

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Improvements to Generator Interconnection)
Procedures and Agreements)
)

Docket No. RM22-14-000

**MOTION TO INTERVENE AND COMMENTS OF THE
NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS**

Pursuant to Rules 211 and 214 of the Federal Energy Regulatory Commission (“FERC” or “Commission”) Rules of Practice and Procedure,¹ the National Association of Regulatory Utility Commissioners (“NARUC”) submits this motion to intervene and comments in response to the Commission’s June 16, 2022 Notice of Proposed Rulemaking (“NOPR”).² In the NOPR, the Commission is proposing reforms to “address interconnection queue backlogs, improve certainty, and prevent undue discrimination for new technologies.”³

I. COMMUNICATIONS

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¹ 18 C.F.R. §§ 385.211, 385.214 (2020).

² *Improvements to Generator Interconnection Procedures and Agreements*, Notice of Proposed Rulemaking, 179 FERC ¶ 61,194 (2022) (“NOPR”).

³ NOPR at P 1.

II. MOTION TO INTERVENE

NARUC is the national organization of the state commissions responsible for economic and safety regulation of the retail operations of utilities. NARUC's members have the obligation under state law to ensure the establishment and maintenance of such energy utility services as may be required by the public convenience and necessity, as well as ensuring that those services are provided at just and reasonable rates. NARUC's members include the government agencies in the fifty states, the District of Columbia, Puerto Rico, and the Virgin Islands charged with regulating the rates, terms, and conditions of service associated with the intrastate operations of electric, natural gas, water, and telephone utilities. Both Congress⁴ and the federal courts⁵ have long recognized NARUC as the proper party to represent the collective interests of state regulatory commissions.

NARUC member state commissions and FERC have regulatory authority over and oversight of regional and local transmission facilities. Given the topics covered by the NOPR, this proceeding will have an impact on NARUC member state commissions and, thus, NARUC has a direct interest in it.

⁴ See 47 U.S.C. § 410(c) (1971) (Congress designated NARUC to nominate members of Federal-State Joint Boards to consider issues of concern to both the Federal Communications Commission and State regulators with respect to universal service, separations, and related concerns); Cf., 47 U.S.C. § 254 (1996) (describing functions of the Joint Federal-State Board on Universal Service). Cf. *NARUC, et al. v. ICC*, 41 F.3d 721 (D.C. Cir. 1994) (where the Court explains “[c]arriers, to get the cards, applied to . . . [NARUC], an interstate umbrella organization that, as envisioned by Congress, played a role in drafting the regulations that the ICC issued to create the ‘bingo card’ system”).

⁵ See *United States v. Southern Motor Carrier Rate Conference, Inc.*, 467 F. Supp. 471 (N.D. Ga. 1979), *aff'd* 672 F.2d 469 (5th Cir. 1982), *aff'd en banc on reh'g*, 702 F.2d 532 (5th Cir. 1983), *rev'd on other grounds*, 471 U.S. 48 (1985).

III. INTRODUCTION

The Commission opened this proceeding pursuant to its authority under section 206 of the Federal Power Act (“FPA”)⁶ as part of its larger, ongoing effort to reform the processes and procedures used to develop transmission facilities in the United States.⁷ Specifically, through the proposed reforms in this proceeding, the Commission seeks to address interconnection queue backlogs, decrease uncertainty in these processes, and prevent undue discrimination for new technologies.⁸ NARUC commends the Commission for continuing down this path of proposing reforms to address outstanding issues concerning transmission planning, development, and deployment. Through this process and the work of the Joint Federal-State Task Force on Electric Transmission (“Task Force”),⁹ NARUC welcomes these opportunities to share the experiences of the states with the Commission and work collaboratively to find solutions.

IV. COMMENTS

A. Reforms to Implement a First-Ready, First-Served Cluster Study Process

1. Pre-queue information availability

The Commission proposes two reforms to increase transparency for prospective interconnection customers, thus allowing those customers to better assess the viability of a specific proposed generating facility, which reduces the need for multiple speculative

⁶ 16 U.S.C. § 824e.

⁷ See *Building for the Future Through Electric Regional Transmission Planning & Cost Allocation & Generator Interconnection*, Advance Notice of Proposed Rulemaking, 176 FERC ¶ 61,024 (2021) (“ANOPR”); *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, Notice of Proposed Rulemaking, 179 FERC ¶ 61,028 (2022).

⁸ NOPR at P 1.

⁹ *Joint Federal-State Task Force on Electric Transmission*, 175 FERC ¶ 61,224 (2021).

interconnection requests.¹⁰ The first reform proposed by the Commission is a requirement for “transmission providers to offer an informational interconnection study to serve as additional information for prospective interconnection customers in deciding whether to submit an interconnection request.”¹¹ The Commission also proposes to “set minimum requirements for transmission providers to publicly post available information pertaining to generator interconnection”¹² so potential customers may evaluate efficient points of interconnection before entering the queue and reduce the incentive to submit multiple speculative interconnection requests.

NARUC did not offer a direct position on pre-queue information availability in its ANOPR comments. However, NARUC supported making interconnection request processes simpler and more accessible.¹³ NARUC also supported more co-optimization of generation and transmission planning processes, which necessarily requires a more proactive exchange of information between transmission providers and generation planners and developers.¹⁴

NARUC does not take a position on the specific requirements of the Commission’s proposals and does not express a preference for potentially competing proposals (e.g., “additional information interconnection study requirement” versus “public interconnection information”). However, NARUC supports improving the quality and expanding the quantity of information available to potential interconnecting generation customers to allow for more informed decision making when requesting interconnection service. The potential reforms

¹⁰ NOPR at P 40.

