UNITED STATES OF AMERICA

BEFORE THE

FEDERAL ENERGY REGULATORY COMMISSION

Improvements to Generator Interconnection Procedures and Agreements	)))	Docket No. RM22-14-000

REQUEST FOR REHEARING OF PUBLIC INTEREST ORGANIZATIONS (PIOs)

Pursuant to section 313(a) of the Federal Power Act,[1] and Rule 713 of the Federal Energy Regulatory Commission's ("Commission") Rules of Practice and Procedure,[2] the Energy Alabama, Environmental Defense Fund, National Audubon Society, Natural Resources Defense Council, NW Energy Coalition, Sierra Club, Southern Environmental Law Center, Sustainable FERC Project (together "Public Interest Organizations" or "PIOs") submit this request for rehearing of the Commission's Order in the above-mentioned docket.[3]

I. BACKGROUND

Order No. 2023 is the culmination of two years of Commission proceedings, commencing with its July 15, 2021 Advanced Notice of Proposed Rulemaking in Docket No. RM21-17-000, in which the Commission set forth and sought comments on a proposal for comprehensive reform to its transmission planning requirements, including its regulations governing the interconnection process.[4] After receiving hundreds of stakeholder comments,

[1] 16 U.S.C. § 825*l* (2018).
[2] 18 C.F.R. § 385.713 (2023).
[3] *Improvements to Generator Interconnection Procedures and Agreements*, 184 FERC ¶ 61,054 (2023) ("Order No. 2023").
[4] *Bldg. for the Future Through Elec. Reg'l Transmission Planning & Cost Allocation and Generator Interconnection*, 86 Fed. Reg. 40,266 (July 15, 2021), 176 FERC ¶ 61,024 (2021) ("ANOPR").

including from several members of the Public Interest Organizations,[5] the Commission issued its Notice of Proposed Rulemaking focusing specifically on interconnection reforms in this docket on July 5, 2022.[6] PIOs provided comments on the NOPR,[7] indicating their general support for the Commission's efforts while providing explanation on why further refinements to its proposal would be necessary to effectuate its aim of just and reasonable rates.[8]

PIOs continue to agree with the Commission's determination that regulatory reform is necessary to address current interconnection procedures that have led not only to unpredictable and unreasonable delays for developers and unjust costs for consumers across all regions, but also threaten reliability.[9] As noted by the Commission, the vast majority of commenters agree that reforms are necessary to help relieve nationwide interconnection queue backlogs and ensure that the Commission's *pro forma* interconnection procedures result in just, reasonable, and non-discriminatory or preferential rates, practices, and procedures.[10] PIOs generally agree with the Commission's determination that the following features of the existing system are particularly in need of reform: (1) the lack of information available to prospective interconnection customers; (2) the use of a serial first-come, first-served study process and a lack of consequences for the failure of transmission owners to meet study deadlines; (3) the lack of protocols around affected

[5] *See Comments of Pub. Int. Orgs.*, *Bldg. for the Future Through Elec. Reg'l Transmission Planning and Cost Allocation and Generator Interconnection*, Docket No. RM21-17-000 (Oct. 12, 2021), Accession No. 20211012-5519 ("PIO ANOPR Comments") and *Reply Comments of Pub. Int. Orgs.*, *Bldg. for the Future Through Elec. Reg'l Transmission Planning and Cost Allocation and Generator Interconnection*, Docket No. RM21-17-000 (Nov. 30, 2021), Accession No. 20211130-5284.
[6] *Improvements to Generator Interconnection Procs. and Agreements*, 87 Fed. Reg. 39,934 (July 5, 2022), 179 FERC ¶ 61,194 (2022) ("NOPR").
[7] *See Comments of Pub. Int. Orgs.*, *Improvements to Generator Interconnection Procs. and Agreements*, Docket No. RM22-14-000 (Oct. 13, 2022), Accession No. 20221013-5251 ("PIO NOPR Comments"); *Reply Comments of Pub. Int. Orgs.*, Improvements to Generator Interconnection Procs. and Agreements, Docket No. RM22-14-000 (Dec. 15, 2022), Accession No. 20221215-5071 ("PIO NOPR Reply Comments").
[8] PIO NOPR Comments *passim*.
[9] *Id.* at 2–3, 10–17; NOPR at PP 3, 37–38, 42–43, 58, 61.
[10] Order No. 2023 at PP 30, 38.

system studies; (4) the problems around evaluating new generating and alternative transmission technologies; and (5) the lack of modeling or performance requirements for non-synchronous generating facilities.[11]

PIOs also agree in principle that an integrated and systemic solution designed to address the core sources of interconnection queue delays is necessary to resolve the unprecedented queue backlogs that not only unfairly inhibit competition across all regions but unjustly imperil the ability of state, tribal, and local governments to meet energy policy requirements. PIOs support the Commission's shift to an interconnection rule structure that requires a first-ready, first-served cluster study process with firm study completion deadlines, including non-compliance penalties for transmission providers.

