

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

Interconnection of Large Loads to the
Interstate Transmission System

Docket No. RM26-4-000

**COMMENTS OF THE PEW CHARITABLE TRUSTS, ENERGY MODERNIZATION
PROJECT**

Pursuant to the October 27 notice inviting comments on the Department of Energy’s (DOE) proposed Advanced Notice of Proposed Rulemaking (proposed ANOPR), The Pew Charitable Trusts (Pew) submits these comments on the DOE’s proposed reforms to address the interconnection of large loads to the interstate transmission system.

Pew’s Energy Modernization Initiative works with state and federal policymakers to build a modern, reliable, and affordable electric grid, including the adoption of local, distributed energy, such as home solar and batteries. As multiple studies have shown, these distributed energy resources (DERs) can offer diverse benefits, including consumer savings, enhanced capacity and reliability, as well as important resilience benefits. Last year, Pew launched its Distributed Energy Resources Initiative, which is working to identify policy pathways that accelerate the adoption of DER technologies across the United States. Pew is developing a policy playbook outlining steps that state and local policymakers can use to quicken the pace of DER deployment to build a modern, reliable, and affordable electric grid. In our view, the current rulemaking presents another important opportunity for expanding DER adoption across U.S. communities, and we urge the Commission to carefully consider and adopt approaches to interconnection study requirements, tariffs, and other requirements that leverage these valuable resources.

I. DER Aggregations (Virtual Power Plants) Should Be Considered Alongside Curtailment Flexibility and Generation Commitments in Large Load Interconnections.

The Department of Energy’s (“DOE”) directive under Federal Power Act (“FPA”) section 403 requests that the Commission initiate this ANOPR to establish a regulatory framework ensuring the timely, orderly, and non-discriminatory interconnection of large loads—defined by DOE as loads of 20 MW or greater—and hybrid configurations consisting of large load paired with onsite generation. DOE’s directive further contemplates an expedited study pathway for certain load types, including curtailable or dispatchable large loads and hybrid load-generation resources, with potential study timeframes as short as 60 days.¹

Pew encourages the Commission to recognize in this rulemaking that DER aggregations—commonly referred to as virtual power plants (“VPPs”)—are a cost-effective and near-term tool that large loads can employ to provide flexibility and operational support to the transmission system. VPPs have the potential to lower capacity procurement needs and defer or avoid costly network upgrades associated with interconnecting large loads, while supporting distributed energy systems that provide consumers savings.

Allowing large load interconnection studies to include VPPs is consistent with existing policy under Order No. 2222, which recognizes that DERs should be able to participate in regional wholesale markets and can “provide a variety of benefits including: lower costs for consumers through enhanced competition, more grid flexibility and resilience, and more innovation within the electric power industry.”² Recognizing DERs as an eligible option for large

¹ Wright, C. (2025) ‘Re: Secretary of Energy’s Direction that the Federal Energy Regulatory Commission Initiate Rulemaking Procedures and Proposal Regarding the Interconnection of Large Loads Pursuant to the Secretary’s Authority Under Section 403 of the Department of Energy Organization Act’. (DOE Letter).

² Federal Energy Regulatory Commission (2020), *FERC Order No. 2222: A New Day for Distributed Energy Resources*, <https://www.ferc.gov/media/ferc-order-no-2222-fact-sheet>.

load interconnection would help ensure that those large loads can utilize the full suite of Commission-approved wholesale market tools to mitigate capacity and network upgrade needs, while also managing their net demand in a manner that supports reliability, enhances competition, and reduces overall system costs for consumers.

II. VPPs Constitute a Near-Term, Scalable, and Cost-Effective Source of Flexible Capacity

DOE analysis finds that VPPs are already delivering tens of gigawatts of flexible capacity across the United States, and that with appropriate market access, they could serve 10–20 percent of national peak demand by 2030.³ Importantly, according to The Brattle Group, VPPs can be deployed on timelines shorter than traditional resources and at significantly lower cost, saving utilities tens of billions of dollars in capacity investments.⁴ VPPs are inherently modular and flexible, allowing them to scale rapidly, respond dynamically to system conditions, and provide verifiable reductions to a load’s net peak demand.

III. Order No. 2222 Provides a Basis That Would Enable Large Loads To Use VPPs to Support Their Interconnection

Order No. 2222 requires that RTOs/ISOs allow DER aggregators to participate directly in wholesale markets and to provide energy, capacity, and ancillary services. In the order, the Commission established that DERs “can at times effectively provide the capacity, energy, and ancillary services that are purchased and sold” in wholesale markets, and that “removing the barriers to participation” by DER aggregations “will enhance the competitiveness and in turn the efficiency, of RTO/ISO markets and thereby help to ensure just and reasonable and not unduly

³ Downing, J. *et al.* (2023) *Pathways to Commercial Liftoff: Virtual Power Plants*. Washington, D.C: U.S. Department of Energy.

