

164 FERC ¶ 61,135
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Kevin J. McIntyre, Chairman;
Cheryl A. LaFleur, Neil Chatterjee,
and Richard Glick.

Essential Reliability Services and the Evolving
Bulk-Power System—Primary Frequency Response

Docket No. RM16-6-001

ORDER ON CLARIFICATION AND REHEARING

(Issued August 24, 2018)

1. On February 15, 2018, the Commission issued Order No. 842.¹ In this order, we address the requests for rehearing and/or clarification of Order No. 842 filed by PJM Interconnection L.L.C. (PJM), Arizona Public Service Company (APS) and AES Companies (AES). For the reasons discussed below, we grant PJM's request for clarification to the extent discussed in this order, and deny APS's and AES's requests for rehearing.

I. Background

2. On February 18, 2016, the Commission issued a Notice of Inquiry (NOI) in this proceeding addressing issues regarding essential reliability services and the evolving Bulk-Power System.² In the NOI, the Commission noted the ongoing transformation of the nation's generation portfolio, leading to concerns that fewer resources may be providing primary frequency response.³ The Commission stated that "a substantial body of evidence has emerged warranting consideration of possible actions to ensure that resources capable of providing primary frequency response are adequately maintained as

¹ *Essential Reliability Services and the Evolving Bulk-Power System—Primary Frequency Response*, Order No. 482, 162 FERC ¶ 61,128 (2018).

² *Essential Reliability Services and the Evolving Bulk-Power System—Primary Frequency Response*, FERC Stats. & Regs. ¶ 35,576 (2016) (NOI).

³ *Id.* PP 8-20 (discussing the nation's evolving generation resource mix).

the nation's resource mix continues to evolve.”⁴ On November 17, 2016, the Commission issued a Notice of Proposed Rulemaking (NOPR) that proposed to revise the *pro forma* Large Generator Interconnection Agreement (LGIA) and the *pro forma* Small Generator Interconnection Agreement (SGIA) to require all newly interconnecting generating facilities, both synchronous and non-synchronous, to install and enable primary frequency response capability as a condition of interconnection.⁵

II. Order No. 842

3. In Order No. 842, the Commission modified the *pro forma* LGIA and Large Generator Interconnection Procedures (LGIP), as well as the *pro forma* SGIA and Small Generator Interconnection Procedures (SGIP), to require newly interconnecting large and small generating facilities (synchronous and non-synchronous) to install, maintain, and operate equipment capable of providing primary frequency response as a condition of interconnection.⁶ The Commission also established certain uniform minimum operating requirements in the *pro forma* LGIA and *pro forma* SGIA, including maximum droop and deadband parameters and provisions for timely and sustained frequency response.⁷

4. Regarding the applicability of the new requirements, the Commission stated that the requirements apply to newly interconnecting large and small generating facilities that execute or request the unexecuted filing of a LGIA or SGIA on or after the effective date of Order No. 842 as well as all existing large and small generating facilities that take any action that requires the submission of a new interconnection request that results in the filing of an executed or unexecuted interconnection agreement on or after the effective date of Order No. 842.⁸ The Commission did not require changes to existing interconnection agreements that were executed, or filed unexecuted, prior to the effective date of Order No. 842.

⁴ *Id.* P 14.

⁵ *Essential Reliability Services and the Evolving Bulk-Power System—Primary Frequency Response*, Notice of Proposed Rulemaking, 157 FERC ¶ 61,122 (2016) (NOPR).

⁶ Order No. 842, 162 FERC ¶ 61,128 at PP 33-39.

⁷ *Id.* PP 56-66; 94-105.

⁸ *Id.* P 252.

5. The Commission declined to mandate compensation for primary frequency response service in Order No. 842.⁹ The Commission rejected commenter assertions challenging requirements for the provision of primary frequency response without compensation as being misplaced.¹⁰ The Commission explained that while it was requiring newly interconnecting generating facilities to install equipment capable of providing frequency response and adhere to specified operating requirements, it was not mandating headroom, which is a necessary component for the provision of primary frequency response service.¹¹ In addition, the Commission stated that, on balance, the record indicated that the cost of installing, maintaining, and operating a governor or equivalent controls is minimal, and that it agreed with those commenters who observed that minimal reliability-related costs such as those incurred to provide primary frequency response, are reasonably considered to be part of the general cost of doing business, and are not specifically compensated.¹²

