

**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 SOLAR ENERGY INDUSTRIES ASSOCIATION**

The United States is in a critical race to achieve global dominance in artificial intelligence (AI). Sustaining and enhancing America’s global AI dominance will promote “human flourishing, economic competitiveness, and national security.”<sup>1</sup> But we need the power to achieve these goals. Rapid innovations in AI and data center infrastructure have created significant, and often unexpected, increases in electricity demand.<sup>2</sup> After years of flat power demand, the grid is now seeing significant increases in load growth. The advanced computing industry is poised for rapid expansion, yet the energy sector and the regulatory frameworks governing it have struggled to keep pace. The interconnection of these new large loads to the grid is governed by a patchwork of regulations and business practices that fail to deliver accurate load projections or encourage the development of generation to provide energy to those new loads.

As Department of Energy Secretary Wright recognized in his October 27, 2025 letter to the Federal Energy Regulatory Commission (the Commission), AI infrastructure must be able to

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<sup>1</sup> Executive Order 14179, “Removing Barriers to American Leadership in Artificial Intelligence” (Jan. 23, 2025).

<sup>2</sup> PJM Interconnection, L.L.C., Data Center Planning & Need Assessment Update (Jan. 10, 2023), <https://www.pjm.com/-/media/committees-groups/committees/teac/2023/20230110/item-04---data-center-load-planning.ashx> *Strategic Industries Surging: Driving US Power Demand*, Grid Strategies, (2024), <https://gridstrategiesllc.com/wp-content/uploads/National-Load-Growth-Report-2024.pdf>. *Chairman Rosner’s Letter to the RTOs/ISOs on Large Load Forecasting*, (Sept. 18, 2025) <https://www.ferc.gov/news-events/news/chairman-rosners-letter-rtosisos-large-load-forecasting>. See, e.g., post-Technical Conference comments submitted in FERC Docket No. AD24-11-000, including CEBA December 9 Post-Technical Conference Comments at 12-13; DCC December 9 Post-Technical Comments at 12; Google December 9 Post-Technical Conference Comments at 7-8; Wilson Energy Economics December 9 Post-Technical Conference Comments at 2, 7.

interconnect to the grid efficiently, fairly, and expeditiously.<sup>3</sup> Developers of AI infrastructure need clear and flexible rules to ensure the orderly interconnection of those loads while maintaining the reliability of the grid. Without clear rules, the United States risks ceding its global AI dominance.

Pursuant to the October 27, 2025 Notice Inviting Comments,<sup>4</sup> the Solar Energy Industries Association (SEIA) submits these comments on Secretary Wright’s proposed advanced notice of proposed rulemaking regarding the Interconnection of Large Loads to the Interstate Transmission System.<sup>5</sup> The comments and recommendations below represent the experiences of a wide range of member companies who are working with hyperscalers to develop and build the resources that will serve this new demand. SEIA’s members are working with hyperscalers to develop the generation that will be able to serve these new loads and appreciate the opportunity to provide comments that will assist the Commission in establishing clear procedures on how the new load and generation can interconnect to the transmission system.

## **I. NEED FOR REFORM: ADDRESSING INACCURATE LOAD PROJECTIONS**

SEIA urges the Commission to issue a rulemaking that would standardize the interconnection procedures and agreements for new large loads, including loads that seek to locate with, or near, new generation. As explained above, energy-intensive AI infrastructure is developing at a much faster pace than the development of the generation needed to serve it.<sup>6</sup>

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<sup>3</sup> Secretary of Energy’s letter re the Interconnection of Large Loads Pursuant to the Secretary's Authority under Section 403 of the Department of Energy Organization Act, Docket No. RM26-4 (Oct. 27, 2025).

<sup>4</sup> Notice Inviting Comments, Docket No. RM26-4 (Oct. 27, 2025).

<sup>5</sup> Interconnection of Large Loads to the Interstate Transmission System, Notice Inviting Comments, Docket No. RM26-4 (Oct. 27, 2025) (“Proposed ANOPR”).

<sup>6</sup> See *Long-Term Load and DER Forecasting*, Energy Systems Integration Group, at 29 (2025) <https://www.esig.energy/long-term-load-and-der-forecasting/>. (“Data center load growth is the single largest component of growth in utility load forecasts and is expanding at an unprecedented rate, with forecasts ranging between 65 GW and 90 GW of new load by 2029”); Grid Strategies, *supra* note 2 at 6 (“It may take only one or two

However, the extent to which AI infrastructure development is outpacing new generation is unclear.

Grid operators today face a fundamental challenge: The impacts of new data center loads are difficult to understand, and existing forecasting practices are ill-equipped to capture them accurately. Data centers often submit multiple interconnection requests for the same project,<sup>7</sup> and some hyperscalers have acknowledged engaging with multiple utilities simultaneously for a single facility.<sup>8</sup> Vertically integrated utilities lack incentives to scrutinize load requests, since they stand to benefit financially from capital investments that expand their rate base.<sup>9</sup> These duplicative load requests are then used to develop utility load forecasts, which in turn inform wholesale rates and transmission planning, raising questions about the transparency and accuracy of those processes.<sup>10</sup>

Compounding these challenges is the fact that data center loads are not uniform. The energy needs of a new data center depend heavily on its operational profile and proximity to, or even co-location with, generation.<sup>11</sup> Some large loads can operate islanded from the grid and

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years to connect new load to the grid, while it may take over four years to bring new generation online and even longer to build new transmission.”).