However, PIOs request that the Commission grant rehearing and reconsider four determinations in Order No. 2023. First, despite acknowledging that access to this interconnection information prior to the interconnection customer joining the queue is essential to the success and fairness of its reforms,[12] Order No. 2023 omits two of the NOPR's three proposed reforms to provide interconnection customers with the advanced cost information they need,[13] yet declines to expand the scope of the third reform. The Commission's dramatic reduction in the scope of information required of Transmission Providers is at odds with the Commission's finding that more information is essential for just, reasonable, and not unduly discriminatory rates, practices, and procedures; and its failure to explain how the remaining

[11] *See* Order No. 2023 at P 45.
[12] *Id. at* P 67.
[13] Order No. 2023 at PP 68, 839

information requirements will be sufficient or why additional data are overly burdensome is therefore arbitrary and capricious.

Second, despite the Commission's assertion that the current failure of transmission providers to properly analyze and employ new generation and transmission technologies has contributed to unjust and unreasonable costs to consumers, the Commission unreasonably grants transmission providers the unfettered discretion whether or not to implement any advanced transmission technology ("ATT") that has been demonstrated to be the less expensive option for consumers. Without some measure of accountability for transmission providers who fail to use cost-effective alternative technologies—for example, through an assumption of imprudence—the Commission essentially applies the demonstrably ineffective "reasonable efforts" standard, which it has already rejected as unjust, unreasonable, and unduly discriminatory in one study context.

Third, the Commission's decision to remove dynamic line rates ("DLRs") from the list of ATTs that transmission providers must consider is arbitrary and capricious. While the Commission cites comments that DLRs may be most effective in transmission contexts rather than interconnection contexts, the purpose of the mandatory consideration of ATTs is to identify the least cost technology option in applied situations. The Commission does not refute that in some interconnection situations, DLRs may be the least cost option, or a part of a suite of least cost technologies. Thus, allowing transmission providers to study ATTs without DLRs will in some instances cause the review to miss the most efficient option.

Finally, the Commission acts unreasonably and without proper consideration of the record by mandating consideration of resource-specific operating parameters for storage withdrawals, but for not storage injections or other resources. The Commission finds that

unrealistic and oversimplified modeling of certain technologies could lead to overestimates of grid impacts and thus inflate costs and cause unjust and unreasonable rates, yet it only implements a requirement for more realistic modeling in the limited circumstance of storage withdrawals. The failure to extend this requirement to storage injections and other technologies will perpetuate inaccurate estimates of grid impacts, and moreover, lead to inefficient usage of grid capacity, causing unjust and unreasonable rates.

II. STATEMENT OF ISSUES AND SPECIFICATION OF ERROR

Pursuant to Rules 203(a)(7) and 713(c),[14] the issues presented for consideration on rehearing are as follows:

The Commission violated the Federal Power Act (FPA) and Administrative Procedure Act in revising *pro forma* interconnection procedures under FPA Section 206 in a manner that will lead to unjust, unreasonable, and unduly discriminatory rates, practices, and procedures. In particular:

1. The replacement *pro forma* interconnection procedures fail to address the Commission's identified source of primary harm, as they do not provide interconnection customers with the very information the Commission has stated is necessary for those customers to have in order to ensure that interconnection queue rates, practices, and procedures are just, reasonable, and not unduly discriminatory.[15] The Commission's failure to engage with evidence in the record regarding the need for expanded data and to balance interests it admits are asymmetrical is also arbitrary and capricious.[16]