III. Requests for Clarification and Rehearing

A. PJM

6. PJM states that it has initiated a stakeholder process to develop and submit filings pursuant to section 205 of the Federal Power Act (FPA) to include in its tariffs primary frequency response requirements that are based on similar requirements currently in its business practice manuals.¹³ However, PJM asserts that since the issuance of Order No. 842, some generating facility owners participating in the stakeholder process now question PJM's authority to require existing generating facilities to provide primary frequency response or, at a minimum, to require primary frequency response without compensation, citing Order No. 842.¹⁴

7. In particular, PJM states that certain phrases in Order No. 842 could be interpreted to support the propositions that: (1) primary frequency response from existing generating facilities is not necessary or required; (2) existing generating facilities providing primary

⁹ *Id.* PP 119-126.

¹⁰ *Id.* P 120.

¹¹ *Id.*

¹² *Id.* P 121.

¹³ PJM Request for Clarification or, in the Alternative, Request for Rehearing at 2.

¹⁴ *Id.*

frequency response must be compensated notwithstanding the Rule's finding of no compensation needed; or (3) Order No. 842 prohibits transmission providers from requiring—through either existing tariff provisions, manual provisions, or through a future FPA section 205 filing—existing generating facilities with equipment capable of providing primary frequency response from providing primary frequency response without compensation, notwithstanding that no similar requirement exists for compensation to new generating facilities.¹⁵

8. Therefore, PJM requests clarification of the Commission's decision to exclude existing generating facilities from the primary frequency response requirements adopted in Order No. 842. In particular, PJM asks the Commission to affirm that Order No. 842 was not intended to establish a "blanket prohibition" for transmission providers from imposing primary frequency response service obligations on existing generating facilities when justified due to regional transmission organization (RTO) or independent system operator (ISO) requirements or specific identified regional needs.¹⁶

9. PJM requests clarification of the following points: (1) Order No. 842 does not excuse a generating facility from any requirement that it may have as a condition of an existing interconnection agreement or any other RTO or ISO requirement to provide primary frequency response; (2) Order No. 842 does not render unjust and unreasonable any existing RTO or ISO rates or rules requiring that existing generating facilities provide primary frequency response; (3) transmission providers may seek Commission approval of primary frequency response requirements, including the requirements mandated by Order No. 842, applicable to existing generators; (4) the Commission's concerns related to primary frequency response are addressed not only by the requirements in Order No. 842, which only apply to newly interconnecting generating facilities, but also by each transmission provider's and balancing authority's currently-effective frequency response requirements that apply to existing generators and any future primary frequency response requirements proposed under section 205 of the FPA; and (5) nothing in Order No. 842 mandates compensation to existing generating facilities that are capable of providing primary frequency response.

10. PJM asserts that Order No. 842 should not be read as relieving generating facilities from satisfying requirements included in existing interconnection agreements or any other existing RTO/ISO primary frequency response requirements.¹⁷ To do so, or to uphold other similarly restrictive interpretations advanced by certain PJM stakeholders,

¹⁵ *Id.* at 2-3 (citing Order No. 842, 162 FERC ¶ 61,128 at P 143).

¹⁶ *Id.* at 1.

¹⁷ *Id.* at 2.

would be “untenable” according to PJM, and force transmission providers and balancing authorities to rely on only new or future interconnecting generating facilities for primary frequency response.¹⁸ Such an outcome, PJM suggests, would defeat the purpose of Order No. 842.¹⁹

11. Should the Commission deny its clarification requests, PJM requests that the Commission grant rehearing and issue an order finding that: (1) primary frequency response from existing generating facilities is needed to maintain Bulk-Power System reliability; and (2) the primary frequency response requirements in Order No. 842 apply to all existing generating facilities with governors or equivalent controls capable of providing primary frequency response.²⁰

B. APS

12. APS argues that the requirement to submit compliance filings within 70 days after the effective date of Order No. 842 does not appear to consider the time that would be needed by Transmission Providers to develop, vet, and file proposals for regional flexibility.²¹ APS contends that Transmission Providers considering regional variations as allowed by Order No. 842 may need to engage in stakeholder processes, coordinate with impacted utilities, many have obligations with respect to their generator interconnection procedures, and may need to modify more portions of their Open Access transmission Tariff (OATT) than contemplated by Order No. 842. For these reasons, APS requests rehearing of the 70 day time frame for compliance filings and requests that the Commission allow 120 days after the effective date of Order No. 842 for the submission of compliance filings.²²

13. APS raises concerns with the timing of the applicability of Order No. 842. Specifically, APS asserts that an interconnection request received prior to the effective date of Order No. 842 may have been designed, studied, and premised (including from a financing perspective) on the assumption that such generator would not be required to install the technology and/or controls required by Order No. 842²³ Moreover, APS

¹⁸ *Id.* at 4.

