

## FERC Nod To Energy Storage As Transmission Has Caveats

By **Mark Perlis and Bud Earley** (September 1, 2020, 5:35 PM EDT)

Electric storage is transforming the electricity industry, by offering solutions to the intermittency of renewable generation and associated reliability challenges in operating the electric grid.

The Federal Energy Regulatory Commission has been receptive to electric storage, and has adapted regulatory constructs to enable electric storage facilities to perform varied and multiple services — running the gamut from full participation in wholesale energy and ancillary services markets, to functioning as a transmission asset, in lieu of transmission line and substation upgrades.

But a recurring issue is how energy storage facilities will earn revenues and recover their investment costs. In Order 841, FERC mandated that wholesale capacity, energy and ancillary services markets operated by regional transmission organizations, or RTOs, and independent system operators, or ISOs, be opened to energy storage facilities.

In a 2017 policy statement, FERC stated that energy storage facilities could, in principle, provide transmission services and receive cost-based rates while also earning market compensation for participation in energy and ancillary services markets. In an Aug. 10 order,[1] FERC approved, for the first time, tariff rules that allow, under certain circumstances, electric storage facilities to qualify as transmission-only assets eligible for full cost-of-service rates.

Although the order approves only specific tariff rules issued by Midcontinent Independent System Operator Inc., or MISO, other ISOs and RTOs may attempt to rely on the findings put forward by FERC in the order to justify their own tariff approaches to qualifying energy storage facilities as transmission-only assets.

Treating electric storage facilities as transmission-only assets and making them eligible for cost recovery through cost-of-service transmission rates — rather than being dependent upon market revenues available to electric generating facilities — raises legal and practical issues. In fact, the newest FERC commissioner, James Danly, dissented from the MISO order, preferring to maintain the bright line between generation and transmission previously established by the commission.



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Danly is concerned that FERC has opened the door to future claims of discrimination by electric storage facilities that will claim entitlement to the cost-of-service rates accorded transmission facilities, rather than being limited to the competitive energy market revenues available to generation facilities. Time will tell whether ISOs, RTOs and project developers seek to expand the eligibility of electric storage facilities for cost-of-service transmission rates.

It also remains to be seen whether ISOs and RTOs, with FERC approval, will implement rules, consistent with FERC's 2017 policy statement, that go beyond the MISO order to permit electric storage facilities to receive both cost-of-service rates and retain some portion of their energy market revenues.

## **Background**

While storage resources generally operate as supply-side resources that earn revenue through energy market participation, their ability to both inject energy into the grid and withdraw energy from it allows them to be operated in a way that may substitute for potentially more costly transmission facilities.

The MISO tariff provisions that FERC recently approved would allow a storage facility to be treated as a transmission-only asset if it is selected to resolve issues identified in a MISO regional transmission plan. Prior to the MISO order, FERC viewed favorably only one proposal to classify electric storage resources as transmission for cost-based recovery purposes.

In 2010, FERC addressed a petition for a declaratory order from Western Grid Development LLC[2] to install on the California ISO system batteries that, according to Western Grid, would facilitate reliability by providing voltage support and thermal overload protection.

FERC approved treatment of the battery storage facilities as transmission facilities for cost-based recovery purposes, provided that:

- The facilities were operated to provide voltage support and thermal overload protection at the direction of the CAISO;
- CAISO did not manage the charging of the batteries, which would have compromised the CAISO's independence in administering the energy markets;
- The project developers would not retain market revenues and would credit them against transmission rates; and
- The batteries would not be offered into the energy markets when not providing transmission services, so as not to undercut competitive offers of other market participants.

But FERC's 2017 policy statement seemed to relax these requirements, since it invited ISOs and RTOs to encourage some market participation by electric storage facilities eligible for cost-of-service rates, by developing rules that would allow recovery of costs and that would not impinge upon market competition.

## **MISO Tariff Rules**

MISO's tariff provisions will allow a storage facility to be approved as the preferred solution to issues

identified in a regional transmission plan and, as such, be treated as a transmission-only asset. The tariff includes:

- An evaluation process for a storage resource to be included in a regional plan;
- Cost and performance factors to be considered in that evaluation;
- Criteria for selecting a storage resource as the preferred solution; and
- Development of operating guides for each storage resource serving a transmission function.

MISO refers to this new type of resource as a "storage facility as a transmission-only asset," or SATOA. A SATOA must be under the functional control of MISO, and may only participate in MISO's markets to the extent necessary to allow the SATOA to provide the services for which it was selected in the regional plan.