¹¹ *Id.* at P 42.

¹² *Id.* at P 49.

¹³ Motion to Intervene and Comments of the National Association of Regulatory Utility Commissioners, Docket No. RM21-17-000 (October 12, 2021) (“NARUC ANOPR Comments”) at 37.

¹⁴ NARUC ANOPR Comments at 41-43.

proposed by the Commission to improve pre-queue information availability are measured steps toward co-optimizing transmission and generation planning that respect both (1) the jurisdiction of the states over generation decisions and (2) the concept of open access to the grid for interconnection customers. NARUC anticipates that improved decision quality in the pre-queue phase should reduce the need for speculative “placeholder” interconnection requests, later withdrawals, and subsequent restudies. Thus, these reforms are likely to promote reliability and cost-savings by encouraging more optimal interconnection requests that can be processed more efficiently and at lower overall cost.

2. Cluster studies as *pro forma* process

In the NOPR, the Commission finds “the inefficiency of the *pro forma* serial first-come, first-served interconnection study process in the *pro forma* [Large Generator Interconnection Procedures (“LGIP”)] is a major cause of the backlogs delaying transmission providers’ interconnection queues.”¹⁵ To remedy this issue, the Commission proposes to “require transmission providers to eliminate the serial first-come, first-served study process and instead use a first-ready, first-served cluster study process” through amendments to the *pro forma* [Large Generator Interconnection Agreement (“LGIA”)] and *pro forma* LGIP.¹⁶ To support this reform, the Commission preliminarily finds “a first-ready, first-served cluster study process, coupled with increased financial commitments and readiness requirements that [the Commission] also propose[s] in this NOPR, will address the interconnection queue issues described above.”¹⁷ The Commission requests comment on several aspects of the above proposal, including the foundational question of “whether the Commission should require transmission providers to

¹⁵ NOPR at P 53.

¹⁶ *Id.* at P 64.

¹⁷ *Id.*

conduct cluster studies on subgroups of interconnection customers based on areas of geographic and electric relevance.”¹⁸

NARUC supports streamlining the interconnection study process to permit interconnection studies in batches or “clusters” based on geographic area and electrical relevance rather than on a first-come, first-served basis. As stated in its ANOPR comments, NARUC finds that a cluster study approach is superior to a serial, first-come, first-served approach in two ways.¹⁹ First, performing a single study for a batch of generator interconnection requests reduces the time and resources transmission providers must commit to study interconnection requests, as compared with sequential, project-by-project studies. NARUC expects streamlining the study process and optimizing usage of limited resources should ultimately produce cost savings for end-use customers and other benefits associated with more timely and efficient interconnections of generating capacity. Second, because the cost of network upgrades identified in a cluster study may be shared across multiple projects, using a cluster study approach alleviates the cost burden placed on a single generator and should result in more equitable cost-sharing overall. As a result, a single “first-mover” project would not pay a disproportionate share of upgrade costs where multiple generators seeking to interconnect in the same general area of the electric grid might also benefit from such upgrades. Better cost-sharing will likely also reduce the number of projects that ultimately withdraw from the queue, which, in the past, has been a cause of restudies and further delays.

NARUC does not offer comment on the specific mechanics of the Commission’s proposed cluster study approach. However, NARUC does favor affording transmission

¹⁸ *Id.* at P 77.

¹⁹ NARUC ANOPR Comments at 39-40.

providers some flexibility to design an optimal cluster study approach for their regions in consultation with the states and other stakeholders. As the Commission notes, many large transmission providers have already implemented a cluster study approach.²⁰ Any reform adopted by the Commission should build on this progress and not unnecessarily burden proactive transmission providers with overly prescriptive new requirements that substantially conflict with ongoing interconnection study reform efforts.

3. Allocation of upgrade costs within and among study clusters

As noted above, the Commission proposes to require clustered interconnection studies. However, the Commission notes that “the *pro forma* LGIP . . . does not explain how transmission providers should allocate network upgrade costs among interconnection customers within a cluster.”²¹ Therefore, the Commission proposes “to revise the *pro forma* LGIP . . . to require transmission providers to allocate network upgrade costs to interconnection customers within a cluster using a proportional impact method.”²²

The Commission also identifies another potential cost allocation shortcoming, in that “[t]here are no existing provisions in the *pro forma* LGIP that require transmission providers to share network upgrade costs between earlier-in-time and later-in-time interconnection customers (e.g., customers studied in separate clusters).”²³ To remedy this gap, the Commission proposes “to revise the *pro forma* LGIP and *pro forma* LGIA to require transmission providers to allocate the costs for network upgrade costs between interconnection customers in an earlier cluster study

²⁰ NOPR at n.226.

²¹ *Id.* at P 84.

²² *Id.* at P 88.

²³ *Id.* at P 90.

and interconnection customers in a subsequent cluster study that benefit from the same network upgrade in a manner that is roughly commensurate with the benefits received.”²⁴

In its ANOPR comments, NARUC addressed the allocation of interconnection upgrade costs and urged the Commission “to retain the participant funding model applicable to network upgrades resulting from generator interconnections.”²⁵ However, NARUC understood the need to evaluate new cost-sharing methods and suggested, “[r]ather than embark on a full-scale revision to the rule, FERC should retain the core tenet of participant funding, while exploring the as yet untapped potential economies of scale that could result from increased coordination among participants.”²⁶

The proposed requirement to share upgrade costs among cluster study participants aligns with NARUC’s position that costs can be allocated more broadly and reasonably by implementing a cluster study process,²⁷ while preserving the participant funding model. While NARUC strongly supports the concept of shared upgrade costs within a cluster, it does not offer comment on the specific proposal to require cost-sharing within a cluster based on the proportional impact method. NARUC understands this approach is already widely utilized by transmission providers to allocate cluster study costs among study participants, but the applicability and specific requirements of such a methodology appear to be issues best suited to comment from transmission providers and future generator interconnection customers.

