



## FERC Acts to Support Storage Deployment

FEBRUARY 21, 2018

*[Gary Bachman](#) and [Gabe Tabak](#)*

On February 15, the Federal Energy Regulatory Commission (FERC) issued [Order No. 841](#), a final rule on *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*. Acting on a [2016 proposed rule](#), the final rule requires each regional transmission organization (RTO) and independent system operator (ISO) to adjust market rules to better accommodate energy storage resources. FERC also announced a technical conference on aggregation of distributed energy resources (DERs) for April 10 and 11.

### Energy Storage: Requiring Full Participation Rights

The final rule requires each RTO/ISO to create a “participation model” – a set of market rules – that recognizes the physical and operational attributes of storage resources and facilitates their participation in wholesale markets. The final rule adopts a formal definition of an energy storage resource, as “a resource capable of receiving electric energy from the grid and storing it for later injection of electric energy back to the grid.” This definition is intended to be technology-neutral, and to apply to resources connected at any point on the grid. Each participation model must meet four criteria:

1. A storage resource must be eligible to provide all services that it is technically capable of providing in RTO/ISO markets, including capacity, energy, and ancillary services;
2. A storage resource must be dispatchable by the grid operator, and able to set the wholesale market clearing price as a buyer and seller;
3. Physical and operational characteristics of storage resources must be accounted for, through bidding parameters or other means; and
4. Storage resources above 100 kw must be eligible to participate (but RTOs/ISOs can set a lower threshold).

Based on comments submitted on the proposed rule and in earlier proceedings, FERC concluded that shoehorning storage into existing participation models might unnecessarily constrain storage resources from providing all possible services, and thus found existing RTO/ISO tariffs to be unjust and unreasonable under the Federal Power Act. The new storage participation models must be available to storage resources interconnected to the transmission system, distribution system, and behind customer meters. The final rule requires each RTO/ISO to revise its tariff to allow storage resources to de-rate capacity to meet minimum run-time requirements (in FERC’s example, a 10MW/20MWh resource capable of fully discharging over two hours could instead offer 5MW for a 4-hour period, reducing its maximum output but providing services over a longer interval). Each RTO/ISO will have to put in place rules to prevent conflicting dispatch signals – because storage resources can act as both supply and demand resources – within any market interval. Additionally, sales of energy from RTO/ISO markets used to charge storage resources, where storage facility output will be re-sold back to the wholesale markets, must be priced at the wholesale locational marginal price.

RTOs and ISOs will have significant latitude in implementing the final rule. For instance, precisely how to account for physical and operational characteristics of storage resources (whether by bidding parameters, or other means) will be left for the market operators to develop in stakeholder processes and propose to FERC (although the final rule requires any proposal to be able to account for minimum and maximum states of charge, charge time, run time, discharge and charge limits, and discharge and charge ramp rates). RTOs and ISOs will also have latitude on what sorts of telemetry requirements to propose.

Each RTO/ISO must file tariff changes to implement the requirements of the final rule within 270 days of the rule's publication in the Federal Register. These filings will likely be due in late November 2018. RTOs/ISOs will then have up to one further year to implement the tariff revisions.

### **Aggregation of Distributed Energy Resources: More Information Needed**

The 2016 proposed rule also would have required RTOs and ISOs to allow aggregation of small distributed energy resources (including behind-the-meter generation, demand response, and storage) to meet minimum size requirements for participation in their markets. However, rather than finalize this proposal, FERC has elected to solicit further information before taking final action. On February 16, FERC staff released [a report](#) on distributed energy resources, as well as an [initial agenda](#) for a technical conference on April 10<sup>th</sup> and 11<sup>th</sup> to discuss DERs. The initial agenda for the technical conference indicates that a wide range of topics will be covered, including:

- how to dispatch and price DER aggregations;
- coordinating DER operations at the wholesale and state/local levels;
- whether a single DER aggregation should be able to provide both wholesale and retail services;
- how to collect and share data on DERs;
- how to incorporate DERs in modeling, planning, and operations studies; and
- how to coordinate between DER aggregators, the RTO/ISO, and the distribution-level utility or utilities.

Parties wishing to participate as panelists in the technical conference should submit a nomination form by March 15, 2018.

### **Implications**

The storage and DER proceedings are significant steps in FERC's ongoing efforts to allow non-traditional resources to participate in wholesale markets on an equal footing with conventional generation. Battery storage costs have fallen significantly in recent years, and an increasing number of states are beginning to require the inclusion of storage in utility resource planning. Order No. 841 will allow storage resources to pursue revenues from energy, capacity, and ancillary services sales, which will improve the economics of deployment. However, the rule also emphasizes that each RTO/ISO will have latitude to propose market rules that – provided they are consistent with FERC's order – address unique aspects of each market, and the preferences of regional stakeholders.

FERC found that aggregation of DERs pose larger market, operational, and jurisdictional challenges. Any FERC action on this front will likely require a new proposed rule following the April technical conference. Ensuring that federal and state regulators, market operators, local utilities, and reliability entities have sufficient visibility, oversight, and ability to plan for DERs will be key issues for FERC to address in any final rule on this topic.

### **For more information**

Van Ness Feldman represents clients on a full range of issues arising out of the organized markets regulated by FERC. If you are interested in additional information regarding FERC's recent orders and their implications, please contact [Doug Smith](#), [Gary Bachman](#), [Gabe Tabak](#), or any member of the firm's Electric Practice at (202) 298-1800 in Washington, D.C. or in Seattle at (206) 623-9372.

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