[14] 18 C.F.R. §§ 385.203(a)(7), 385.713.
[15] 16 U.S.C. §§ 824d(a), (b); *Pub. Serv. Elec. & Gas Co. v. FERC*, 989 F.3d 10, 13 (D.C. Cir. 2021) ("*Artificial Island"*) ("[I]f the Commission determines that the rate is unlawful, it must establish a just and reasonable replacement rate."); *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41, 54 (D.C. Cir. 2014) (quoting *Motor Vehicles Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)) (FERC must "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made."); *Farmers Union Cent. Exch., Inc. v. FERC*, 734 F.2d 1486, 1499–1500, 1518 (D.C. Cir. 1984).
[16] 16 U.S.C. § 825*l*; *Consol. Edison Co. of NY, Inc. v. FERC*, 45 F.4th 265, 278 (D.C. Cir. 2022) ("FERC's ratemaking orders will not stand . . . if they are 'either unreasonable or inadequately explained.'"); *Encino Motorcars v. Navarro*, 579 U.S. 211, 2126 (2016) (citing *FCC v. Fox Television Stations, Inc*., 556 U.S. 502, 515

2. The Commission's decision to grant transmission providers sole discretion over whether to implement ATTs demonstrated to be a "least cost" network upgrade in the interconnection process does not result in just and reasonable rates and fails to meet its statutory duty to protect ratepayers.[17]

3. The Commission's decision to exclude DLR from its list of enumerated ATTs is not supported by reasonable findings and will lead to unjust and unreasonable rates and undue discrimination.[18]

4. The Commission's decision only to mandate consideration of resource-specific operating parameters in limited circumstances (storage unit withdrawals) is based on arbitrary conclusions regarding transmission providers' ability to enforce compliance, disregards the available evidence in the record, and will lead to unjust and unreasonable costs for interconnection customers.[19]

(2009)); *National Fuel Gas Supply Corp. v. FERC*, 468 F.3d 831, 839 (D.C. Cir. 2006); *NorAm Gas Trans. Co.v. FERC*, 148 F.3d 1158, 1165 (D.C. Cir. 1998) (an agency will be reversed when it does not "engage with the arguments raised before it."); *K N Energy, Inc. v. FERC*, 968 F.2d 1295, 1303 (D.C. Cir. 1992) ([I]t remains the duty of the courts "to ensure that an agency engage the arguments raised before it—that it conduct a process of *reasoned* decisionmaking."); *Algonquin Gas Transmission Co. v. FERC*, 948 F.2d 1305, 1312–13 (D.C. Cir. 1991); *Motor Vehicles Mfrs. Ass'n*, 463 U.S. at 29, 33.

[17] 16 U.S.C. §§ 824d(a), 824e(a); *Emera Maine v. FERC*, 854 F.3d 9, 19, 21-22 (D.C. Cir. 2017); *Municipal Light Bds. v. FPC*, 450 F.2d 1341, 1348 (D.C. Cir. 1971), *cert. denied*, 405 U.S. 989 (1972); *Atl. Ref. Co. v. Pub. Serv. Comm'n of State of N.Y.*, 360 U.S. 378, 388 (1959).

[18] 16 U.S.C. §§ 824d(a), (b); *Artificial Island*, 989 F.3d 10, 13 ("[I]f the Commission determines that the rate is unlawful, it must establish a just and reasonable replacement rate."); *S.C. Pub. Serv. Auth.*, 762 F.3d 41, 54 (quoting *Motor Vehicles Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)) (FERC must "examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made."); *NorAm Gas Trans. Co.*, 148 F.3d 1158, 1165 (an agency will be reversed when it does not "engage with the arguments raised before it."); *Farmers Union Cent. Exch., Inc.*, 734 F.2d 1486, 1499–1500, 1518.

[19] *Id.*

III. REQUEST FOR REHEARING

A. The Commission erred by not providing an adequate method for prospective interconnection customers to obtain information about potential interconnection costs at a specific location prior to submitting an interconnection request.

i. The limited information publicly available to potential interconnection customers will lead to unjust, unreasonable, unduly discriminatory, and preferential rates.

