

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

Indianapolis Power & Light Co.)	
v.)	Docket No. EL17-8-000
Midcontinent Independent System Operator, Inc.)	

**MOTION TO INTERVENE AND COMMENTS OF
THE ENERGY STORAGE ASSOCIATION**

Pursuant to Sections 206(f) and 214 of the Rules of Practice and Procedure of the Federal Energy Regulatory Commission (“Commission”), the Energy Storage Association (“ESA”) hereby moves to intervene in the above-captioned proceeding and submits the following comments regarding the complaint filed on October 21, 2016 (“Complaint”), by Indianapolis Power & Light Company (“IPL”) seeking reforms to the Open Access Transmission, Energy and Operating Reserve Markets Tariff (“Tariff”) of the Midcontinent Independent System Operator, Inc. (“MISO”).

I. Motion to Intervene

ESA works on behalf of its member companies to promote the development and commercialization of competitive and reliable energy storage delivery systems for use by electricity suppliers and their customers. ESA’s membership comprises a diverse group of electric sector stakeholders, including utilities, independent power producers, manufacturers of advanced technologies -- such as batteries, flywheels, thermal energy storage, compressed air energy storage, supercapacitors, and other technologies -- component suppliers, and system integrators. ESA’s over 180 member companies have expertise in transmission-level grid operations relevant to advanced energy storage, with approximately 300 MW of electric storage deployed in RTO/ISO markets. Accordingly, ESA will be

significantly and directly affected by FERC's ruling in the above-captioned matter and it is in the public interest to allow ESA to participate as an intervenor in this docket.

Communications regarding this filing should be directed to the following persons, who should be placed on the Commission's official service list in this proceeding:

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II. Comments

a. IPL is correct that the MISO Tariff is unjust, unreasonable and unduly discriminatory for failing to compensate suppliers of primary frequency response

With an evolving makeup of generation resources there is an increasing challenge to maintain reliability, especially frequency balancing. Even MISO has acknowledged potential issues surrounding its ability to provide reliable frequency response due to an evolving generation mix, as many generating units currently do not respond effectively to PFR signals.¹

Energy storage technologies are well suited to provide critical frequency response with their rapid response times and fast ramping capabilities, at a relatively low incremental

¹ Terry Bilke. "MISO Reliability Subcommittee Frequency Response Update." Midcontinent Independent System Operator. April 2016. Available at https://www.misoenergy.org/_layouts/MISO/ECM/Redirect.aspx?ID=222008

cost. ESA agrees with IPL that it is not just and reasonable to require resources to provide frequency response, which carries with it some cost, without any compensation structure. As ESA noted in its comments to Commission in Docket No. RM16-6-000 *Essential Reliability Services and the Evolving Bulk Power System—Primary Frequency Response*, there should be a compensation mechanism for PFR.² ESA generally agrees with IPL that the concept of pay-for-performance identified in Order 755 be used in compensating resources that provide PFR, where fast and accurate performance is rewarded through appropriate compensation, in addition to response capacity.

b. IPL is correct that the limitations on current dispatch protocols and compensation methodologies for frequency regulation service is discriminatory.

ESA agrees with IPL that there are serious limitations on the current dispatch protocols and compensation methodologies of MISO for frequency regulation service for very fast and accurate resources like advanced storage. As ESA mentioned in its comments to the Commission in Docket No. AD16-20-000 *Electric Storage Participation in Regions with Organized Wholesale Electric Markets*, MISO's current Regulation dispatch protocols do not fully take advantage of the capabilities of advanced storage resources. While MISO utilizes five dispatch priority groups for Regulation, in which resources are ranked based on available ramp,³ the Regulation dispatch signal is extremely slow and subdued relative to the capabilities of advanced storage resources, as the signal was designed for thermal generation resources. Advanced storage resources can ramp much faster and can provide much more movement than the current MISO Regulation dispatch signal can provide. As a result, MISO's Regulation market does not allow the capabilities of advanced energy

² See Comments of the Energy Storage Association, submitted April 25, 2016 in Docket No. RM16-6.

³ MISO Business Practice Manual No. 002 - Energy and Operating Reserve Markets, section 8.2.4 Regulating Reserve Deployment.

storage to be offered or compensated.⁴ Thus, ESA argues that even with redress of the issues identified by IPL, MISO would continue to under-utilize and under-compensate advanced storage resources.

Creating a mechanism to capture the unique operating characteristics for technologies like lithium-ion batteries and other advanced storage technologies would allow for a dispatch signal that would operate the resource fleet in an optimal manner and allow it to provide the intended services in a most effective manner. ESA believes that many of the missing elements of an efficient and effective Regulation dispatch scheme in MISO are contained in a planned project titled “Automatic Generation Control Enhancement for Fast-Ramping Resources,”⁵ which has not been initiated since introduction in 2014, despite being the most highly ranked Market Roadmap priority by MISO stakeholders in both 2015 and 2016.⁶

c. It has been demonstrated successfully that Storage Resources should be allowed to provide products beyond frequency regulation and be paid for the value of the services offered.

ESA agrees with IPL that the Commission should find the MISO Tariff to be unjust, unreasonable, and unduly discriminatory with respect to limitations on storage resources providing a wider suite of products including Ancillary Services, Energy, Ramp, and Capacity. The MISO tariff, in its definition of a Stored Energy Resource (SER), limits participation of a storage system to regulation and explicitly removes its ability to participate in the Energy and other markets. As ESA mentioned in its comments to the Commission in

⁴ See Comments of the Energy Storage Association, submitted June 6, 2016 in Docket No. AD16-20.

⁵ See MISO Market Roadmap - Project Statuses and Fact Sheets, available at <https://www.misoenergy.org/layouts/MISO/ECM/Redirect.aspx?ID=214446>. While MISO has been considering an Automatic Generation Control Enhancement project that was developed with input from the storage industry in 2014, the enhancement has remained in the initial “planned” phase without any movement, despite clear and significant benefits of this enhancement for MISO.

⁶ See MISO Market Roadmap results [here](#) and [here](#).

Docket No. AD16-20-000 *Electric Storage Participation in Regions with Organized Wholesale Electric Markets*, the operating characteristics of a resource should determine its viability to participate in the suite of services that an ISO administers and not be subject to exclusions based on technology that limit market participation.⁷

III. Conclusion

ESA supports IPL's filing and respectfully requests that the Commission find that MISO's Tariff, as it relates to energy storage entities is unjust, unreasonable, and unduly discriminatory.

Respectfully submitted,
ENERGY STORAGE ASSOCIATION

By its attorney,



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⁷ See Comments of the Energy Storage Association, submitted June 6, 2016 in Docket No. AD16-20.

CERTIFICATE OF SERVICE

I, Anne O'Hanlon, hereby certify that the foregoing Motion to Intervene and Comments were served via electronic mail to the service list.

Dated in Boston, MA this 10th day of November 2016.

A handwritten signature in blue ink that reads "Anne O'Hanlon" with a horizontal line underneath.

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