

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

**Utilization In the Organized Markets of Electric )  
Storage Resources as Transmission Assets )  
Compensated Through Transmission Rates, ) Docket No. AD16-25-000  
for Grid Support Services Compensated In )  
Other Ways, and for Multiple Services )**

**COMMENTS OF THE NEW YORK INDEPENDENT SYSTEM OPERATOR, INC.**

In accordance with the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) November 14, 2016 *Notice Inviting Post-Technical Conference Comments*<sup>1</sup> in the above referenced proceeding, the New York Independent System Operator, Inc. (“NYISO”) hereby submits post-technical conference comments in response to certain questions raised in the Commission’s November 1, 2016 *Supplemental Notice of Technical Conference* (the “Supplemental Notice”)<sup>2</sup> in this proceeding, and during the Technical Conference convened on November 9, 2016 (“Technical Conference”). The Supplemental Notice identified five topics of discussion for Panel 2, of which the NYISO was a participant. These comments clarify and supplement the NYISO’s comments at the Technical Conference. The NYISO expects to submit additional comments on electric storage resources in response to the Commission’s Notice of

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<sup>1</sup> *Utilization In the Organized Markets of Electric Storage Resources as Transmission Assets Compensated Through Transmission Rates, for Grid Support Services Compensated in Other Ways, and for Multiple Services*, Docket No. AD16-25-000 (Nov. 14, 2016) (Notice Inviting Post-Technical Conference Comments).

<sup>2</sup> *Utilization In the Organized Markets of Electric Storage Resources as Transmission Assets Compensated Through Transmission Rates, for Grid Support Services Compensated in Other Ways, and for Multiple Services*, Docket No. AD16-25-000 (Nov. 1, 2016) (Supplemental Notice of Technical Conference) [hereinafter *Supplemental Notice*].

Proposed Rulemaking issued on November 17, 2016 in Docket No. RM16-23-000, *et al.*<sup>3</sup> The NYISO appreciates the opportunity to work with the Commission and FERC Staff at the Technical Conference and in the submission of these comments.

## I. COMMENTS

The Technical Conference's second panel addressed utilization of electric storage resources for grid support services. Its purpose was "to explore potential models to enable an electric storage resource to provide a compensated grid support service rather than, or in conjunction with, being compensated for providing transmission service."<sup>4</sup> As stated at the Technical Conference, the NYISO has integrated electric storage resources as supply resources, but not as providers of transmission service.<sup>5</sup> The September 30, 2016 *Notice of Technical Conference* defined electric storage resources as facilities "that can receive electric energy from the grid and store it for later injection of electricity back to the grid,"<sup>6</sup> adding that electric storage can include "all types of electric storage technologies, regardless of their size and storage medium, or whether they are interconnected to the transmission system, distribution system, or behind a customer meter."<sup>7</sup> The NYISO's existing market rules permit limited participation of such electric storage resources in the Capacity, Energy and Ancillary Services in the NYISO administered wholesale markets.

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<sup>3</sup> *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, Notice of Proposed Rulemaking, 157 FERC ¶ 61,121 (Nov. 17, 2016).

<sup>4</sup> *Supplemental Notice* at 6.

<sup>5</sup> *Utilization In the Organized Markets of Electric Storage Resources as Transmission Assets Compensated Through Transmission Rates, for Grid Support Services Compensated in Other Ways, and for Multiple Services*, Docket No. AD16-25-000, Tr. 117:3-15 (DeSocio).

<sup>6</sup> *Utilization In the Organized Markets of Electric Storage Resources as Transmission Assets Compensated Through Transmission Rates, for Grid Support Services Compensated in Other Ways, and for Multiple Services*, Docket No. AD16-25-000 at 1 n.1 (Sept. 30, 2016) (Notice of Technical Conference).

<sup>7</sup> *Id.*

Electric storage resources are currently permitted to provide a variety of services under the NYISO's Tariffs. Specifically, electric storage resources with the ability to provide at least 1 MW of capability for at least four consecutive hours are eligible to provide capacity, energy, operating reserves and regulation service as Energy Limited Resources<sup>8</sup> ("ELR").<sup>9</sup> Electric storage resources that can perform for at least one but less than four hours are eligible to provide energy, operating reserves, and regulation service, but cannot provide capacity. ELRs, notwithstanding their energy limited capability, are treated similarly to all other Generator suppliers of energy, capacity and ancillary services. The NYISO also permits electric storage resources with at least 1 MW of capability but one hour or less of run-time to provide regulation service to the wholesale market as a Limited Energy Storage Resource ("LESR").<sup>10</sup> Although not specifically designed for electric storage resources, the NYISO's demand response programs also provide avenues for electric storage resource compensation from the capacity, energy, and ancillary services markets. Finally, the NYISO permits electric storage resources to provide Voltage Support Service and reactive power.

