

FERC Order Could Open Electric Grid To Diverse Resources

By **Levi McAllister** and **Arjun Ramadevanahalli** (September 29, 2020, 4:48 PM EDT)

The Federal Energy Regulatory Commission reached a new milestone in its continued quest to reform wholesale electric markets when it issued Order No. 2222 on Sept. 17. Order No. 2222 is a final rulemaking that amends FERC's regulations to remove barriers to the participation of distributed energy resource, or DER, aggregations in the capacity, energy and ancillary service markets operated by independent system operators, or ISOs, and regional transmission organizations, or RTOs.

The rule has an extremely broad reach, because it can apply to any class of DER located on a distribution system or behind a customer meter — including electric storage, intermittent generation, distributed generation, demand response, energy efficiency, thermal storage and electric vehicles, among others.

These latest reforms were informed by FERC's experience developing Order No. 841, which enabled the agency to glean a wealth of information on DER aggregation issues. As it did with electric storage resources in Order No. 841, FERC determined that wholesale market rules create barriers preventing the full participation of DER aggregations. With Order No. 2222, FERC wants to ensure that any DER that is technically capable of providing wholesale services through aggregation is eligible to do so.

Rule Overview

Many of the rulings and rationales set forth in Order No. 841 provide a road map for FERC's analysis in the context of DERs. Just as FERC mandated in Order No. 841, ISOs and RTOs will implement the Order No. 2222 reforms through the creation or modification of wholesale market participation models.

FERC directed the ISOs and RTOs to establish DER aggregators as a discrete market participant category and to accommodate the participation of DER aggregators under one or more participation models. The ISOs and RTOs will have broad discretion to craft those models, so long as they satisfy the criteria set forth in the rule.

Key aspects of those criteria include the following.



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Qualifications for Participation

FERC directed the ISOs and RTOs to implement a minimum size requirement not to exceed 100 kilowatts for all DER aggregations, matching the minimum size threshold under FERC's storage participation rule. Recognizing that larger individual DERs could create modeling and metering issues,

FERC directed the ISOs and RTOs to propose a maximum capacity size for an individual DER resource under an aggregation — or, alternately, to explain why such a requirement is not necessary. FERC requires that any qualification criteria be technology neutral.

Eligible Services

While the ISOs and RTOs will need to allow DERs to provide multiple wholesale services, they are free to propose restrictions to prevent double-counting of resources — e.g., a situation in which a DER is registered to provide the same market service twice, once as a standalone resource and once under a DER aggregation.

Importantly, that restriction does not limit a DER from participating in both retail and wholesale programs, and being compensated in each for providing distinct services.

State Opt-Outs

An opt-out refers to the ability of a state to prohibit resources sited on the distribution grid from participating under a FERC rulemaking. FERC refused to provide a broad opt-out in Order No. 2222, but has taken a slightly different approach than it did in Order No. 841, where it also refused an opt-out, in recognition of the potentially greater burden the rule may impose on smaller utility systems.

Specifically, FERC directed ISOs and RTOs to prohibit bids from DER aggregators if the aggregation includes DERs that are customers of small utilities — i.e., those that distributed 4 million megawatt-hours or less in the previous fiscal year — unless the relevant electric retail regulatory authority has permitted such participation under FERC's rule.

Coordination

The final rule requires ISOs and RTOs to involve state authorities and the distribution utility under the following coordination schemes:

- A process for a distribution utility to timely review the individual DERs that compose a DER aggregation, including any changes to the resources under a DER aggregation;
- A process for ongoing operational coordination among the ISO or RTO, the DER aggregator and the distribution utility, to include a mechanism for distribution utilities to override ISO or RTO dispatches for reliability or safety reasons; and

- A process to accommodate the voluntary participation of the relevant electric retail regulatory authority or authorities.

Other Requirements

ISOs and RTOs will also have to devise other minimum technical and operational criteria, such as locational requirements for DER participation, information and data requirements, bidding parameters, and metering and telemetry requirements.

Analysis

Prior FERC rulings have permitted DERs to participate in wholesale markets, if those resources were able to otherwise meet the applicable qualification criteria. However, Order No. 2222 reflects FERC's view that prior efforts have not done enough to facilitate the market participation of DERs, especially those that are quite small in size.

The implications of such a bellwether ruling across the power sector are numerous. Below, we identify just a limited number of those considerations and opportunities that Order No. 2222 presents.

Distribution System Impacts

Although the potential issues are numerous and could be the topic of a separate discussion, we identify three issues for consideration at this time.

First, FERC reiterates that it has the discretion, but no statutory obligation, to provide an opt-out that would otherwise allow a retail regulatory authority to prohibit DER participation in organized markets. Although FERC exercised that discretion to provide an opt-out in its demand response rulemaking — Order No. 719 — it declined to do so here.

However, the commission did clarify that it is not infringing on a state regulatory authority's ability to condition participation in retail DER programs on nonparticipation in organized markets. In other words, a resource must be able to choose between retail participation and wholesale participation; FERC will not provide a mechanism that allows a retail regulator to remove the either/or choice.

Second, FERC confirmed that it is willing, on a case-by-case basis, to approve the assessment of wholesale distribution charges against DER aggregators participating in organized markets. This approach is consistent with FERC's ruling in Order No. 841, as well as its 2014 seminal decision on the issue in its PJM Interconnection case.