As noted above, NARUC supports sharing costs within study clusters to address disproportionate cost burdens on individual generators but has commented in the past that this

²⁴ *Id.* at P 98.

²⁵ NARUC ANOPR Comments at 30, *see also id.* at 23, 30-33, 39.

²⁶ *Id.* at 23.

²⁷ *Id.* at 40.

enhancement “likely will need to be paired with other potential solutions to maximize the benefit.”²⁸ As a possible additional cost allocation enhancement, NARUC specifically suggested in its ANOPR comments that the Commission consider “assignment of a portion of costs to later-in-time interconnection customers.”²⁹ Therefore, NARUC also supports the Commission’s proposal to share upgrade costs across study clusters as a measured but reasonable reform to improve cost assignment across projects, while retaining the participant funding model. The proposal in this NOPR to share upgrade costs across multiple study clusters is a logical extension of the cluster cost-sharing concept and could spread costs over even more interconnection customers benefitting from upgrades.

Some states are concerned the proposed reform to share costs among earlier-in-time and later-in-time cluster study participants adds substantial billing complexity, administrative cost, and may diminish cost certainty for interconnection customers. Therefore, NARUC encourages the Commission to work collaboratively with transmission providers to explore best practices and ensure the reform can be implemented feasibly and affordably.

4. Enhanced Financial Commitments and Readiness Requirements

In the NOPR, the Commission proposes enhanced financial commitments and readiness requirements to support the shift from a serial first-come, first-served interconnection study process to a first-ready, first-served cluster study process. The Commission’s proposals include increased study and LGIA deposits,³⁰ more stringent site control requirements,³¹ improved

²⁸ *Id.* at 40.

²⁹ *Id.* at 32-33.

³⁰ NOPR at PP 104-110.

³¹ *Id.* at PP 111-123.

commercial readiness frameworks,³² required assessment of withdrawal penalties,³³ and the establishment of a transition process.³⁴

NARUC supports the implementation of reasonable increased financial commitments and readiness requirements to support more efficient queue management and processing. For example, in its ANOPR Comments, NARUC advocated “instituting more site control requirements for [interconnection customers] across the United States such as those in place in MISO and SPP”³⁵ because such requirements are a more effective method of queue management than the relatively small financial deposits required in other regions. Likewise, NARUC supports other reasonable queue management reforms proposed by the Commission, including enhanced financial commitments, commercial readiness criteria, and withdrawal penalties. NARUC also supports the requirement for transmission providers to implement a transition process subjecting existing interconnection customers to the new study process, financial commitments, and readiness requirements, but allowing existing late-stage customers to finish the interconnection process under existing rules.

As detailed above, NARUC supports the proposed requirement to implement first-ready, first-served cluster study processes and views the above-described reforms as a necessary step to enable such a transition. However, NARUC also wishes to recognize the multiple transmission providers around the country that are proactively and voluntarily implementing similar reforms to ameliorate backlogs in their interconnection queues. These providers include, but are not

³² *Id.* at PP 127-134.

³³ *Id.* at PP 138-148.

³⁴ *Id.* at PP 149-160.

³⁵ NARUC ANOPR Comments at 36-37.

limited to, Duke Energy's North Carolina subsidiaries,³⁶ the Southwest Power Pool,³⁷ the Midcontinent Independent System Operator,³⁸ and the PJM Interconnection.³⁹ These entities' efforts generally align with the goals of the Commission's above proposals and NARUC supports some implementation flexibility to account for regional differences, similar to NARUC's comments regarding existing cluster study approaches.

5. Consideration of alternate interconnection processes in certain areas

NARUC supports the above-described cluster study requirement and associated cost allocation and readiness reforms. However, some states are concerned that, in certain regions where the demand for interconnection now significantly exceeds the available supply, the Commission's proposed cluster study and queue management reforms alone may be insufficient to solve this imbalance. Under these circumstances, these states think some form of project prioritization may be needed to effectively allocate scarce interconnection access to the highest value projects. While NARUC takes no position on the merits of these scarcity concerns and

³⁶ See *Duke Energy Carolinas, LLC, Duke Energy Progress, LLC, and Duke Energy Florida, LLC*, Revisions to Attachment J (Large Generator Interconnection Procedures) to Joint OATT. Docket No. ER21-1579-000 (April 1, 2021); *Duke Energy Carolinas, LLC, Duke Energy Progress, LLC, and Duke Energy Florida, LLC*, Order Accepting Tariff Revisions, Docket Nos. ER21-1579-000; ER21-1579-001 (August 6, 2021).

³⁷ See *Southwest Power Pool, Inc.*, Submission of Tariff Revisions to Modify the Generator Interconnection Procedures to Mitigate Generator Interconnection Backlog, Docket No. ER22-253-000, (October 29, 2021); *Southwest Power Pool, Inc.*, Order Accepting Tariff Revisions, Docket No. ER22-253-000 (January 14, 2022).

³⁸ See *Midcontinent Independent System Operator, Inc.*, Proposed Revisions to Attachment X of MISO Tariff to Shorten the GIP Timeline, Docket No. ER22-661-000 (December 15, 2021); *Midcontinent Independent System Operator, Inc.*, *Midcontinent Independent System Operator, Inc.*, Order Accepting Tariff Revisions, Docket No. ER22-661-000 (March 14, 2022).