The need to provide interconnection customers with adequate information to identify interconnection costs prior to joining the interconnection queue is a fundamental requirement for reforming the interconnection queue process. In the NOPR, the Commission acknowledged that "backlogs and delays, and the resulting timing and *cost uncertainty* hinder the timely development of new generation and thereby stifle competition in the wholesale electricity markets," which results in unjust, unreasonable, and unduly discriminatory or preferential rates and conditions.[20] Further, "cost uncertainty poses an especially significant obstacle because interconnection customers may not be able to finance substantial increases in unexpected interconnection costs,"[21] which can ultimately force interconnection customers to withdraw from the interconnection queue.[22]

Importantly, the level of uncertainty is not balanced since "an information asymmetry exists between independent power producers and transmission owner affiliates, in particular in non-RTO/ISO regions" such that transmission owners and their affiliates have greater access than independent power producers to information on the relative cost of interconnection at different points.[23] To provide prospective interconnection customers and other stakeholders with more cost certainty, the Commission proposed three reforms: public access information,

[20] Order No. 2023 at P 37 (emphasis added).
[21] *Id.* at P 43.
[22] *Id.* at P 41.
[23] *Id.* at P 67 and n.129.

informational studies, and optional solicitation studies, but declined to adopt the latter two reforms in Order No. 2023.

PIOs do not support or oppose the Commission's decision declining to adopt the informational studies or optional solicitation studies proposals; however, without those reforms,[24] the originally proposed "five data points"[25]for the public access information requirement are insufficient to remedy the Commission's finding in Order No. 2023 that the *pro forma* interconnection procedures "fail[] to contain a process by which an interconnection customer can obtain information about potential interconnection costs at a specific location or point of interconnection prior to submitting an interconnection request,"[26] making it difficult for interconnection customers to assess the commercial viability of a specific proposed generating facility before submitting an interconnection request. Both the informational studies and optional solicitation studies were specifically intended to provide additional cost information to prospective interconnection studies.[27]

In contrast, the public access information requirement was intended to provide high-level information to assist interconnection customers with comparing multiple points of interconnection and estimate congestion.[28] Specifically, the NOPR proposed that transmission providers "make publicly available an interactive visual representation of available

[24] In addition, the Commission removed the requirement for transmission providers to perform feasibility studies. *Id.* at PP 67, 92.
[25] *Id.* at P 152.
[26] *Id.* at P 46.
[27] *Id.* at P 68 (stating that "[t]he Commission proposed that the information interconnection study would provide cost estimates for the transmission provider's interconnection facilities and network upgrade costs specific to the scenario detailed in the interconnection agreement"). NOPR at 225 (finding that the information optional solicitation study can "help resource planning entities make decisions about their resource solicitations through increased access to information about the relative costs of different combinations of interconnection requests").
[28] *Id.* at P 152 (agreeing with MISO and Ameren that "the five data points proposed in the NOPR are reasonable and sufficient to provide a *high-level* comparison between several points of interconnection, and therefore to satisfy the goals of this reform") (emphasis added); *see also* NOPR at P 51 (stating that "[t]hese metrics would be intended to facilitate a high-level comparison between various points of interconnection, without submitting an interconnection request."

interconnection capacity" and a table "that allow[s] prospective interconnection customers to see certain estimates of a potential generating facilities' effect on the transmission provider's system" ("heatmap").[29]

Recognizing these deficiencies and gaps, many parties suggested that the Commission add more data to the heatmap to provide information for interconnection customers to readily identify network upgrades, which would help them estimate the costs to interconnect their project before they join the interconnection queue. For example, NextEra argued that certain information "would help an interconnection customer estimate what upgrades might be needed based on what appears to be the limiting element on the transmission facility, as well as the likely network upgrade."[30] Accordingly, NextEra suggested that the heatmap data could assist with this assessment if it includes information on the circuit and ratings of the equipment. PIOs argued that the heatmap should include the number of megawatts that "can be interconnected without substantial costs," among other things.[31]

In declining to adopt these suggestions, the Commission places the burden on interconnection customers to fill the gaps. The Commission finds that "such information *may* allow prospective customers to estimate expected congestion, and, in turn, to assess likely network upgrades . . . ."[32] While interconnection customers might be able to use software or hire consultants to transform the heatmap into meaningful data to estimate network upgrade costs, not all customers have access to those resources. Given the pervasiveness of the withdrawal issue and its impact on processing delays for other interconnection customers,[33] the heatmap

[29] NOPR at P 51.
[30] NextEra NOPR Comments at 11.
[31] *See* PIO NOPR Comments at 19; Order No. 2023 at P 111.
[32] Order No. 2023 at P 136.
[33] *Id.*, Appendix B: Interconnection Study Metrics, Table 2: RTOs/ISOs Interconnection Study Metrics 2022.