⁴ See Hledik, R. and Peters, K. (2023) *Vol 1, Real Reliability: The Value of Virtual Power Plant*. rep. The Brattle Group.

discriminatory or preferential rates for wholesale electric services.”⁵ Consistent with the Commission’s non-discrimination principles towards different technologies, the order adopts a “technology neutral” definition of DER to ensure that “any resource that is technically capable of providing wholesale services through aggregation is eligible to do so...”⁶

Specifically, Order No. 2222 requires RTOs/ISOs to remove the barriers to DER aggregations participating in wholesale markets by: (1) recognizing heterogeneous portfolios that may combine distributed generation, load flexibility, and storage; (2) establishing a minimum size for aggregations not exceeding 100 kW; (3) implementing distribution-utility coordination protocols; (4) adopting metering and telemetry requirements tailored to aggregated resources; and (5) instituting anti-double-counting protections to ensure accurate accounting of wholesale and retail services.⁷ Furthermore, the order explicitly allows DERs that are on both the distribution system and customer side of the meter to participate in wholesale markets.⁸

The policy objectives underlying Order No. 2222 are directly relevant to the current ANOPR. DER participation in wholesale markets is a well-defined, FERC-approved pathway through which large loads may procure and present measurable, dispatchable, and creditable capacity to the transmission provider as part of an interconnection request. When a large load procures or contracts with a VPP, it must demonstrate a verifiable reduction in its studied net load and a corresponding ability to contribute flexible supply during periods of system need.

IV. Incorporating VPPs Into Large-Load Interconnection Requires Clear Implementation Principles

⁵ Order 2222 at 14-15.

⁶ *Id.* at 91-92.

⁷ Office of Public Participation (2025) *FERC Order No. 2222 Explainer: Facilitating Participation in Electricity Markets by Distributed Energy Resources[i]*. Federal Energy Regulatory Commission.

⁸ *See id.* at 46.

Principle three of the ANOPR provides that studying load and hybrid facilities together with generation facilities “will allow for efficient siting of loads and generating facilities and thereby minimize the need for costly network upgrades.”⁹ This principle should explicitly allow VPPs and flexible resources to be studied with large loads, recognizing that an aggregation of resources on the same system can achieve the same benefits.

To further effectuate DOE’s directive and ensure that flexible, dispatchable, and distributed resources can support the reliable interconnection of large loads, the Commission should consider including the following principles in any proposed rule resulting from this ANOPR:

A. Qualifying Aggregated DERs Should Clearly be Allowable In a Large Load Interconnection Request

A large load should be permitted to present a contracted VPP or aggregated DER portfolio to reduce its studied net load by a specified MW profile, which may vary hourly or seasonally. Accreditation, telemetry, and verification requirements should be consistent with existing wholesale market rules under Order No. 2222 or the applicable regulatory authority in the jurisdiction of the VPP’s operations.

B. DERs Within a VPP Must Satisfy Locational and Deliverability Requirements

The Commission should consider aggregated DERs that: (1) are located within sufficient proximity to be able to mitigate the constraint or congestion caused by new demand; (2) meet any locational, deliverability, or distribution-system criteria relevant to the load’s own energy usage; and (3) where applicable, comply with Order No. 2222’s requirements for coordination with distribution utilities and anti-double-counting protections.

⁹ DOE Letter.

These criteria ensure that an aggregated DER portfolio provides real and verifiable support to the transmission system, avoiding any duplication of services or operational ambiguity.

C. FERC Should Consider Directing RTOs/ISOs to Update Order No. 2222 Compliance To Facilitate VPP Use in Large-Load Interconnection

The Commission should also consider directing regional grid operators to update their tariffs to explicitly allow large loads to utilize VPPs in interconnection requests. Given that some RTOs/ISOs, like the Midcontinent Independent System Operator (MISO), will not have fully implemented Order No. 2222 until the end of the decade,¹⁰ such updates should strive to accelerate implementation timelines to make VPPs available to large loads under DOE's Section 403 proposal.

In addition, if a regional grid operator has not implemented Order No. 2222 in the region in which a proposed VPP is located, the Commission should consider allowing large loads to seek expedited consideration of the VPP's participation in the wholesale market and to be studied alongside the load or hybrid facility for interconnection. This limited pathway would ensure that large loads are not precluded from utilizing this Commission-approved category of flexible resources.

V. Conclusions

Clearly recognizing aggregated DERs as a mechanism for large loads to meet interconnection-related capacity needs would advance the objectives of this ANOPR. By establishing a framework and appropriate ground rules for allowing VPPs to be studied together with load and hybrid facilities, the Commission can ensure that large loads have a diverse suite

¹⁰ Cook, Amanda Durish (Jan 16, 2025), *FERC Permits 2030 Finish Date for MISO Order 2222 Compliance*. RTO Insider. <https://www.rtoinsider.com/95916-ferc-finish-date-miso-order-2222-compliance/#:~:text=MISO%20proposed%20a%20two%2Dstep,Order%202222%20compliance%20is%20wrong>.

of tools for flexibility and resource adequacy, accelerate interconnection timelines, and encourage large loads to make DER investments that can simultaneously provide direct consumer savings and resiliency benefits. Pew appreciates the Commission's consideration of these comments.

Sincerely,

A handwritten signature in cursive script, reading "Maureen Quinlan". The signature is written in dark ink on a light blue rectangular background.

Maureen Quinlan
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