The transmission-only storage resources will incur costs and earn revenue through the energy markets as they purchase energy when charging and sell energy when discharging, as directed by MISO to perform transmission service. To ensure the storage resources do not collect more than their costs from their market activities directed by MISO, any revenues collected from market activities will be credited through transmission rates.

#### **FERC's MISO Order**

FERC found that MISO's proposal to make storage resources eligible for cost recovery as a transmission facility is just and reasonable, because the resources' operation would be limited to serving a transmission function, and thus it is appropriate to recover costs in the same manner as transmission facilities in the same transmission plan project category.

The MISO order finds that the tariff is consistent with precedent "recognizing the viability of classifying electric storage facilities as transmission assets for cost-recovery purposes." FERC recognizes, however, that it is breaking new ground.

The order notes that, while MISO's proposal is broader than Western Grid's facility-specific proposal, both the Western Grid order and the 2017 policy statement stated "that Western Grid does not necessarily present the only scenario in which the Commission might conclude that storage costs can be included in transmission rates."

In the MISO order, FERC addressed a number of technical and implementation issues. On broader issues, FERC found that the proposal preserves MISO's independence, even though MISO must assert functional control over the storage resource in order to address a transmission need. This is because a SATOA's owner is responsible for managing the facility's state of charge to ensure readiness to address that need.

FERC also found that a SATOA's operations are unlikely to have significant real-time energy market impacts, and thus should have only a limited impact on market prices. SATOAs are not eligible to participate in MISO's capacity, ancillary services or day-ahead energy markets.

FERC rejected arguments that MISO has not justified its proposal to treat SATOAs as transmission assets because all storage facilities, and similar supply-side resources, can provide the same benefits acting as a

market resource. The order says a storage resource will not be included in transmission plans unless MISO has functional control of the asset. MISO would not have such functional control over a market resource.

The order also notes that a storage asset must meet a multitude of requirements, and pass muster in various comparative analyses against other potential solutions, to show that is uniquely situated to act as the preferred solution to a specific transmission issue, and thus qualify as a SATOA.

### **Commissioner Danly's Dissent**

Danly dissented from the MISO order as "impermissibly blurring the line between generation and transmission." He views the Federal Power Act as premised upon treating generation and transmission facilities as performing distinct functions for which different cost recovery regimes are appropriate.

Danly stressed that classification of services should not control eligibility for receiving cost-of-service rates. According to his dissent, "the output of generation is amenable to being sold in a competitive market construct in a way that building long-term, capital-intensive transmission infrastructure is not."

Danly expressed concern that by assigning transmission status to facilities performing a generation function, MISO grants those facilities guaranteed recovery of cost and profit. He warned that the resulting expansion of the definition of transmission to include storage facilities that inject energy into the grid will invite more requests for such treatment, in a broader range of circumstances, and that FERC will find it difficult to reject them to avoid undue discrimination claims.

Danly would "reject MISO's filing and explicitly find that our holding in Western Grid was in error."

### **Future Takeaways**

The MISO order is limited to the specific MISO transmission planning process, and its criteria and rules for selecting an electric storage facility as a transmission solution. In its filing, MISO cited a single proposed 2.5 megawatt battery project that was found through the planning process to be a more cost effective solution to local transmission instabilities than rebuilding an existing 115 kilovolt line and upgrading a substation.

It is not clear how many other electric storage facilities, if any, that MISO would select for full cost-of-service rates. It is also not clear whether other RTOs and ISOs will follow MISO's lead and invite electric storage projects for selection as transmission-only assets eligible for cost-of-service rates.

Even if other RTOs, ISOs and storage developers seek transmission-only classification for electric storage facilities, under the MISO precedent, they will need to develop and implement workable rules governing dispatch of the resources and crediting of any market revenues earned from the discharge of energy.

If RTOs and ISOs intend to implement the dual compensation authorized under FERC's 2017 policy statement, and allow electric storage resources both to receive cost-of-service transmission rates and to retain some market revenues, those RTOs and ISOs and their stakeholders will need to develop tariff structures that extend well beyond the narrow compass of the tariff rules approved in MISO.

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[1] Midcontinent Independent System Operator Inc., 172 FERC ¶ 61,132 (MISO).

[2] Western Grid Development LLC, 130 FERC ¶ 61,056.