ultimately falls short of providing a reasonable method for interconnection customers to predict potential network upgrade costs prior to entering the queue. As the Commission finds, without having the requisite cost information prior to submitting an interconnection request, the "rational" decision that customers will make is to submit multiple interconnection requests to gain information on which interconnection sites are favorable, which leads to withdrawals that contribute to interconnection study delays and add costs to the interconnection process.[34]

The Commission should revisit the record to evaluate and adopt the additional data that will allow all customers to estimate the potential network upgrade costs using reasonable efforts. In Order No. 2023, the Commission affirms its preliminary determination that the *pro forma* informational requirements were unjust, unreasonable, and unduly preferential and discriminatory.[35] Failing to expand the data provided with the heatmap will keep in place the status quo *pro forma* infirmities and related excessive withdrawals and resulting queue backlogs.[36]

ii. The Commission's decision not to require that more information be made publicly available to potential interconnection customers is arbitrary and capricious, and is contrary to the weight of the comments and record.

Based on the existing record, the Commission's failure to meaningfully explain why it declined to adopt any additional data for the heatmap is arbitrary and capricious, not based on substantial evidence, and fails to engage with relevant arguments and contrary evidence in this proceeding. In denying to adopt additional data for the heatmap,[37] the Commission applies a benefit-burden balancing framework and finds that adding any additional data requirements to

[34] *Id.* at P 67; *see also* P 62.
[35] *Id.* at P 46.
[36] *Alliant Energy Corp. v. FERC*, 253 F.3d 748 (D.C. Cir. 2001); *Gulf States Utils. Co. v. FPC*, 411 U.S. 747, 759 (1973); *FPC v. Conway Corp.*, 426 U.S. 271, 279 (1976).
[37] Order No. 2023 at P 111 (noting a list of the additional data inputs for the heatmap from party comments).

assist interconnection customers is outweighed by the potential burden to transmission providers.[38] However, the Commission's analysis unduly favors transmission providers and is arbitrary since it fails to consider countervailing evidence that the heatmap must include additional data.

On one hand, the substantial benefits associated with providing interconnection customers with cost data prior to them submitting interconnection requests are clear. As stated earlier, a rational response to a lack of pre-interconnection queue information is for interconnection customers to submit multiple interconnection requests to gain information on which interconnection sites are favorable,[39] which leads to withdrawals that intensify unmanageable interconnection queue backlogs. Thus, whether the heatmap provides reasonable benefits—that is, ultimately decreasing speculative bids and unclogging the interconnection queues—turns on the Commission providing interconnection customers with enough information to estimate network upgrade costs. The much-discussed Midcontinent Information System Operator ("MISO") heatmap example indicates that while the heatmap and related data proposed by the Commission might be helpful, they are *not* enough.[40] Thus, the Commission has failed to demonstrate how its proposal will achieve the intended benefits.

On the other hand, the marginal burden for transmission providers to provide some level of additional heatmap data is likely minimal since they can automate the "information posting and interactive capability" using "available industry system simulation tools."[41] The Commission does not explain why any of the suggested additional data will be overly

[38] *Id.* at P 154.
[39] *Id.* at P 67.
[40] *Id.* at PP 101, 102 (noting that a heatmap that does not provide sufficient detail or commercially actionable information is not useful); see also *id.* at n.261.
[41] *Id.* at P 139.

burdensome for transmission providers to include in the heatmap. Thus, PIOs believe that the Commission fails to strike a balance that appropriately matches the benefits that the additional data would provide with the burden of providing them.

Moreover, the Commission fails to engage with comments arguing that the heatmap must include additional data for it to provide a meaningful tool for prospective interconnection customers to use when considering whether they should submit an interconnection request. As noted above, PIOs and several other commenters explicitly provide specific examples of additional information that the Commission should include in the heatmap requirement. Thus, the Commission should grant rehearing and fully evaluate the evidence demonstrating that the heatmap requirement should be expanded, given the importance of providing interconnection customers with the requisite information to assess their ability to advance through the interconnection queue prior to making their initial deposit and being subject to withdrawal fees.

B. The Commission erred in granting to transmission providers sole discretion over whether to implement ATTs as a network upgrade in the interconnection process, regardless of whether transmission provider studies demonstrate the ability for ATTs to allow for safe interconnection at quickly and at least cost.