<sup>7</sup> *Uncertainty and Upward Bias are Inherent in Data Center Electricity Demand Projections*, London Economics Inc., at 8 (July 7, 2025), available at <https://www.sclc.org/wp-content/uploads/2025/07/LEI-DataCenter-Final-Report-07072025-2.pdf>.

<sup>8</sup> Chairman Doug Scott, Illinois Commerce Commission at 5, (May 27, 2025), available at <https://www.ferc.gov/media/chairman-doug-scott-illinois-commerce-commission> (“[W]e need to have a better understanding of what load growth is real... The RTOs get their load forecasts from the utilities; however, every utility is different in how they establish their load forecast. Some of the hyperscalers admit to talking to multiple utilities at any given time. It is quite possible that there is double-counting in forward-looking load forecasts, especially given that these data center projects are developed under non-disclosure agreements. Recently, certain data center projects have been cancelled, undermining previous load projections.”).

<sup>9</sup> *Uncertainty and Upward Bias are Inherent in Data Center Electricity Demand Projections*, London Economics Inc., at 8 (July 7, 2025), available at <https://www.sclc.org/wp-content/uploads/2025/07/LEI-DataCenter-Final-Report-07072025-2.pdf>.

<sup>10</sup> Electricity Customer Alliance, et al., *Joint Letter to FERC re Load Forecasting*, at 1 (May 30, 2025), <https://static1.squarespace.com/static/61cb4ad27eb866577fe066fe/t/683dad0998acf67ccdbb63e2/1748872457167/Join+Customer+Letter+to+FERC+re+Load+Forecasting+5.30.25.pdf>.

<sup>11</sup> Clean Energy Buyers Association Pre-filed comments at 5, Docket No. AD24-11; Talen Energy Pre-Filed Comments at 1-3, Docket No. AD24-11 (“Talen has been . . . safely operating co-located loads for over 18 months.”).

accept the risk of outages, while others require firm backup service. Certain loads are flexible and can respond to price signals or participate in demand response programs. Each arrangement “is going to be a snowflake...they are going to have their own design, their own concerns, their own issues, their own configurations that they would like to meet.”<sup>12</sup>

A standardized interconnection process can help solve that. By establishing uniform procedures that include readiness requirements, such as deposits and site control, transmission providers can better identify viable large-load projects and reduce speculative requests.<sup>13</sup> Further, requiring more information regarding load profile will allow utilities with load serving obligations to make more accurate load projections. Improving the accuracy of load projections will, in turn, support more effective transmission planning and generation development. Load forecasts are a critical input into Commission-jurisdictional wholesale market operations and influence how prices are formed. When forecasts reflect realistic expectations of future demand, they help send accurate price signals to both suppliers and consumers, supporting the development of a reliable and cost-effective grid. Accurate load forecasting is essential to ensure that rates remain just and reasonable.

## **II. ESTABLISHING A LEGALLY DURABLE JURISDICTIONAL STATEMENT OVER THE INTERCONNECTION OF LARGE LOADS**

The Proposed ANOPR provides four legal theories under which the Commission could assert jurisdiction over large load interconnections.<sup>14</sup> As written, each theory either fails to justify, or provides a weak justification for, the Commission’s authority in this area. To be clear,

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<sup>12</sup> Transcript, *Technical Conference Regarding Large Loads Co-Located at Generating Facilities* at 61, Docket No. AD-24-11 (Nov. 1, 2024). (statement of Aubrey Johnson, Vice President, System & Resource Planning, Midcontinent Independent System Operator).

<sup>13</sup> See e.g. *Improvements to Generator Interconnection Procs. & Agreements*, Order No. 2023, 184 FERC ¶ 61,054, at P 691, *order on reh 'g*, 185 FERC ¶ 61,063 (2023).

<sup>14</sup> See Proposed ANOPR PP 13-16.

SEIA agrees that the Commission has the authority to issue a rulemaking to standardize the process for interconnecting large loads to the transmission system and urges the Commission to do so while recognizing state jurisdictional boundaries. However, the Commission's exercise of that authority must be grounded in a clear and legally durable jurisdictional foundation.

#### **A. The Jurisdictional Statement Flaws**

The first jurisdictional theory in the Proposed ANOPR, merely analogizes large load interconnection to generator interconnection, stating that both are “critical component[s] of open access transmission service.”<sup>15</sup> The ANOPR provides no further explanation as to why the processes are similar, why large load interconnection is a “critical component of open access transmission service,” or even whether large loads require transmission service. But even assuming the processes are similar, this theory fails to acknowledge a critical difference between a transmission owning utility providing interconnection service to an unaffiliated generator versus providing interconnection service to a large load. Unaffiliated generators are competitors to vertically integrated transmission-owning utilities that also own generation.<sup>16</sup> Without standardized interconnection procedures, utilities would have both the incentive and ability to discriminate against their competitors.<sup>17</sup> After finding that interconnection is a critical component of open access transmission service, the Commission stated that a standardized interconnection process would limit the opportunities for transmission-owning utilities to discriminate against

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<sup>15</sup> Proposed ANOPR at P 13.

