capability to provide the service. Existing and new resources should be treated consistently in terms of potential compensation and service obligations.

The Market Monitor agrees with PJM that the requirement to maintain the capability and to provide frequency response service should apply uniformly to new resources and existing resources with the ability to provide the service; that these requirements are and should continue to be considered part of the cost of doing business in the PJM market; and that the opportunity to recover all of these costs is currently provided through PJM's markets. The Market Monitor also agrees with PJM (at 4) that a uniform requirement under PJM's market construct is necessary to provide a level playing field, but the Market Monitor recommends extension of the uniform requirement to all resources in the PJM market.

The Market Monitor does not agree that existing resources that do not have the capability to provide primary frequency response service should be exempt from the requirement to have the capability to provide the service, to maintain that capability once added and to provide the service going forward. In order to provide consistent treatment for all resources in the PJM market, the requirement to have the capability must apply to all existing resources, regardless of whether the existing resource currently has the capability to provide the service.

It should be clarified that the determination (at P 137) "that requiring existing generating facilities that have not submitted a new interconnection request to install and operate governors or equivalent controls would be overly expensive and unnecessarily burdensome" does not apply to RTOs with markets that support and depend on the economic viability of merchant generation. More specifically, clarification is needed that

PJM's current market construct provides the opportunity for old and new resources to recover the costs of installing and maintaining the capability to provide the service. PJM market prices in the energy and capacity markets currently reflect the costs of providing frequency response service.

PJM's capacity market provides an opportunity for the owners of new and existing resources to receive compensation for the costs of frequency response related equipment. PJM's capacity market treats frequency related equipment costs just like all other elements of capital costs for a generator. The CONE unit, which affects the shape and location of the capacity market demand curve, includes the costs of frequency response related equipment. Prices in the capacity market therefore reflect the costs of the capability to provide primary frequency response service. The price in the capacity market is paid to all cleared resources, regardless of whether they are existing or new. Exempting any existing resources from the obligation to provide the service would provide an unfair market advantage to those resources compared to new entrants and existing resources that are required to add and/or maintain the capability.

PJM's energy market provides an opportunity for the owners of new and existing resources to receive compensation for the incremental costs of frequency response. Any heat loss related costs of providing and/or being capable of providing primary frequency response is reflected in resource heat rate curves and therefore in the associated energy offers. Prices in the energy market therefore reflect the incremental costs of providing primary frequency response.

B. Technology Specific Compensation Is Not Warranted.

The Commission correctly determined that it is not necessary to define a new and specific payment stream for the provision of primary frequency response, and the provision of primary frequency response by resources is a compensated cost of doing business in PJM. Such determination contradicts assertions of AES that the provision of primary frequency response requires direct and specific compensation and that any such direct

compensation mechanism should favor storage technology over other existing and potential sources of the service.

AES argues (at 1–2) that historically primary frequency response has been provided by resources that provide and are paid to provide other services. AES argues (at 2) that due to these other sources of compensation “there was no reason to separately compensate resources with specialized equipment designed specifically to provide PFR.” AES argues (*id.*) that the development of new technologies that can only provide PFR and no other services now necessitates compensation for PFR specifically. AES states (at 3), “that while a schedule-based mechanism might make sense in some regions, ‘[a] market-based incentive should be offered within RTOs where the predominant business model is merchant generation.’” AES then argues (at 4) that any resulting compensation mechanism should recognize the speed advantage of batteries and compensate batteries for the benefits provided by their significantly faster response times.

AES’s assertion that a specific compensation mechanism is warranted for primary frequency response, or that such an approach is practical given the nature of primary frequency response, is incorrect. Existing market mechanisms in markets such as PJM’s, which support merchant generation, already provide the opportunity for existing and new resources to recover the costs associated with providing the service. Market prices in PJM, in both energy and capacity, currently reflect the costs of providing this service. There is no evidence to support the claim that the service is being provided inefficiently or at inadequate levels in PJM. What has been missing is a clear requirement for existing and new resources to provide the service.

Further, no evidence supports AES’s assertion that batteries can provide primary frequency response more efficiently than other technologies. AES’s own statements run counter to this claim. AES indicates that in order for batteries to be economically viable, batteries need extra compensation, over and above that which would be provided to traditional sources of primary frequency response.

A universal requirement to provide frequency control would create an incentive for resource owners to use the most cost effective technology to comply with the requirements. If batteries are the least cost technology, unit owners would replace frequency control equipment with batteries.

II. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to these comments as the Commission resolves the issues raised in this proceeding.

Respectfully submitted,



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Dated: April 2, 2018

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 2nd day of April, 2018.



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