¹⁹ *Id.*

²⁰ *Id.* at 5.

²¹ APS Request for Rehearing at 4.

²² *Id.* at 5.

²³ *Id.* at 5-6.

asserts that the interconnection agreement could have been tendered just before or even just after the effective date of Order No. 842, resulting in an inconsistency between the original, studied design of the generator and the generator owner's obligations under Order No. 842.²⁴ In APS's view, "[s]uch inconsistency could be extremely problematic and costly for interconnection customers who were unaware of, or did not factor, additional controls and requirements into their project design or business planning."²⁵

14. Further, APS observes that the Commission's acceptance of transmission provider OATT revisions in their compliance filings will not occur until after the effective date of Order No. 842.²⁶ APS asserts that the time lag between the effective date of Order No. 842 and the approval of transmission provider OATT provisions could create "inconsistency and uncertainty where regional or other variations are requested."²⁷ In particular, APS argues, interconnection requests made prior to the effective date may contain financing and project design assumptions and details that do not reflect the new technology and primary frequency response service obligations in Order No. 842. Therefore, APS requests that Order No. 842 be modified to apply only to those projects where the interconnection request was received after the Commission has accepted a transmission provider's proposed OATT revisions.²⁸

C. AES

15. AES requests that the Commission reconsider on policy grounds its decision in Order No. 842 not to mandate compensation for resources providing primary frequency response. AES asserts that the absence of compensation mechanisms for primary frequency response "is directly preventing the wide-scale deployment of the very technology that could arrest the aggregate decline in system-wide primary frequency response most efficiently—lithium ion batteries."²⁹ AES states that the reference in Order No. 842 to an individual company's right to seek compensation under section 205

²⁴ *Id.*

²⁵ *Id.* at 6.

²⁶ *Id.* at 2, 6.

²⁷ *Id.* at 2.

²⁸ *Id.* at 6.

²⁹ AES Request for Rehearing at 6.

of the FPA “is of little consolation to companies currently trying to plan investments on a nation-wide basis.”³⁰

IV. Discussion

A. Procedural Matters

16. Rule 713(d)(1) of the Commission’s Rules of Practice and Procedure, 18 C.F.R. § 385.713(d)(1) (2017), prohibits answers to requests for rehearing. Accordingly, we will not accept the answers submitted by the Independent Market Monitor for PJM, the PJM Utilities Coalition, and the joint filing of PJM Providers Group and Electric Power Supply Association. We also will not accept PJM’s May 9, 2018 motion for expedited action.

B. Substantive Matters

17. As discussed below, we grant PJM’s request for clarification to the extent discussed in this order, and deny APS’s and AES’s requests for rehearing.

1. PJM Request for Clarification or Rehearing

18. We grant PJM’s request for clarification to the extent discussed below. We agree with PJM that interpreting Order No. 842 as creating a blanket prohibition of all primary frequency response requirements on existing generating facilities is overly broad, unreasonable, and inconsistent with the fundamental purpose of Order No. 842 to ensure adequate primary frequency response capability.³¹ In setting forth requirements for primary frequency response capability and operations, the Commission did not address and therefore did not nullify existing requirements for the provision of primary frequency response for existing generators. We find that Order No. 842 does not relieve existing generating facilities from existing requirements for primary frequency response, including requirements set forth in transmission provider tariffs or business practice manuals, including operating requirements for governors or equivalent controls and/or sustained response.

19. Order No. 842 is consistent with and supplements prior Commission actions accepting changes to transmission provider tariffs requiring interconnection customers to install or enable primary frequency response capability or establishing specified governor settings without accompanying compensation, such as the Commission’s approval of

³⁰ *Id.*

³¹ Order No. 842, 162 FERC ¶ 61,128 at P 27.