<sup>16</sup> *Standardization of Generator Interconnection Agreements & Procs.*, Order No. 2003, 104 FERC ¶ 61,103, at P 5 (2003), *order on reh'g*, Order No. 2003-A, 106 FERC ¶ 61,220, *order on reh'g*, Order No. 2003-B, 109 FERC ¶ 61,287 (2004), *order on reh'g*, Order No. 2003-C, 111 FERC ¶ 61,401 (2005), *aff'd sub nom. Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

<sup>17</sup> Order No. 2003 at P 4. *See also* Order No. 2003 at P 677 (describing the independent entity variation for RTOs, which, as grid operators, are not incentivized to discriminate against unaffiliated generator owners.).

their competitors in the generation market.<sup>18</sup> Large loads, however, are not competitors to transmission-owning utilities; they are customers. Transmission Owners are financially motivated to attract large loads to their service territories and to provide favorable interconnection terms and conditions. The underlying concern about undue discrimination that justified Order No. 2003 does not apply in the same way to the interconnection of large load. Therefore, a mere analogy between large load interconnection and generator interconnection is insufficient to justify Commission jurisdiction.

The second jurisdictional theory relies on the argument that interconnections of large loads constitute a “practice directly affecting”<sup>19</sup> Commission-jurisdictional wholesale electricity rates under the Federal Power Act, citing *FERC v. Electric Power Supply Association (EPSA)*.<sup>20</sup> In *EPSA*, the Supreme Court upheld Order No. 719, which required wholesale market operators to accept demand response bids from aggregators of electricity consumers, except where prohibited by state regulators.<sup>21</sup> The Court held that the Commission had the authority to regulate such participation because it directly affected wholesale market prices. The Proposed ANOPR’s reliance on *FERC v. EPSA* overlooks a key difference between demand response and large load interconnections. Order No. 719 expanded wholesale market participation by allowing a new type of resource—demand response—to bid directly into wholesale markets.<sup>22</sup> The Court recognized that wholesale market operators employ demand response bids in competitive auctions that balance wholesale supply and demand and thereby set wholesale prices.<sup>23</sup> The

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<sup>18</sup> Order No. 2003 at P 12.

<sup>19</sup> Proposed ANOPR at P 14.

<sup>20</sup> *Id.*

<sup>21</sup> *FERC v. Elec. Power Supply Ass’n*, 577 U.S. 260 (2016).

<sup>22</sup> *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281 (2008).

<sup>23</sup> *FERC v. Elec. Power Supply Ass’n*, 577 U.S. 260, 277, 136 S. Ct. 760, 774, 193 L. Ed. 2d 661 (2016), *as revised* (Jan. 28, 2016).

Court stated that the Commission “has the authority—and, indeed, the duty—to ensure that rules or practices ‘affecting’ wholesale rates are just and reasonable.”<sup>24</sup> As the Court made clear, though, the plain language in the Federal Power Act’s grant of authority is broad and “could extend FERC’s power to some surprising places,” as “markets in just about everything—the whole economy, as it were” can influence demand, which could not have been what Congress intended.<sup>25</sup> So in making its finding, the Court adopted a “common-sense construction of the FPA’s language, limiting FERC’s ‘affecting’ jurisdiction to rules or practices that ‘*directly* affect the [wholesale] rate.’”<sup>26</sup> While large loads may interconnect to transmission-level assets under the Commission’s seven factor test,<sup>27</sup> the loads themselves are not direct participants in wholesale markets. Rather, they are retail customers whose operations may indirectly influence wholesale prices by contributing to demand. This indirect impact is beyond the scope of the Commission’s jurisdiction under the Federal Power Act.

The third jurisdictional theory states that regulating large load interconnections would not impinge on the states’ authority over retail sales of electricity.<sup>28</sup> While this statement aligns with the Federal Power Act’s division of jurisdiction between federal and state regulators,<sup>29</sup> it does not itself establish a basis for federal authority. The Commission must clearly articulate how exercising jurisdiction over large load interconnections is consistent with, but not derivative of, its authority over wholesale transactions and transmission in interstate commerce. Any legally durable justification must respect the limits of federal authority and avoid infringing on state control over retail sales and generation mix within their borders.

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<sup>24</sup> *FERC v. Elec. Power Supply Ass’n*, 577 U.S. 260, 277, 136 S. Ct. 760, 774, 193 L. Ed. 2d 661 (2016), *as revised* (Jan. 28, 2016).

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* (citing *California Independent System Operator Corp. v. FERC*, 372 F.3d 395, 403 (2004)).

<sup>27</sup> See Proposed ANOPR at 18.

<sup>28</sup> Proposed ANOPR at P 15.

<sup>29</sup> *FERC v. Elec. Power Supply Ass’n*, 577 U.S. 260 at 264.