³⁹ See *PJM Interconnection, L.L.C.*, Tariff Revisions for Interconnection Process Reform, Request for Commission Action by October 3, 2022, and Request for 30-Day Comment Period, Docket No. ER22-2110-000 (June 14, 2022) (NARUC understands this pending application includes both queue reform and a transition to a cluster study approach.).

potential solutions given the wide diversity of situations across the county, it encourages the Commission to seriously engage and respond to these concerns.⁴⁰

B. Reforms to Increase the Speed of Interconnection Queue Processing

1. Elimination of the Reasonable Efforts Standard

The NOPR asserts that failure to timely complete interconnection studies is a significant problem nationwide.⁴¹ Citing data collected pursuant to Order No. 845, the Commission demonstrates that the reasonable efforts standard does not provide a meaningful incentive for the transmission providers to complete their studies within the deadlines established in their tariffs.⁴² To address this concern, the Commission proposes to revise the *pro forma* LGIP to eliminate the reasonable efforts standard for transmission providers completing interconnection studies, and instead impose firm study deadlines and establish penalties that would apply when transmission providers fail to meet these deadlines.⁴³

a. Proposed Penalties and Penalty Structure

The NOPR proposes to add a new section 3.9 to the *pro forma* LGIP to impose financial penalties on transmission providers that fail to meet study deadlines for cluster studies, cluster re-studies, facilities studies, and affected system studies, except in situations where force majeure is determined to be applicable.⁴⁴ The NOPR proposes a penalty of \$500 per day that the

⁴⁰ See, e.g., Initial Comments of the Colorado Public Utilities Commission, *Improvements to Generator Interconnection Procedures and Agreements*, Docket No. RM22-14-000 (October 13, 2022).

⁴¹ NOPR at P 165.

⁴² *Id.* at P 167.

⁴³ *Id.* at P 167-68. Proposed revised sections: 2.2, 3.5.4(i), 7.4, 8.3, and Attachment A to Appendix 4 of the *pro forma* LGIP.

⁴⁴ NOPR at P 169.

study is late.⁴⁵ For example, a transmission provider that misses a study deadline by 150 days would be penalized \$75,000. The penalty would be capped at 100% of the total study deposit received.⁴⁶ The Commission proposes to implement the penalty structure after the transmission provider has completed one cluster study cycle after the effective date of compliance for implementing the reforms proposed in the NOPR.⁴⁷ The NOPR also proposes a no-penalty, 10-day grace period for a study that is delayed by 10 business days or less,⁴⁸ but would permit a transmission provider to extend the deadline of a particular study by 30 days by mutual agreement of the transmission provider and all interconnection customers in the relevant study.⁴⁹ Finally, the NOPR proposes to distribute such penalties to the delayed interconnection customers on a pro rata basis to offset their study costs and would prohibit the recovery of such penalties in transmission rates.

NARUC agrees that timely provision of interconnection service is critical to maintaining just and reasonable rates⁵⁰ and supports the Commission's proposal to eliminate the reasonable efforts standard from the *pro forma* LGIP. As the NOPR recognizes, nearly all transmission providers across the country, including many transmission providers that have implemented queue reforms, regularly fail to meet interconnection study deadlines. While the NOPR does not specify the degree of delay, the amount of delays can be substantial⁵¹ and the tendency to miss

⁴⁵ *Id.*

⁴⁶ *Id.* at P 170.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.* at P 167.

⁵¹ *See* NOPR at Appendix A, Table 1 (documenting 1,281 Current Delayed Studies in the PJM queue alone).

deadlines introduces uncertainty in a process that is important to bringing new generation online in a timely and cost-effective manner.

NARUC is encouraged that the Commission is examining consequences for lack of compliance, as discussed by the Joint Federal-State Task Force on Electric Transmission.⁵² NARUC agrees that the lack of consequences for missing study deadlines can largely contribute to the transmission provider's failure to complete studies in a timely manner.⁵³ Short of being held accountable for missing deadlines, there may be little confidence that timelines would be met. This concern applies whether the transmission provider has already adopted process improvements.

As stated above, the NOPR proposes to penalize transmission providers when they fail to meet study deadlines for studying interconnection requests on an affected transmission system.⁵⁴ NARUC supports holding transmission providers accountable for failing to meet study deadlines. If a penalty and penalty structure are imposed, the penalty should be sufficient to incentivize action by the transmission provider and should not be of a *de minimus* amount. For consistency, any adopted penalty structure should be applied equally to transmission providers delaying interregional affected system studies.

NARUC also supports the proposal to return the penalties to the affected interconnection customers. This would ensure that those entities are provided relief commensurate with the

⁵² See Joint Fed.-State Task Force on Elec. Transmission, Technical Conference, Docket No. AD21-15-000, Tr. 89:6-25 (Chair LeVar) (May 6, 2022) (encouraging FERC to examine “appropriate consequences to the transmission providers when they don’t comply with the tariffs,” including by missing study deadlines).

⁵³ NOPR at P 166.

⁵⁴ *Id.* at n.245.

delay caused by the transmission provider. NARUC fully agrees that in no case should penalties be recoverable in transmission rates. Doing so would defeat the purpose of the penalty and would be contrary to principles of sound ratemaking.

NARUC supports capping any penalties at 100% of the total study deposit.⁵⁵ NARUC notes that the cap and the penalty structure must be viewed together to determine whether they provide sufficient means to incent accountability and advance the intended goals of the proposed reforms. NARUC also agrees that penalties should not be assessed until after the transmission provider has completed one cluster study immediately following a transition cycle. NARUC further recommends that a technical conference be held prior to any penalty structure becoming effective, allowing transmission providers to publicly discuss lessons learned associated with the new process and to refine the process, as appropriate. This suggestion is in keeping with the intent to optimize the interconnection review process.