California Independent System Operator Corporation (CAISO) tariff provisions that, among other things, impose primary frequency response operating requirements on existing generators.³² For these reasons, we grant the clarification that Order No. 842 does not relieve a generating facility from any requirement that it may have as a condition of an existing interconnection agreement or any other requirement to provide primary frequency response. We also clarify that Order No. 842 does not address the justness and reasonableness of any existing RTO/ISO requirements for primary frequency response, other than to find that public utility transmission providers, including RTOs/ISOs, need to revise their OATTs to adopt Order No. 842's requirements.

20. We also find that nothing in Order No. 842 should be read as barring a transmission provider from proposing additional frequency response requirements under section 205 of the FPA. The requirements adopted in Order No. 842 were meant to work in conjunction with other Commission actions to ensure the continued availability of primary frequency response. For example, in Order No. 794, the Commission approved Reliability Standard BAL-003-1.1, requiring balancing authorities to satisfy frequency response obligations.³³ Under BAL-003-1.1, it is up to balancing authorities to take appropriate actions to satisfy their frequency response obligations. Accordingly, we grant PJM's requested clarification that transmission providers have the opportunity through a section 205 filing to propose primary frequency response requirements, including requirements for existing generating facilities.

21. PJM also requested clarification that the Commission's concerns related to primary frequency response are addressed not only by the requirements in Order No. 842, but also by each transmission provider's and balancing authority's currently-effective frequency response requirements. We clarify that the requirements set forth for newly interconnecting generating facilities would not – by themselves – address the Commission's concerns regarding frequency response. Rather, those requirements along with each transmission provider's and balancing authority's other frequency response requirements and practices will “ensure that the future generation mix will be capable of providing primary frequency response”³⁴ In Order No. 842, the Commission did not

³² See *Cal. Indep. Sys. Operator Corp.*, 156 FERC ¶ 61,182, at P 17 (2016) (accepting, among other things, CAISO's proposed changes to section 4.6.5.1 of its tariff, which provides in pertinent part that “Participating Generators with governor controls that are synchronized to the CAISO Controlled Grid must respond immediately and automatically.”); *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,097, at n.58 (2015).

³³ *Frequency Response and Frequency Bias Setting Reliability Standard*, Order No. 794, 146 FERC ¶ 61,024, at P 62 (2014).

³⁴ Order No. 842, 162 FERC ¶ 61,128 at P 57.

review or address each transmission provider's and balancing authority's frequency response requirements and we decline to do so here. Order No. 842 does not obviate the need for primary frequency response from existing generating facilities and was not intended to limit the supply of primary frequency response to only newly interconnecting generating facilities. Rather, the requirements in Order No. 842 are intended to build on primary frequency response provided by existing generating facilities.³⁵

22. Finally, with respect to compensation, we agree with PJM that nothing in Order No. 842 mandates compensation to existing generators that are capable of providing primary frequency response. In Order No. 842, the Commission specifically declined to require compensation for primary frequency response, but stated that it would consider proposals for primary frequency response compensation submitted under section 205 of the FPA.³⁶ Accordingly, we grant PJM's requested clarification that nothing in Order No. 842 mandates compensation to existing generators that are capable of providing primary frequency response.

2. APS Rehearing Request

23. We deny APS's request for rehearing. As an initial matter, we note that APS submitted its Order No. 842 compliance filing on May 15, 2018. Because APS has already submitted its compliance filing, we dismiss as moot APS's request for rehearing regarding extending the timeline for submitting compliance filings.³⁷

24. We also deny APS's rehearing request to modify the applicability criteria of Order No. 842. The requirements of Order No. 842 apply to any newly interconnecting generation facilities that execute, or request the unexecuted filing of, an LGIA or SGIA on or after the effective date of the Final Rule.³⁸ While APS suggests that subjecting

³⁵ See *id.* P 94: "We are persuaded by the reliability assessments performed by NERC confirming a general decline in primary frequency response that, unless adequately addressed, could worsen as the generation resource mix continues to evolve." See also *id.* P 27.

³⁶ Order No. 842, 162 FERC ¶ 61,128 at P 27.

³⁷ Moreover, we note that, if APS believed it needed additional time to prepare its compliance filing, it could have requested an extension of time from the Commission.