## B. Potential Jurisdictional Solutions

The fourth jurisdictional theory reiterates the Commission's exclusive jurisdiction over the transmission of electricity in interstate commerce. This principle provides a more credible path forward, but it must be elaborated upon if the Commission were to use it as a foundation to assert jurisdiction over the interconnection over large loads.

In order for the Commission to assert jurisdiction over the large load interconnection, the load must be interconnected to the Commission-jurisdictional transmission system, and not the state-jurisdictional distribution system. Any final rule in this proceeding must clearly limit jurisdiction to the interconnection of large loads *to the Commission-jurisdictional transmission system*, as defined under the Commission's seven-factor test.<sup>30</sup> This jurisdictional finding should extend to any generation that may be co-located with the large load.

For load co-located with generation, if the Commission seeks to extend its jurisdiction over the sale of energy from the co-located generation, the Commission must be mindful of the various configurations of the large loads. As stated earlier, large load configurations can vary significantly in their design and grid-backup needs. In some cases, a large load may include a protection system that prevents it from taking any backup power from the grid. Where such a system exists, the transaction involves only distribution-level facilities between the load and its associated generation. The only sale of energy in that configuration is a retail sale between the load and the generator, placing the transaction outside of the Commission's jurisdiction. In other cases, however, large loads may remain physically connected to the transmission system in a manner that allows them to draw power during certain operating conditions. In those instances,

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<sup>30</sup> Order No. 888, FERC Stats. & Regs. ¶ 31,036, 21,620 (1996), order on reh'g, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048, *order on reh'g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), order on reh'g, Order No. 888-C, 82 FERC ¶ 61,046 (1998).



the use of the transmission system constitutes interstate transmission service and properly falls within the Commission’s jurisdiction.

Any rule asserting jurisdiction over large load interconnections must be carefully tailored and supported by all stakeholders. The jurisdictional boundaries of this rulemaking should be discussed and debated within the FERC-NARUC Joint Federal-State Task Force.

### **III. GUIDING PRINCIPLES FOR *PRO FORMA* PROCEDURES AND AGREEMENT**

#### **A. General Principles – Flexibility and Transparency**

In crafting a final rulemaking governing the interconnection of large loads, the Commission must make flexibility a top priority. The Commission should establish a *pro forma* Large Load Interconnection Service Agreement. A *pro forma* agreement would provide consistent procedural guidance. However, the *pro forma* must be flexible enough to accommodate different types of large loads and co-location agreements. These arrangements may include loads receiving firm transmission service as well as loads that agree to be curtailable under certain system conditions. The Commission’s approach must recognize that each configuration has distinct operational needs and system impacts. The November 2024 Technical Conference demonstrated that large loads vary considerably in both design and interconnection characteristics.<sup>31</sup> In the Show Cause Order on the rules surrounding co-location in PJM Interconnection, L.L.C., the Commission recognized that different arrangements “are likely to use or benefit from the transmission system in different ways depending on how they are configured and, moreover, that those different configurations will themselves likely have

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<sup>31</sup> Transcript, *Technical Conference Regarding Large Loads Co-Located at Generating Facilities* at 61, Docket No. AD-24-11 (Nov. 1, 2024). (statement of Aubrey Johnson, Vice President, System & Resource Planning, Midcontinent Independent System Operator).

different impacts on the transmission system.”<sup>32</sup> These statements demonstrate the need for a framework that is adaptable to multiple configurations and allows transmission providers and interconnection customers the ability to design site-specific configurations while maintaining consistency with Commission policy.

Regulatory flexibility should give rise to transparency for, and from, large loads. Large load developers need access to accurate information about available grid capacity in order to make informed siting and investment decisions.<sup>33</sup> The heatmap reforms in Order No. 2023 provide for a degree of transparency, requiring transmission providers to post a heatmap of available transmission capacity.<sup>34</sup> SEIA urges the Commission and stakeholders to continue developing solutions that would improve upon these heatmaps.

Large loads must also provide greater transparency to transmission providers and other stakeholders so that transmission providers could improve their load forecasts. In addition to establishing standard procedures for the interconnection of large loads, the Commission should also establish standardized reporting requirements from Commission-jurisdictional utilities to the transmission providers. Transmission providers currently rely on load forecasts produced by utilities, but each utility employs its own methods and assumptions when developing those forecasts.<sup>35</sup> Establishing transparent forecasting assumptions and requiring standardized reporting by load-serving entities would improve the accuracy of the load forecasts that feed into transmission planning and market operations.<sup>36</sup> Greater transparency will help ensure that new large loads are studied and interconnected efficiently while maintaining system reliability and

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<sup>32</sup> *PJM Interconnection, L.L.C.*, 190 FERC ¶ 61,115, P 76 (2025) (PJM Show Cause Order).

<sup>33</sup> Comments of Data Center Coalition under EL25-49, et al. (April 23, 2025).

<sup>34</sup> Order No. 2023 at P 135.