NARUC supports the proposal to grant a grace period allowing room for transmission providers to resolve unexpected delays within an allotted time. As the NOPR proposes, the penalty would be cumulative, starting at day 11 but inclusive of days 1 through 10.⁵⁶ Such a cumulative penalty structure is reasonable and should deter transmission providers from using the grace period as “free” extra days to submit the study.

Lastly, NARUC agrees with the NOPR that a 30-day extension of the study deadline must be by mutual agreement of all interconnection customers in the cluster.⁵⁷ NARUC supports this proposal, provided that the transmission provider first performs an examination and certifies

⁵⁵ *Id.* at P 170.

⁵⁶ *Id.*

⁵⁷ *Id.*

to FERC that the extension will not delay unrelated projects outside the cluster. NARUC further suggests that FERC should require transmission providers to publicly post study timelines and ongoing queue status for transparency to alert all stakeholders regarding interconnection study progress and/or impending delays.

b. Direct Assignment of Delay-Related Monetary Penalty Costs

The NOPR proposes to grant not-for-profit RTOs/ISOs filing rights under Federal Power Act section 205 to directly assign the costs of a monetary penalty arising from delayed system studies to a responsible transmission owner.⁵⁸ Specifically, the NOPR proposes to require RTOs/ISOs to file tariff provisions that permit them to make a filing to recover the costs of specific penalties for failing to meet an interconnection study deadline from the appropriate transmission owner that is responsible for, or contributed to, the delay.⁵⁹ The Commission recognizes that not-for-profit RTOs/ISOs may need to recover the costs of monetary penalties from other entities and that such tariff provisions are likely necessary to ensure that the RTOs/ISOs can pay such penalties for which they are not responsible.⁶⁰ The Commission seeks comment on whether a more appropriate method exists for assigning such penalties in RTOs/ISOs and, more generally, whether these penalties will incent more timely completion of interconnection studies or lead to adverse consequences.⁶¹

The NOPR observes the similarity of such an assignment to the assignment of reliability-related monetary penalties.⁶² In its Reliability Penalty Guidance Order, the

⁵⁸ *Id.* at P 172.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.*

Commission provided a suggested methodology for directly assigning monetary penalties arising from non-compliance with mandatory and enforceable NERC reliability standards.⁶³ The Commission stated that where the RTO/ISO itself is assessed a monetary penalty for which the RTO/ISO believes another entity is responsible, “the Commission will entertain a section 205 filing by that RTO or ISO to directly assign the costs of the penalty to another entity.”⁶⁴ Since the issuance of this guidance, the Commission has approved tariff provisions as applied to the allocation of reliability-related monetary penalties.⁶⁵

NARUC supports the Commission’s proposal to provide a tariff mechanism for not-for-profit RTOs/ISOs to seek recovery of the costs of specific interconnection study penalties that should be directly assigned to other responsible entities. This is consistent with well-established cost causation principles and is in line with established Commission precedent. Furthermore, this will incent more timely completion of interconnection studies. NARUC observes, however, that the NOPR is silent on the mechanism for assigning the cost of penalties associated with delays that may be attributed to neighboring transmission providers responsible for conducting affected systems studies. NARUC seeks clarification for such instances.

c. Potential RTO/ISO Penalties Issues

The NOPR provides that monetary penalties are appropriate in certain circumstances to incent compliance with tariff deadlines, notwithstanding the RTO’s/ISO’s status as a non-profit

⁶³ *Reliability Standard Compliance & Enft in Regions with Reg'l Transmission Organizations or Indep. Sys. Operators*, 122 FERC ¶ 61,247 (2008) (Reliability Penalty Guidance Order) at PP 21-24.

⁶⁴ Reliability Penalty Guidance Order at P 23.

⁶⁵ *See, e.g., Cal. Indep. Sys. Operator Corp.*, 138 FERC ¶ 61,156 at P 16 (2012).

entity.⁶⁶ As noted above, the assignment of penalties to the appropriate RTO/ISO member found to be responsible for the interconnection delay is consistent with cost causation principles. However, were a penalty to be levied against a non-profit RTO/ISO and no member was found to be responsible for the delay, NARUC questions how that penalty would be paid.⁶⁷ Non-profit RTOs are not shareholder owned. They are independently managed and answerable to their membership.

For penalties not caused by a specific member, and instead attributable to RTO/ISO management or process, it appears that a non-profit RTO/ISO would have to spread the cost of the penalty across its membership. NARUC questions whether such an action would be consistent with cost causation. The NOPR references consistency with Order No. 890 and Order No. 672-A to explain its proposal to apply penalties to all transmission providers in a manner that is agnostic of for-profit or non-profit status.⁶⁸ However, Order No. 890 and Order No. 672-A appear to provide limited guidance. The Commission in Order No. 890 only asserted the existence of “other sources of money”⁶⁹ available to pay penalties and Order No. 672-A explicitly agreed that “not-for-profit status will be considered”⁷⁰ when determining a penalty.

Without a more detailed explanation, when penalties are applied to a non-profit RTO/ISO and a specific member cannot be charged for causing the interconnection delay, the monetary penalty might ultimately be passed on to end-use customers, either directly or indirectly.

⁶⁶ NOPR at P 171.

⁶⁷ *See also* NOPR, Christie, Comm’r, concurring at P 3.

⁶⁸ NOPR at P 171.