Allowing interconnection customers to interconnect in a reliable, efficient, transparent, and timely manner is a fundamental requirement for reforming the interconnection queue process. In the NOPR, the Commission stated that ATTs are important to the transmission system because they "often can be deployed both more quickly and at lower costs than other network upgrades."[42] In its final rule, the Commission affirms that failing to evaluate ATTs renders rates unjust and unreasonable and "fails to ensure that interconnection customers are able

[42] *Id.* at P 1534.

to interconnect in a reliable, efficient, transparent, and timely manner."[43] Numerous commentors agree with the Commission's finding that ATTs can reduce rates and allow for faster and more efficient interconnection.[44]

PIOs support the Commission's decision in the final rule to require transmission providers to study ATTs in the interconnection study process. However, in granting to those same transmission providers the sole discretion over whether to implement ATTs, the Commission undermines its own finding that ATTs can reduce costs and increase the speed and efficiency of the interconnection process.

Under the final rule, a transmission provider could find that an interconnection customer could interconnect at a lower cost and faster using ATTs than other traditional transmission solutions but still require the interconnecting customer to use the more expensive, slower solution. The final rule only states that the transmission provider must make its decision whether to allow for the use of ATTs "consistent with good utility practice, applicable reliability standards, and other applicable regulatory requirements."[45] The rule does not, however, define

[43] *Id.* at P 1583.

[44] Docket No. RM22-14-000, Improvements to Generator Interconnection Procs. and Agreements, Initial and Reply Comments of the following parties filed on October 13, 2022 and December 14, 2022, respectively: Reply Comments of the Am. Council on Renewable Energy at 3-4; Comments of Advanced Energy Econ at 42; Reply Comments of Advanced Energy Econ.at 41; Comments of AES Clean Energy Dev., LLC at 25; Initial Comments of Amazon Energy LLC at 5-6; Initial Comments of the Clean Energy Buyers Ass'n at 61-62; Clean Energy Associations Reply Comments at 9; Initial Comments of Clean Energy Buyers Ass'n, Improvements at 5; Consumer Protection Coalition Reply Comments at 2; Comments and Protest of the Cmty. Renewable Energy Ass'n and NewSun Energy LLC at 92; Comments of EDF Renewables, Inc. at 14; Comments of ENGIE N. Am., Inc at 12; Comments of Elec. Power Rsch. Inst.at 20-21; Reply Comments of Fervo Energy Co. at 8-9; Comments of the Ill. Com. Comm'n at 14; Comments of Invenergy Solar Dev. N. Am. LLC, Invenergy Thermal Dev. LLC, Invenergy Wind Dev. N. Am. LLC, and Invenergy Transmission LLC at 52; Motion to Intervene and Comments of the Nat'l Ass'n of Regul. Util. Comm'r at 38-39; Reply Comments of the Oceti Sakowin Power Auth.at 14; Comments of the Pub. Utils. Comm'n of Ohio's Office of the Fed. Energy Advocate at 15; Initial Comments of the Org. of MISO States, Inc.at 19; Initial Comments of Ørsted N. Am.at 3; Reply Comments of Ørsted N. Am. at 8; Initial Comments of the R Street Inst.at 9; Comments of the Solar Energy Indus. Ass'n at 41; Comments of Tesla Inc.at 8; WATT Coalition Initial Comments at 2; WATT Coalition Reply Comments at 1.

[45] Order No. 2023 at P 1578.

what it means to decide "consistent with good utility practice," leaving the door open for transmission providers to reject ATTs even where studies demonstrate them to be least cost and faster than the chosen interconnection technology.

The transmission provider is not even required to justify its decision not to allow the use of ATTs. Instead, the Commission merely requires the transmission provider to include "an explanation of the results of the evaluation of the enumerated alternative transmission technologies for feasibility, cost, and time savings as an alternative to a traditional network upgrade."[46] Those results could well be that the ATTs are superior to the chosen upgrade in terms of speed, cost, and efficiency, with no explanation of why despite these benefits the ATTs were rejected. The Commission's decision to grant transmission providers sole discretion over whether to implement ATTs, therefore, makes the study and publication of the study results a mere formality rather than a way to implement the least cost, most efficient transmission upgrades for interconnecting customers. So long as the transmission checks the box that says it studied enumerated ATTs it can carry on selecting other solutions no matter how much more expensive or slower they are than the studied ATTs.