<sup>35</sup> Pre-Filed Statement of Chairman Doug Scott, Illinois Commerce Commission, Docket No. AD25-7-000, (May 28, 2025) available at <https://www.ferc.gov/media/charman-doug-scott-illinois-commerce-commission>.

<sup>36</sup> Response of Advanced Energy United to PJM Interconnection, L.L.C.’s Answer to the Show Cause Order under EL25-49, et al.; Comments of Data Center Coalition under EL25-49, et al. (April 23, 2025).

protecting existing customers.

## **B. Principles for Reform in the Proposed ANOPR**

1. *Jurisdiction should be limited to interconnections directly to transmission facilities.*

The Proposed ANOPR states that, in issuing a rulemaking on the interconnection of large loads, the Commission’s jurisdiction “should be limited to interconnections directly to transmission facilities.”<sup>37</sup> SEIA supports this principle. As discussed above, a final rulemaking must be legally durable and grounded in the Commission’s statutory authority. Limiting jurisdiction to interconnections that occur directly at the transmission level aligns with the Federal Power Act and avoids unnecessary encroachment into areas under state authority. This approach will help ensure that the final rule withstands judicial scrutiny and provides a clear, administrable framework for transmission providers and interconnection customers.

2. *The Commission should make an independent determination as to the size of load this rulemaking should apply.*

The Proposed ANOPR recommends that the rulemaking should only apply to new loads greater than 20 megawatts (MW) and, for co-located facilities,<sup>38</sup> where the load is greater than 20 MW. As an initial matter, the Commission must make clear that grid-charging energy storage

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<sup>37</sup> Proposed ANOPR at P 18.

<sup>38</sup> The Proposed ANOPR uses the term “Hybrid Facilities” to refer to loads that share a point of interconnection with new or existing generation facilities. Proposed ANOPR at P 12. “Hybrid facilities” before FERC refer to two or more resources that share a point of interconnection. *See* Order No. 2023, P 1509, FN 2856. Throughout proceedings before the Commission that discuss situations where load and generation share a point of interconnection, the Commission and commentors have used the term “Co-located facilities.” PJM Show Cause Order, P 3, FN 4. Consistent with the terminology used before the Commission, these comments will use the phrase “co-located facilities.”

resources should not be considered load under any potential rulemaking.<sup>39</sup> Energy storage resources occupy a unique space on the grid, as they both inject energy onto the grid and sometimes charge from the grid.<sup>40</sup> However, energy storage resources are subject to the generator interconnection procedures set forward by each transmission provider. These resources should not be captured by a rule intended to address the interconnection of new demand-side infrastructure.

SEIA supports the Commission limiting the application of the rulemaking to net loads over a certain size. While using a 20 MW threshold would make the rule consistent with the *pro forma* Large Generator Interconnection Procedures and Agreement,<sup>41</sup> that threshold may not accurately reflect what constitutes a “large” load. In November 2024, a subgroup of the NERC Large Load Task Force conducted an informal survey to gather feedback from participants on what load size should qualify as “large” under a potential NERC regulatory construct. Most of the survey respondents defined “large” as greater than 50 MW.<sup>42</sup> In order to set a legally defensible size for which loads are considered “large,” the Commission should request data on the average size of new large loads, as well as the demand profiles and curtailment abilities, of those loads.

In addition to establishing a size threshold, the Commission should also define a voltage threshold for determining whether a load is subject to the rule. Voltage levels dictate the extent

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<sup>39</sup> Southwest Power Pool, Inc., Revisions to Add the High Impact Large Load Processes and Generation Assessment, at 12, Docket No. ER26-247 (Oct. 24, 2025) (“An Electric Storage Resource is not considered a HILL.”).

<sup>40</sup> Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators, Order No. 841, 162 FERC ¶ 61,127 (2018), *order on reh’g*, Order No. 841-A, 167 FERC ¶ 61,154 (2019).

<sup>41</sup> Order No. 2003 at P 52.

<sup>42</sup> North American Electric Reliability Corporation, *Characteristics and Risks of Emerging Large Loads*, at 11 (July 2025), [https://www.nerc.com/comm/RSTCReviewItems/3\\_Doc\\_White%20Paper%20Characteristics%20and%20Risks%20of%20Emerging%20Large%20Loads.pdf](https://www.nerc.com/comm/RSTCReviewItems/3_Doc_White%20Paper%20Characteristics%20and%20Risks%20of%20Emerging%20Large%20Loads.pdf).

of a load's impact on the transmission system and can serve as a clear indicator of whether a facility is transmission- or distribution-connected.<sup>43</sup> Incorporating both size and voltage criteria would ensure jurisdictional clarity and focus the rule on those facilities with a material effect on the bulk power system.

3. *Large loads and associated generation should be studied together.*

The Proposed ANOPR states that “to the extent practicable, load and hybrid facilities should be studied together with generating facilities.”<sup>44</sup> While SEIA supports the Commission requiring load and the associated generation to be studied together, we believe this principle must be clarified.

First, the Commission must clarify whether it intends for this rulemaking to create a new queue specifically for large-load interconnections or to incorporate such projects into the existing interconnection queues.<sup>45</sup> SEIA recommends that the Commission allow flexibility in how these studies are conducted and prioritized so that they align appropriately with each region's existing queue and study procedures. Mandating a rigid, standalone queue for large loads could duplicate processes and increase administrative burdens.