⁶⁹ *See* Order No. 890, 118 FERC ¶ 61,119 at P 1357.

⁷⁰ *Rules Concerning Certification of the Elec. Reliability Org.; & Procs. for the Establishment, Approval, & Enforcement of Elec. Reliability Standards*, Order No. 672-A, 71 FR 19814 (Apr. 18, 2006), 114 FERC ¶ 61328, at P 56 (2006).

Moreover, since the NOPR proposes to distribute the penalties to the delayed interconnection customer, end-use customers would effectively be funding study costs. Such an outcome would be inconsistent with sound ratemaking principles.

d. Periodic Status Reports

In support of the Commission's endeavor to ensure interconnection queues proceed more smoothly going forward, the Commission requests comment on whether it should issue periodic reports summarizing the status of transmission providers' queues and timeliness of interconnection studies based on information collected through existing reporting requirements.⁷¹ NARUC agrees that it should. The issuance of additional reports by the Commission would be a useful supplemental tool in conjunction with the elimination of the reasonable efforts standard. Additional information adds transparency and allows stakeholders and the states which are served by transmission providers to monitor the openness and barriers of interconnection queues and potentially work to ameliorate speedbumps before they turn into the interconnection logjams of today's queues. However, these reports cannot substitute for eliminating the status quo reasonable efforts standard. The reasonable efforts standard and existing reporting requirements did not restrain interconnection study times and reduce queue backlogs. Additional reports by the Commission are unlikely to discipline interconnection queues on their own.

Yet, that is not to say the proposal for Commission-issued reports should not be adopted if the Commission decides not to adopt monetary penalties. The Commission proposes many changes to interconnection queues in this proposed rulemaking. Within those changes, the addition of clustering similarly situated resources as well as processing interconnection studies in

⁷¹ NOPR at P 173.

batches has the potential to significantly reduce the delays in interconnection queues even absent the imposition of monetary penalties. Commission-issued reports would allow it and stakeholders to determine the effectiveness of these innovations on their own. Further, if after the transition period⁷² the reports issued by the Commission indicate the queues are not functioning properly, the Commission should build in a requirement for transmission providers that are missing deadlines to submit corrective action plans with the goal of further improving queue management rules for that transmission provider.

e. Penalty Structure

NARUC takes no position on the precise level of a penalty, nor the need for penalties given the myriad changes that may fix the logjam without penalties. In certain circumstances as noted earlier, costs associated with penalties or unreimbursed study expenses created by penalties for non-profit RTOs/ISOs, absent reform, are likely to ultimately fall on load. As such, the Commission should carefully consider whether penalties are appropriate or whether the other changes proposed by this rulemaking should be tested in isolation. However, should the Commission determine that penalties are necessary, NARUC offers the following comments for the Commission's consideration.

The guiding principle of interconnection queues should be that transmission providers enable the placement of as much capacity as possible into service at least cost, subject to state policies regarding generation mix. In service of that guiding principle, any penalty imposed by the Commission should be structured to incent transmission providers to complete studies that would result in more capacity added onto the system. Consequently, the penalty should not be

⁷² *Id.* at PP 149-160.

targeted at the number of customers in a cluster that are being delayed, but rather a penalty should take into account the desirable characteristics of the resources being delayed.

The Commission's two proposals, a \$500/day penalty and a \$100/customer/day penalty in the delayed study,⁷³ are both agnostic to the capacity in a particular study. As a result, the Commission's "per-customer penalty" proposal might discriminate in favor of cluster studies that have a large number of customers but where each customer has only a smaller capacity resource. In such a case, the transmission provider attempting to simultaneously complete multiple delayed studies would have an incentive to complete the study with more customers, even if that study would add less capacity to the system. While the *per diem* penalty does not share this discriminatory flaw, it would be a blunt instrument that would not serve to incent transmission providers to put more capacity on the system. Instead of a per-customer penalty or a simple *per diem* penalty, if multiple clusters are being processed simultaneously, the penalty structure should incent the transmission provider to complete studies for higher capacity clusters, all other things being equal.

The Commission also asks whether there should be exceptions to the imposition of penalties other than force majeure.⁷⁴ With clear rules and the recommended reporting suggested in these comments to facilitate transparency in the queue, no other exceptions should be needed. However, given that the proposed process is untested, the prospect for unforeseen circumstances may exist. As such, the transmission provider should be afforded the opportunity to request a penalty exemption on a case-by-case basis. In such cases, the transmission provider would bear the burden of justifying its exemption request. In weighing a request for a penalty exemption,

⁷³ *Id.* at P 173.

⁷⁴ *Id.*

the Commission should consider not only whether unforeseen circumstances caused delays, but also whether the circumstances justify delays beyond the provided 10-day grace period and why an extension by mutual agreement was impracticable.

NARUC reiterates, however, that because the burden of penalties have the potential to ultimately fall on load, the Commission should hold a technical conference prior to any penalty structure becoming effective to allow transmission providers to publicly discuss their experiences with the new process and adopt any necessary improvements. Assuming the other proposed reforms in this rulemaking are successful, the Commission could avoid a penalty system. A technical conference prior to the implementation of a penalty system would both allow the Commission to determine if its new processes are working, but also allow penalties to be appropriately focused on the remaining causes or issues contributing to interconnection delay.

2. Affected Systems

The Commission notes in the NOPR the lack of consistency in affected systems study processes between transmission providers.⁷⁵ The timing of releasing study results may not allow interconnection customers sufficient time to make necessary decisions about their interconnection requests. The Commission accordingly proposes three reforms addressing the affected system study process, *pro forma* agreements, and affected system modeling and study assumptions. NARUC appreciates and supports the Commission's objective to increase both consistency and transparency in the coordination of study processes between transmission providers.