³⁸ These requirements also apply to existing large and small generating facilities that take any action that requires the submission of a new interconnection request that results in the filing of an executed or unexecuted interconnection agreement on or after the effective date of the Final Rule. Order No. 842, 162 FERC ¶ 61,128 at P 2.

projects in the later stages of the interconnection queue to the requirements of Order No. 842 could be unduly burdensome or threaten the viability of projects, APS provides no specific information that would persuade us to modify Order No. 842's applicability criteria.

25. Similarly, APS alleges that making the requirements of Order No. 842 effective before each transmission provider's compliance filing is accepted by the Commission could result in "inconsistency and uncertainty where regional or other variations are requested"; however, APS provides no specific information that would persuade us such an approach is necessary to implement the requirements of Order No. 842. Further, we note that Order Nos. 827³⁹ and 828,⁴⁰ which also involved changes to the *pro forma* LGIA and *pro forma* SGIA, did not require that the relevant changes become effective only after the transmission provider's compliance filing is accepted by the Commission; therefore, the Commission's approach in Order No. 842 was not novel. Finally, we note that neither APS nor any other commenter raised this issue in response to the NOPR, though the Commission had proposed there to align the effective date of the rule with the date that the compliance filings were due.

3. AES Rehearing Request

26. AES requests that the Commission reconsider on policy grounds its decision not to mandate compensation for resources providing primary frequency response. AES asserts that the absence of compensation mechanisms for primary frequency response "is directly preventing the wide-scale deployment of the very technology that could arrest the aggregate decline in system-wide primary frequency response most efficiently—lithium batteries."⁴¹ AES states that the reference in Order No. 842 to an individual company's right to seek compensation under section 205 of the FPA "is of little consolation to companies currently trying to plan investments on a nation-wide basis."⁴²

27. We deny AES's request for rehearing. We find that AES's request does not provide any new information not already considered by the Commission in Order No. 842. As a threshold matter, AES fails to address the Commission's findings that the

³⁹ *Reactive Power Requirements for Non-Synchronous Generation*, Order No. 827, FERC Stats. & Regs. ¶ 31,385 (2016).

⁴⁰ *Requirements for Frequency and Voltage Ride Through Capability of Small Generating Facilities*, Order No. 828, 156 FERC ¶ 61,062 (2016).

⁴¹ AES Request for Rehearing at 6.

⁴² *Id.*

costs of installing, maintaining, and operating a governor or equivalent controls in the manner required by Order No. 842 are minimal.⁴³ Moreover, AES fails to address the Commission's observations that it has previously accepted tariff changes requiring the provision of primary frequency response without compensation and that minimal reliability-related costs such as those incurred to provide frequency response are reasonably considered to be part of the general cost of doing business.⁴⁴

28. Similarly, AES provides no support for its assertion that the absence of compensation is "directly preventing the wide-spread deployment" of lithium battery technology, and will "disincentivize" investment in lithium batteries.⁴⁵ Moreover, AES fails to support its assertion that the reference in Order No. 842 of an individual company's right to seek compensation under section 205 "is of little consolation to companies currently trying to plan investments on a nation-wide basis."⁴⁶ Accordingly, AES's rehearing request is denied.

⁴³ Order No. 842, 162 FERC ¶ 61,128 at PP 120-121.

⁴⁴ *Id.* (citing *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,097 at n.58; *Cal. Indep. Sys. Operator Corp.*, 156 FERC ¶ 61,182 at PP 10-12 and 17; *New England Power Pool*, 109 FERC ¶ 61,155 (2004), *order on reh'g*, 110 FERC ¶ 61,335 (2005)). The Commission reiterated this approach in *Indianapolis Power & Light Company v. Midcontinent Indep. Sys. Operator, Inc.*, 158 FERC ¶ 61,107, at PP 36-37 (2017), *order on reh'g and compliance*, 162 FERC ¶ 61,266 (2018) (denying Indianapolis Power's request that the Commission find MISO's tariff to be unjust, unreasonable, and unduly discriminatory or preferential because it does not compensate suppliers of primary frequency response). Indianapolis Power is a member of the AES Companies.

⁴⁵ AES Request for Rehearing at 6.

⁴⁶ *Id.*

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The Commission orders:

The Commission hereby grants PJM's request for clarification to the extent addressed in this order, and denies APS's and AES's rehearing requests of Order No. 842, as discussed in the body of this order.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Document Content(s)

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