Second, the language of the principle itself requires clarity. The Proposed ANOPR refers to both “generating facilities” and “hybrid facilities,” although the latter category includes generating facilities.<sup>46</sup> This distinction creates ambiguity about whether the Commission envisions that a large load could both co-locate with a generating resource behind a single point

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<sup>43</sup> *Id.* (“...the survey also revealed that “large” may be relative to other factors, such as the voltage to which the load is interconnected. For example, a consuming site with a 20 MW peak demand would be considered “large” for distribution service, whereas 20 MW is a relatively small customer if interconnected at transmission voltage.”).

<sup>44</sup> Proposed ANOPR at P 20.

<sup>45</sup> *E.g.* PJM New Services Queue including transmission and interconnection.

<sup>46</sup> Proposed ANOPR at P 20.

of interconnection and also contract with another generator elsewhere on the transmission system under a “bring-your-own-generation” (BYOG) arrangement. If the intent is to address both co-located facilities and BYOG facilities, the Commission must provide for additional requirements to maintain open access principles and not negatively impact generation projects that are already in the queue. This includes requiring any BYOG arrangements to be electrically close, if not behind the same POI, then at least in the same zone. The Commission should also make explicit that BYOG arrangements may include Distributed Energy Resource Aggregations (sometimes referred to as “Virtual Power Plants” (VPPs)).

Third, any study of the large load and associated generation, whether co-located or not, must reflect the actual operational needs of the load. Some arrangements can be completely islanded from the grid and bear the risk of going offline.<sup>47</sup> Others cannot take such a risk. Some large loads are flexible and can respond to utility price signals and demand response programs. The associated study procedures need to be flexible enough to account for different transmission system needs. Failing to account for these specific needs in the study may result in underestimation of the necessary network upgrades associated with the interconnection of that new large load.

4. *The Commission should establish standardized study deposits, readiness requirements, and withdrawal penalties for the interconnection of large loads.*

The Proposed ANOPR recommends that load and co-located facilities should be subject to standardized study deposits, readiness requirements, and withdrawal penalties.<sup>48</sup> SEIA

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<sup>47</sup> See Post-Workshop Comments of the Solar Energy Industries Association, at 4, Docket No. AD24-11 (Dec. 9, 2024).

<sup>48</sup> Proposed ANOPR at P 21.

generally supports instituting standard study deposits, readiness requirements, and withdrawal penalties for the interconnection of large loads, co-located generation and BYOG.

The Commission has recognized that study deposits better identify viable projects and reduce the number of multiple interconnection requests made by the same customer for the purpose of evaluating the costs of different project sites.<sup>49</sup> SEIA supports study deposits that are based on net withdrawals from and, in the case of co-located facilities, injections to the grid. The Commission should consider the magnitude of requested withdrawal and injection rights of the co-location arrangement as a basis for determining the magnitude of study deposits required. However, as SEIA has stated previously with respect to increased project readiness requirements for generator interconnections, increased site control requirements must also come with increased transparency in how the transmission providers will establish load projections.

5. *Transmission providers should study co-located facilities based on the amount of injection or withdrawal rights requested and require large loads and associated generation to install system protection equipment.*

The Proposed ANOPR recommends that transmission providers should study co-located facilities based on the amount of injection or withdrawal rights requested.<sup>50</sup> As a protection measure, the Proposed ANOPR also recommends that the large load and co-located facilities install the system protection facilities necessary to prevent unauthorized injections or withdrawals.<sup>51</sup> SEIA generally supports these recommendations but encourages the Commission to clarify two aspects of these principles.

First, as part of an interconnection request, the large load should have the option to agree

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<sup>49</sup> *Sw. Power Pool, Inc.*, 178 FERC ¶ 61,015, at P 45 (2022); *Pub. Serv. Co. of New Mexico*, 136 FERC ¶ 61,231, P 80 (2011); *Interconnection Queuing Pracs.*, 122 FERC ¶ 61,252, P 16 (2008).

<sup>50</sup> Proposed ANOPR at P 22.

<sup>51</sup> Proposed ANOPR at P 23.

to be curtailed during certain system conditions. Agreeing to limit energy use to the actual output of the associated generating facility should limit the amount of network upgrades to accommodate the new load and limit the grid impact during peak load periods. In addition to agreeing to be curtailable, a large load should have the option to include a VPP in its interconnection request, with accreditation and telemetry consistent with market rules or the relevant regulatory authority. For any large loads located in states with large load tariffs that contain curtailment protocols, the curtailment conditions requested by the developer in the large load interconnection request must be consistent with the curtailment provisions in the applicable state tariff.