⁷⁵ *Id.* at P 179.

a. Affected System Study Process

In the NOPR the Commission proposes requirements including notifications, defined processes, and financial penalties.⁷⁶ These requirements include defined time frames for mandatory communications between transmission providers and affected systems. NARUC appreciates and supports the objectives of these specific requirements and expects that impacted transmission providers and interconnection customers will provide the Commission with feedback on the feasibility of each proposed timeframe. With respect to the proposed assessment of financial penalties, NARUC encourages the Commission to establish consistency with the treatment of penalties related to other types of missed study deadlines. Specifically, NARUC supports returning penalties to interconnection customers and agrees that penalties should not be recoverable in transmission rates in circumstances where the interconnection customer is not itself acting in bad faith in requesting the study.⁷⁷

b. Pro Forma Agreements

The Commission expresses concern about increased litigation and the potential for discriminatory behavior and accordingly determines a need exists for standardized, uniformly applicable agreements that apply to affected system studies.⁷⁸ The Commission proposes a *pro forma* affected system study agreement modeled on the existing *pro forma* system impact study agreement.⁷⁹ The agreement would require the affected system study scope to include a list of specified issues and would set terms and conditions for construction of necessary network upgrades on affected systems. NARUC supports the Commission's objectives to reduce

⁷⁶ *Id.* at P 183.

⁷⁷ One example of an interconnection customer acting in bad faith could be proposing the same plant for multiple interconnection locales to find the lowest cost option.

⁷⁸ *Id.* at P 194.

⁷⁹ *Id.* at P 198.

litigation and the potential for discrimination. NARUC does not take a position on the specific elements of the Commission’s proposed agreement and anticipates fulsome comments from impacted transmission providers and interconnection customers.⁸⁰

c. Affected System Modeling and Study Assumptions

The modeling standards that a transmission provider applies to study interconnection requests can impact potential network upgrade costs. As no uniform requirement currently exists, the Commission proposes to require energy resource interconnection service (“ERIS”) modeling standards, while considering exceptions on a case-by-case basis to allow the use of network resource interconnection service (“NRIS”) modeling standards.⁸¹ The Commission asserts that the less stringent ERIS modeling assumptions should increase the speed of interconnection queue processing, thus reducing necessary network upgrades, withdrawals, and re-studies. NARUC supports the Commission’s objective to accelerate interconnection queue processes and appreciates the benefits that flow to all participants from that acceleration. NARUC does not take a specific position on the differences between ERIS and NRIS modeling assumptions but presumes that transmission providers and interconnection customers will provide thorough feedback on those assumptions and the adequacy of the Commission’s proposal to consider case-by-case use of the NRIS modeling standard.

⁸⁰ NARUC’s comments are directed only to the reforms that have the potential to improve the efficiency of the interconnection queue. Given NARUC’s position that the Commission should retain the participant funding model for network upgrades, NARUC does not support the funding provisions in the affected system *pro forma* agreements since it does not allow for that option.

⁸¹ *Id.* at P 211.

3. Optional Resource Solicitation Study

a. Background

Within its NOPR, the Commission proposes to allow load-serving entities or state agencies to request, in certain circumstances, that transmission providers issue “optional resource solicitation studies.”⁸² NARUC’s understanding is that, in these studies, transmission providers would be required to do a holistic, combined interconnection study on a portfolio of resources selected by the load-serving entity or state agency.

The portfolio of resources would be identified through a state-approved competitive resource acquisition process (such as a PUC-regulated competitive solicitation process, or through a procurement process conducted directly by the state agency). NARUC understands the Commission’s goal for these additional studies is to provide a high level of transparency to the load-serving entities and state agencies about the interconnection costs of the resources they are considering acquiring. The Commission intends to overcome a current situation where resources that are chosen through a competitive bidding process are selected at various stages of the interconnection process, and thus have varying levels of transparency about interconnection feasibility and cost. The process is also intended to better identify economies of scale that can be achieved where a major system upgrade could facilitate the interconnection of multiple resources being considered.

b. General Comments

NARUC supports the Commission’s concept of optional resource solicitation studies.⁸³ The provision of these studies would seem to better align the resource interconnection processes

⁸² *Id.* at P 223.

⁸³ *Id.*

with modern resource acquisition practices done by states and load-serving entities. It also provides these entities with a vital tool (access to interconnection cost information) they require to efficiently acquire needed electric system resources.

Specifically, many states approach resource acquisition through requiring competitive bidding, where the state oversees or implements a process aimed at ensuring that all competitive resource options are considered, and where a best or preferred portfolio of resources is analyzed and determined. In such processes, the selected portfolios of resources may often capture a mixture of resource types, including various fuel sources, intermittent and dispatchable generation, and storage. The process of evaluating and arriving at these portfolios can be complex and challenging for a variety of reasons—one of those being that the feasibility and cost of interconnection may not always be very clear during the analysis stage. NARUC therefore appreciates the Commission’s efforts at making interconnection information more readily available to resource planning entities and at making the interconnection process more efficiently line up with resource planning processes and, in the case of optional resource solicitation studies, use those portfolios as a meaningful input in evaluating interconnection costs.