By granting the transmission provider the ability to reject ATTs that its own studies have demonstrated are least cost and/or fastest solutions, the Commission's decision disregards the FPA's prohibition against unjust and unreasonable rates and undue discrimination. The Commission's requirement that the transmission provider base its decision on "good utility practice, applicable reliability standards, and other applicable regulatory requirements"[47] is

[46] *Id.* at PP 1578, 1590.
[47] *Id.* at P 1578.

insufficient. Not only has the Commission left the elements of those requirements undefined, the FPA is not included on the list of considerations.

Requiring traditional upgrades when a transmission provider's own study has found that ATTs would be cheaper and/or faster imposes excessive costs on interconnection customers. Such disregard for ATTs also courts undue discrimination against the providers of ATTs by favoring traditional upgrades despite the demonstrated benefits of ATTs. Merely requiring study and report results of ATTs does not cure these violations of the FPA.

The Commission lacks the authority to grant transmission providers the ability to implement unjust and unreasonable rates by refusing to implement ATTs where they have been found to be the least cost and/or fastest solution to interconnection issues while maintaining reliability. The Commission should grant rehearing to ensure that transmission providers select ATTs where selecting traditional upgrades would result in excessive costs or delays.

C. The Commission erred in removing DLR from its enumerated list of ATTs that transmission providers must study in the interconnection process.

In the final rule, the Commission modifies its enumerated list of ATTs from the one proposed in the NOPR. In modifying its list, the Commission removed DLR, thereby leaving it to individual transmission providers to determine whether or not to study DLR in the interconnection process. The Commission's decision to exclude DLR from its list of enumerated ATTs is not supported by a reasonable basis and will lead to unjust and unreasonable rates and undue discrimination.

In justifying its decision to exclude DLR from the enumerated list, the Commission states that "the technology may be less beneficial in the interconnection context than in the

transmission operations and planning context . . . . "[48] The Commission goes on to state that "while dynamic line ratings may relieve congestion to increase available interconnection service temporarily or in the short-term, they may not be an adequate substitute for building interconnection facilities and/or traditional network upgrades identified through the interconnection study process that are needed to reliably interconnect a generating facility to the transmission system during all hours."[49]

In justifying its decision to remove DLR from the enumerated list, the Commission failed to engage with any arguments put forward by parties in favor of including DLR. For example, the WATT Coalition provided both initial and reply comments demonstrating the efficacy of DLR in improving carrying capacity[50] and reducing wind curtailments and increasing transmission system headroom.[51] Instead, the Commission merely cites to comments opposed to including DLR.

The Commission's argument that DLR should not be included because it is better utilized in operations and planning processes or arguing that sometimes a technology will be inferior to another technology is not a sufficient justification for its exclusion in the interconnection process. Under the Commission's reasoning, any technology that *may* see higher benefits in another context should be excluded from the enumerated list. But that argument does not resolve whether DLRs or any other technology are likely to provide benefits in the interconnection process that exceed some traditional transmission solutions. The record contains evidence that

[48] *Id.* at P 1598.
[49] *Id.*
[50] WATT Coalition Initial Comments at 2, Docket No. RM22-14-000 (October 13, 2022) (citing a Department of Energy studying finding an increase of carrying capacity by 44%).
[51] WATT Coalition Reply Comments at 16-17, Docket No. RM22-14-000 (December 12, 2022) (citing a National Grid finding that a single DLR project will reduce wind curtailments by 350MW and add 190MW in additional headroom).

DLR may provide substantial benefits in some instances in the interconnection planning process and therefore should be included.

The Commission's decision to exclude DLR from the enumerated list is arbitrary and will lead to unjust and unreasonable rates by increasing the cost of interconnection in some circumstances. As the Commission notes, ATTs increase the efficiency of interconnection queues by allowing solutions to be implemented faster and lower cost. By excluding DLR, an important ATT, the Commission risks making queues less efficient. For these reasons, the rehearing is warranted on the need to include DLR in the enumerated list of ATTs.

D. The Commission erred in limiting consideration of operating parameters to withdrawals of energy by storage resources.

In the NOPR, the Commission found that "[i]f the operating assumptions for interconnection studies do not reflect the operational pattern of the interconnecting generating facilities, it is possible that interconnection studies will overestimate the proposed generating facilities' impact on the transmission system," resulting in excessive and unnecessary network upgrades and, therefore, unjust and unreasonable rates.[52] The Commission thus proposed requiring transmission providers to study interconnection requests from storage resources under operating assumptions for withdrawals provided by the interconnection customer,[53] and asked for comments on whether this reform should be extended to reflect operating assumptions regarding injections from other technologies.[54] In Order No. 2023, the Commission adopts the

[52] NOPR at P 279.
[53] *Id.* at PP 280-285.
[54] *Id.* at P 286.