Second, the Commission should clarify that the associated generator (co-located or BYOG) must go through the standard interconnection queue if they seek any injection rights beyond what is necessary to serve just the large load.<sup>52</sup> This clarification is necessary because technological advances may allow some data centers to reduce consumption from, or even export energy back to, the grid in the future. The technology is constantly evolving and may result in significant power savings for both new and existing data centers.<sup>53</sup> Researchers from the Nicholas Institute at Duke University recently stated that “A variety of recent developments in computational load profiles, operational capabilities, and broader market conditions, however, *suggest that a new phase of opportunity and necessity is emerging.*”<sup>54</sup> The training of the neural networks used to power large language models and other machine learning algorithms is

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<sup>52</sup> See e.g. Southwest Power Pool, Inc., Revisions to Add the High Impact Large Load Processes and Generation Assessment, at 12, Docket No. ER26-247 (Oct. 24, 2025).

<sup>53</sup> How liquid cooling can address AI's water crisis in data centers, Data Center Dynamics (Nov. 4, 2024), <https://www.datacenterdynamics.com/en/opinions/how-liquid-cooling-can-address-ais-water-crisis-in-data-centers/>. (“In addition to reducing water usage, liquid cooling offers a major boost to energy efficiency. ... Many existing data centers are also working on liquid cooling retrofits for at least parts of their data centers.”).

<sup>54</sup> Duke University’s Nicholas Institute for Energy, Environment & Sustainability, Rethinking Load Growth: Assessing the Potential for Integration of Large Flexible Loads at 11, Feb. 2025, [www.nicholasinstitute.duke.edu/publications](http://www.nicholasinstitute.duke.edu/publications) (emphasis added).



deferrable, meaning that these processes could shift to periods of lower grid demand.<sup>55</sup> These processes could also be shifted to other data centers on the grid, to areas where there is less grid demand or more energy available.<sup>56</sup> Sending those requests for additional rights through the existing interconnection process will ensure nondiscriminatory treatment of all generation projects and prevent preferential access for co-located facilities.

6. *Transmission providers should not expedite large loads that agree to be curtailed.*

The Proposed ANOPR recommends that transmission providers expedite the study of large loads that agree to be curtailable and co-located facilities that agree to be curtailable and dispatchable.<sup>57</sup> SEIA does not support this principle.

The Commission should not require load that agrees to be curtailable to be explicitly expedited. Whether a large load is curtailable is something that should be reflected in its requested study assumptions.<sup>58</sup> If a large load agrees to be curtailed during certain system conditions, then that should limit the amount of network upgrades to accommodate the new load. This, in turn, should limit the length of time it would take for the new load to come online. There would be no need to expedite the requests, since the overall interconnection process would be faster by design.

The Commission should also not permit generation that agrees to be dispatchable to be expedited. As stated above, to maintain open access principles and not negatively impact generation projects that are already in the queue, BYOG arrangements must be electrically close,

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<sup>55</sup> *Id.*

<sup>56</sup> *Id.*

<sup>57</sup> Proposed ANOPR at P 24.

<sup>58</sup> See Section III.B.5 *supra*.

if not behind the same POI, then at least in the same zone.<sup>59</sup> This requirement would then ensure that network upgrades are kept to a minimum. To further ensure that open access principles are maintained, the Commission should require that a generator must go through the standard interconnection queue if they seek any injection rights beyond what is necessary to serve just the large load.<sup>60</sup> Going through the standing interconnection process would allow the transmission provider to identify and build the network upgrades necessary to carry the energy from the new generation facility to points beyond its associated large load.

Studies and project designs that limit the grid impacts of adding new generation and load limit the network upgrades identified in the initial large load interconnection process. Generation that connects through that process cannot agree to be dispatchable because the process constrains the ability of those resources to be deliverable beyond the associated large load in the first place.

7. *Network upgrade costs should be allocated to the large loads and generation that trigger the need for network upgrades. However, the amount of network upgrades should be limited under a well-designed large load interconnection process.*

As a general principle, SEIA agrees that if a large load interconnection request triggers a network upgrade, then that large load should pay for the upgrade. This would be consistent with Commission precedent,<sup>61</sup> and applying this cost allocation principle here would ensure that the costs of transmission network upgrades are allocated in a fair and nondiscriminatory manner.

However, the same concerns SEIA has identified regarding the study of load and

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<sup>59</sup> See Section III.B.3 *supra*.

<sup>60</sup> See Section III.B.6 *supra*.

<sup>61</sup> *Improvements to Generator Interconnection Procedures and Agreements*, Order No. 2023, 184 FERC ¶ 61,054 (2023); *Building for the Future Through Electric Regional Transmission Planning & Cost Allocation*, Order No. 1920, 187 FERC ¶ 61,068 (2024), at P 1; *Transmission Plan. & Cost Allocation by Transmission Owning & Operating Pub. Utilities*, Order No. 1000, 136 FERC ¶ 61,051 (2011), at P 4.

generation together also apply to the issue of cost allocation.<sup>62</sup> When large loads and associated generation are evaluated within a single study framework, transmission providers must clearly define how they will determine which customer—whether the large-load interconnection customer or a separate generation interconnection customer—has triggered the need for a network upgrade. Without clear methodologies, there is a risk that costs will be allocated inconsistently or that one class of interconnection customer (load or generation) will be unfairly disadvantaged. The Commission should therefore require transmission providers to develop transparent, standardized criteria for determining cost responsibility in cases where both large-load interconnections and generation projects contribute to the same transmission constraints.