Whether participating as an ELR, LESR, or as part of a demand-side resource, electric storage resources either discharge energy to the grid or behind-the-meter Load, or withdraw energy from them in a given interval. Although electric storage resources, like other resources, can be dispatched to prevent an overload of a transmission facility, they do not change the

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<sup>8</sup> Capitalized terms not otherwise defined herein shall have the meaning specified in Section 1 of the NYISO's Open Access Transmission Tariff ("OATT") and Section 2 of the NYISO's Market Administration and Control Area Services Tariff ("Services Tariff").

<sup>9</sup> The NYISO's Services Tariff defines Energy Limited Resources as "[c]apacity resources that, due to environmental restrictions on operations, cyclical requirements, such as the need to recharge or refill, or other noneconomic reasons, are unable to operate continuously on a daily basis, but are able to operate for at least four consecutive hours each day." Services Tariff § 2.5.

<sup>10</sup> Limited Energy Storage Resources are defined as "[a] Generator authorized to offer Regulation Service only and characterized by limited Energy storage, that is, the inability to sustain continuous operation at maximum Energy withdrawal or maximum Energy injection for a minimum period of one hour." Services Tariff § 2.12.

thermal capability of a transmission facility and therefore do not change the ratings of transmission facilities. Like other types of suppliers, electric storage resources can provide dispatchable services to help mitigate transmission constraints, and can serve load to meet local reliability needs and defer infrastructure investments.<sup>11</sup>

The NYISO is concerned that treating electric storage resources as transmission facilities, without adequate assurances that the transmission services being provided are available to the system operator when needed, may negatively impact reliable transmission grid operations. In treating electric storage resources as transmission facilities, NYISO operators will either (i) need to be able to rely upon the selected electric storage resource(s) as available to mitigate a transmission constraint (and thus run the affected transmission system in a state that relies on the availability of the electric storage resource), or (ii) assume the electric storage resource is not available to mitigate a transmission constraint. If the grid operator takes actions consistent with the electric storage resource being available when it is not, transmission overloads may occur with the potential for loss of load. Alternatively, if the grid operator takes the more conservative approach and acts consistent with the expectation that the electric storage resource is unavailable, the operator would potentially increase operating reserves in the area of the transmission system that the electric storage resource was deployed to protect, defeating the purpose of including electric storage as transmission and unnecessarily adding costs to the least-cost system dispatch.

The NYISO believes that, whenever possible, resources should be compensated for the value of the service they provide where and when those services are provided, rather than be supported by contracts providing a fixed rate of return. When considering whether electric storage resources should be treated as cost-based resources (like certain transmission facilities)

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<sup>11</sup> Electric storage resources, like Generators, are included in the NYISO's reliability planning processes as facilities that can meet reliability needs.

or a merchant resource (like most generation) the Commission should consider the potential implications of such an approach on all supply resources which are compensated for their services in the wholesale energy markets. The NYISO believes, and its Tariffs are currently written to reflect, that electric storage resources that provide supply or supply-like services should be compensated in the same or a similar manner as other suppliers. The existing treatment of electric storage resources as supply evidences the NYISO's view that electric storage resources inject (and reduce withdrawals, in the case of demand response resources) energy as opposed to moving electricity on the transmission system.

## **II. COMMUNICATIONS AND CORRESPONDENCE**

All communications and correspondence concerning these Comments should be served as follows:

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### III. CONCLUSION

WEREFORE, the NYISO respectfully requests that the Commission consider these comments in its continued evaluation of the participation of electric storage resources in the wholesale electric markets.

Respectfully submitted,

/s/ Gregory J. Campbell

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Dated: December 14, 2016

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**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 in accordance with the requirements of Rule 2010 of the Rules of Practice and Procedure, 18 C.F.R. §385.2010.

Dated at Rensselaer, NY this 14<sup>th</sup> day of December 2016.

*/s/ Joy A. Zimmerlin*

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