NOPR proposal regarding storage withdrawals,[55] but declines to extend it to storage injections or other technologies.[56]

While numerous commenters supported the NOPR's preliminary conclusion that failure to use realistic operating assumptions can result in unnecessary network upgrades, stifle competition, and create unduly discriminatory barriers,[57] comments in opposition generally cited implementation concerns.[58] The Commission's decision not to extend this reform is justified by a single sentence referencing "potential reliability impacts and the administrative burden."[59] This vague statement of concern cannot possibly be a valid basis for the Commission's refusal to expand its reform to storage injections and other technologies, particularly given the array of evidence provided by commenters explaining why expansion was important.

The Commission's determination is also at odds with ample evidence that was presented to it explaining how reliability impacts of injections are already being managed by grid operators. For example, in 2022 MISO managed transmission congestion, and thus prevented reliability violations, by curtailing an average of 726MW and as much as 5.9GW of wind.[60] SPP reports a similar amount of curtailments. SPP further notes that the 93 – 95% of those curtailments were directed by automated software, and that this software accounts both for wind generation and load conditions to manage transmission congestion.[61]

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[55] Order No. 2023 at P 1509.
[56] *Id.* at P 1529.
[57] *Id.* at PP 1458 and 1480.
[58] *Id.* at PP 1483, 1485-1486.
[59] *Id.* at P 1529.
[60] Potomac Economics, *2022 State of the Market Report for the MISO Electricity Markets* at p ii (June 2023), chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.potomaceconomics.com/wp-content/uploads/2023/06/2022-MISO-SOM_Report_Body-Final.pdf.
[61] SPP Market Monitoring Unit, *State of the Market 2021* at 58-62 (May 2022), chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.spp.org/documents/67104/2021%20annual%20state%20of%20the%20market%20report.pdf.

Thus, the Commission erred by (1) basing a decision not to implement a reform necessary to avoid unjust and unreasonable rates on an unsupported and unexplained single-sentence claim that the reform might cause undue administrative burden or reliability concerns; (2) failing to evaluate, using its own criteria, whether current practices lead to excessive and unnecessary network upgrades and thereby unjust and unreasonable rates; (3) arbitrarily and capriciously concluding, without adequate discussion or record support, that certain controls and contracts are sufficient to resolve reliability concerns associated with storage withdrawals,[62] and insufficient to resolve those same concerns associated with storage injections and other technologies; and (4) failing to consider that the reliability and administrative issues supporting the Commission's decision already exist and are routinely handled in operations today, despite ample evidence in the record for that understanding.

Ultimately, however, the Commission's decision not to consider operating parameters for all resources is unreasonable because it conflicts with the changing nature of the power grid. One of the main values of storage resources is that they can inject power at times when other resources cannot. Resource adequacy approaches that are rapidly becoming standard consider the fact that different technologies are available at different times, and reward resources that can produce electricity when other resources are not available. To provide reliability in all hours, it will likely be necessary and economic to build renewables resources to a level where they are regularly curtailed, necessitating consideration of operational parameters.[63] All of these trends dictate that the future transmission system will be used dynamically, with different technologies

[62] Order No. 2023 at PP 1515-1522.
[63] *See, e.g.,* Novacheck, Brinkman, and Porrio, *Operational Analysis of the Eastern Interconnection at Very High Reneawble Penetrations* at 16-20 (2018); *see also* Devonie Oleson, *Reframing Curtailment: Why too Much of a Good Thing is Still a Good Thing* (July 18, 2022), https://www.nrel.gov/news/program/2022/reframing-curtailment.html.

sharing transmission capacity based on changing system conditions. Without consideration of operating parameters in interconnection studies, certain interconnection customers will be forced to pay for increasingly excessive and unnecessary upgrades that will sit unused, which will ultimately lead to a less efficient power system and unjust and unreasonable electricity costs for ratepayers.

IV. CONCLUSION

The Public Interest Organizations request that the Commission grant this request for rehearing of Order No. 2023 for the reasons stated above.

Respectfully submitted this 28th day of August 2023

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CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document has been served on this day or the next upon each person designated on the official service list compiled by the Secretary for this proceeding.

Dated at San Francisco, California this 28th day of August 2023.

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