8. *Large load interconnection customers should have the option to build network upgrades.*

The Proposed ANOPR recommends that the interconnection customer shall be afforded the same (or equivalent) option to build as currently provided to generator interconnection customers.<sup>63</sup> SEIA supports this proposal.

Under the *pro forma* Large Generator Interconnection Agreement, the interconnection customer has the option to build the network upgrades necessary to facilitate the interconnection request. Originally this option was limited to situations where the transmission provider notified the interconnection customer that it could not complete the construction of the facilities in a timely manner. But in Order No. 845, the Commission expanded the option to build to allow the interconnection customer to exercise the option regardless of whether the transmission provider can complete construction of the network upgrades on-time.<sup>64</sup> The Commission should grant

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<sup>62</sup> See Section III.B.3 *supra*.

<sup>63</sup> Proposed ANOPR at P 26.

<sup>64</sup> Order No. 845 at P 85.

large load developers the same option.

The rationale the Commission applied in Order No. 845 to expand the option to build for generator interconnection customers applies equally to large-load interconnection customers. Allowing interconnection customers to build network upgrades, whether that interconnection customer is a load developer or a generation developer, allows the customer to build network upgrades in an efficient and cost-effective manner.<sup>65</sup> The benefits of this option are the same, regardless of whether the interconnection customer is developing generation or new load. Requiring large load interconnection customers to wait for the transmission provider to build the network upgrades may result in higher costs and longer project development timelines.<sup>66</sup> To mitigate reliability concerns, the Commission should maintain the same protections for transmission providers, including the transmission provider's right to approve the engineering design, the equipment tests, and the construction of the network upgrades.<sup>67</sup>

9. *The Commission should establish a rule that focuses on bringing new generation online to serve new large loads.*

The Proposed ANOPR invited comments on the proposed requirement that an existing generating facility that seeks to enter a partial suspension to serve a new load at the same location must go through a system support resource (SSR) or reliability must run (RMR) type study.<sup>68</sup> SEIA takes no position on whether the removal of existing generation should be studied as an RMR or SSR. Removing an existing resource from the grid would have the same net impact as adding new load without generation to the grid. While the Commission should remain

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<sup>65</sup> Order No. 845 at P 85.

<sup>66</sup> Order No. 845 at P 86.

<sup>67</sup> Order No. 845 at P 91.

<sup>68</sup> Proposed ANOPR at P 27.

vigilant about the grid impacts of co-locating new load with existing generation, SEIA urges the Commission to establish incentives and efficient processes to encourage large loads to bring their own, *new* generation.

*10. Transmission and ancillary service costs must reflect the benefits the large load and co-located generation receive from the grid.*

The Proposed ANOPR states that “utilities serving large loads, including those at hybrid facilities, should be responsible for ancillary services based on peak demand, without consideration of any co-located generation.”<sup>69</sup> SEIA agrees that the transmission and ancillary service costs must reflect the benefits the large load and co-located generation receive from the grid.<sup>70</sup> However, the type of benefits received and the corresponding cost responsibility will depend on the specific arrangement.<sup>71</sup>

As explained earlier, some arrangements can be completely islanded from the grid and bear the risk of going offline.<sup>72</sup> Others cannot take such a risk. Given this diversity, applying a uniform ancillary service requirement based solely on peak demand would fail to capture the actual benefits provided by the transmission system to different large loads and co-location arrangements. The Commission should instead require transmission providers to develop methodologies that allocate ancillary service and transmission costs in proportion to the level of service and reliability actually used by each customer.

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<sup>69</sup> Proposed ANOPR at P 29.

<sup>70</sup> See Show Cause Order at P 77 (questioning whether Network Integration Transmission Service is the appropriate transmission service for all co-location arrangements or that such service would be consistent with cost causation principle.).

<sup>71</sup> Clean Energy Buyers Association Pre-filed comments at 5, Docket No. AD24-11; Talen Energy Pre-Filed Comments at 1-3, Docket No. AD24-11 (“Talen has been . . . safely operating co-located loads for over 18 months.”).

<sup>72</sup> See Post-Workshop Comments of the Solar Energy Industries Association, at 4, Docket No. AD24-11 (Dec. 9, 2024).

#### IV. CONCLUSION

The United States is entering a new era of electric demand growth driven by AI, data centers, and other large-load developments. The Commission has a critical opportunity to establish clear and legally durable rules that support the reliable interconnection of these new loads. As these comments explain, the interconnection of large loads presents novel challenges that require flexible procedures, accurate forecasting, and transparent cost allocation.

SEIA supports the Commission's leadership in this area and encourages it to issue a Final Rule that prioritizes flexibility and coordination between load and generation interconnections. Such a rule should provide the regulatory certainty needed to enable the timely development of both the generation and transmission infrastructure required to serve this growing demand. By adopting a standardized yet adaptable framework, the Commission can position the United States to meet the power demands of emerging technologies while strengthening grid reliability and advancing our national energy objectives.

Respectfully submitted,

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