As a result, it is important that DER aggregators, as well as DERs themselves, be mindful of the potential assessment of wholesale distribution charges when weighing decisions regarding whether to participate in organized markets or offer pricing strategies.

Third, FERC addressed the impact of its final rule on FERC's existing interconnection requirements and precedent, and expanded the circumstances whereby resources can access wholesale markets absent a FERC-jurisdictional interconnection. FERC determined that all DERs that access wholesale markets as part of an aggregation may do so through an interconnection that FERC will not view as a jurisdictional interconnection.

In so ruling, FERC made clear that a DER interconnection to a distribution facility for the purpose of accessing organized markets through an aggregation as part of Order No. 2222's mandate will not serve as the first use that would otherwise subsequently trigger FERC jurisdictional status over subsequent interconnects. Thus, interconnections to distribution facilities will remain state-jurisdictional — even if those facilities are used to provide wholesale market access — so long as the wholesale market access is limited to DERs participating in an aggregation.

If, on the other hand, a DER accesses the wholesale markets outside of an aggregation, or if a distribution facility is used to provide wholesale market access to non-DERs, FERC's first-use analysis will continue to apply.

Opportunity to Realize and Capture Full Value Stack

FERC determined that DERs can and should be able to realize their full value and, in turn, capture their entire value stack, so long as they are not double-compensated or double-counted. Therefore, FERC will allow DERs in DER aggregations to provide multiple wholesale services, and participate in one or more retail programs concurrent with their participation in wholesale markets.

However, ISOs and RTOs are permitted to narrowly designed restrictions to avoid counting the services provided by DERs more than once. FERC will consider whether the restrictions are appropriate on a case-by-case basis.

As a result of FERC's determination, DERs may realize the full extent of their value by participating in federal and retail programs and/or offering multiple wholesale services. Moreover, the ability to capitalize on the full value of the resources should be an enticing component of DER development while also being consistent with state policies being considered and established throughout the U.S.

Unprecedented Opportunity Created by Heterogeneous Aggregation

As noted above — and similar to FERC's approach in Order No. 841's energy storage rulemaking — FERC's mandate concerning DERs is technology-agnostic. The power creating the impact behind FERC's rule is FERC's decision to permit DERs to aggregate in order to participate in organized wholesale markets.

With Order No. 2222, DERs may now aggregate for the purposes of satisfying minimum size and performance requirements that the organized markets will establish; individual DERs may not be able to satisfy those requirements on their own.

The types of resources that can be aggregated span the sector, and include battery storage, on-site renewables, energy-efficiency resources, distributed and/or backup generation, electric vehicles and associated charging equipment, and other microgrid systems. This feature of the final rule presents tremendous opportunity for the market at a time when state policies, such as California's recent executive order on zero-emission vehicles, are driving DER growth.

Implementation Considerations and Limitations

Although FERC's ruling generated positive commentary from numerous different industry stakeholders, it is not without limitations or points of concern. The implementation of Order No. 2222 itself is sure to

prove challenging and raise additional questions.

For example, FERC's ruling introduces tremendous complexity in the coordination efforts required for organized markets to achieve compliance. Organized markets must incorporate processes into their tariffs that concern (1) review by a distribution utility, (2) review by the relevant regulatory authority, and (3) operational coordination.

Yet, FERC does not provide meaningful guidance on how those processes may be pursued, instead deferring to the judgment of the various market operators. As a result, it is unclear what those processes will entail or how the coordination will be pursued.

Further, while the rulemaking is significant, it does potentially foreclose participation to DERs that are customers of smaller systems. In particular, FERC provides an opt-in for utilities that distribute less than 4 million megawatt-hours in the prior fiscal year. Barring the utility's decision to opt in, its DER customers will not be able to access the markets like others can.

This being the case, FERC's attempt to balance considerations between larger and smaller utility systems can impact the scope of aggregation. This potential becomes further likely when considered in connection with FERC's prior ruling, in Order No. 719, that state regulatory authorities can opt out from demand response participation. Indeed, FERC confirmed that Order No. 2222 does not affect the ability of relevant authorities to prohibit retail demand response from being bid into markets by aggregators.

Finally, while many stakeholders are understandably interested in the minimum size threshold that FERC established for aggregator participation, it is equally important to consider whether, and how, the organized markets will address the other end of the spectrum. Specifically, it is conceivable that markets may seek to implement aggregation caps, whereby tariffs establish a maximum capacity threshold limiting the size of aggregations.

Market operators might argue, for example, that such thresholds are necessary to preserve the integrity of market modeling and address metering or other operational concerns. It remains to be seen how FERC, or market participants, might view such efforts.

Conclusion

Against the backdrop of a rapidly evolving electric grid, the potential implications of Order No. 2222 cannot be understated. The rule has the potential to unlock the capabilities of an extremely broad scope of resources, many of which, as FERC Chairman Neil Chatterjee observed, can "hide in plain sight in our homes, businesses and communities."

Indeed, the rule paves the way for DERs, such as grid-enabled water heaters, small solar installations and electric vehicles, to combine under single aggregation and compete alongside traditional generators for a slice of wholesale market revenues.

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