NARUC strongly supports FERC’s proposal to limit the applicability of the optional resource solicitation study to instances where the resource acquisition is overseen by a state regulatory authority and is competitive and open.⁸⁴ Without this requirement, NARUC is concerned about the opportunity for load-serving entities to potentially use the process in a way that would inappropriately favor the interconnection of company-owned resources. This could come about, for example, if a load-serving entity was able to have a transmission provider

⁸⁴ *Id.* at P 230.

identify cost-saving interconnection options through the optional resource solicitation study for its owned resources but exclude non-company-owned resources from such an analysis, tipping the cost evaluation towards its owned resources. NARUC agrees that state oversight of the portfolio that is selected for an optional resource solicitation study is therefore very important.

c. Response to Specific Questions Posed by the Commission

- i.** Explicit inclusion of state agencies as resource planning entities eligible to request interconnection studies

The Commission asks for comment regarding whether it should include state agencies that are required to develop a resource plan or conduct an acquisition process in the definition of a resource planning entity.⁸⁵ NARUC supports this proposal.

In states where the solicitation process is administered by a state agency, it seems appropriate to allow the state agency to be the entity directly submitting the study request. State agencies in this position could determine their own rules for engaging with the relevant load serving entities (“LSEs”) to coordinate and provide transparency. Where a state agency, such as a state commission, simply oversees the resource selection process administered by a load-serving utility, it would not seem necessary to allow the state agency to be characterized as a resource planning entity. Rather, in such an instance, the agency’s regulatory oversight should be applied to the LSE, such that the LSE is responsible for submitting the request to study a portfolio that the agency agrees should be reviewed. NARUC understands the Commission’s proposal to be consistent with this interpretation and supports the Commission’s proposal.

⁸⁵ *Id.* at P 236.

It may be important, however, for the Commission to specifically clarify that nothing in the proposed rule regarding optional resource solicitation studies is intended to prevent a state regulatory body from requiring an entity it regulates to submit such a study request, even though the Commission describes the resources studies as “optional.” For example, the Commission could include the following language to clarify the situation:

Nothing in the rules regarding an optional resource solicitation study prevents a state regulatory agency from requiring an LSE subject to its jurisdiction to participate in the optional resource solicitation study. State regulators, for example, may as part of their regulatory processes oversee and require certain actions of an LSE with respect to optional resource solicitation studies.

ii. Inclusion of other entities as Resource Planning Entities

The Commission further asks whether other entities, besides load-serving entities and state agencies, should qualify as resource planning entities, and therefore be able to request initiation of an optional resource solicitation study.⁸⁶ If so, the Commission asks what impact, if any, their inclusion would have on the efficiency of the generator interconnection process and whether their inclusion would raise concerns of undue discrimination or preference.

Generally, it would not appear necessary to include other entities as resource planning entities that could initiate an optional resource solicitation study. It is unclear from the NOPR what other entities would be proposed to be considered, but if the question relates to generators, for example, it seems that this would not be advisable. Generators seeking to interconnect and be awarded contracts under a competitive bidding process could have an incentive to request unique and novel combinations that they would estimate would most benefit their projects. This could likely overwhelm the study process and confuse results. This type of optimization could

⁸⁶

Id.

also be counter to the state agency and LSE incentives to find the most cost-effective portfolios for customers through the competitive resource solicitation process.

If the Commission is considering whether “other entities” should include those such as regional transmission planning organizations, NARUC acknowledges that there may be instances where this would make sense. For example, if a state agency was engaged in identifying a “Renewable Energy Zone,” for permitting purposes, the transparency offered by the optional resource solicitation study could provide helpful insights in those endeavors, if it were able to be conducted in conjunction with a competitive procurement process that qualifies for such a study under the Commission’s rules.

iii. Confidentiality concerns with posting resource solicitation studies

The Commission seeks comment on whether the proposed optional resource solicitation study raises any confidentiality concerns, including whether the optional resource solicitation study report could be posted on the transmission provider’s open access same-time information system (“OASIS”) before the qualifying solicitation process has concluded.⁸⁷ NARUC would generally defer this question to the entities whose confidential data could be exposed through this process. However, we note that posting the identity of generators being considered for a resource acquisition process “short list” prior to that process being actually finalized could be problematic. Normally, the identity and details of bidding projects are protected through the resource solicitation process until the projects have reached agreements with the acquiring entity.

⁸⁷ *Id.*

In most instances, however, we would expect that the identity of a generator and other sensitive information could be redacted or hidden in any posting.

iv. Challenges for multistate transmission providers

The Commission seeks comment on what, if any, challenges multistate transmission providers—in particular, those RTOs/ISOs that serve large, multi-state areas—may face regarding study timing, multiple concurrent studies, or other issues in offering an optional resource solicitation study option, and any proposals to mitigate such challenges.⁸⁸ NARUC notes that multi-state transmission providers that are associated with load-serving entities (i.e., non-RTO/ISO entities) may already be dealing with these complexities, since their associated generation function likely is already conducting resource procurement solicitations across multiple states. Thus, the solicitation processes already must be managed and coordinated to account for this. Although the Commission’s proposal does not appear likely to solve the challenges faced by multi-state transmission providers in managing and coordinating across states, it also does not appear to exacerbate those problems. Thus, while NARUC acknowledges potential additional burdens for these transmission providers, we do not believe that these challenges should be viewed as an impediment to the Commission’s proposal.

Where optional resource solicitation studies are requested of a multi-state independent system operator, we can foresee, like the Commission, that there may be challenges if individual states request portfolios of resources that slightly differ from studies requested by other states. NARUC does not have specific suggestions for how to address this issue, other than to note that

⁸⁸ *Id.* at P 237.

facilitated coordination and discussion across states may be the most helpful practice in such instances.

d. Other Questions Raised by the Commission's Proposal

As described above, NARUC appreciates the proposed optional resource solicitations study, and the Commission's motivations in suggesting it. Nevertheless, NARUC believes that important questions also should be considered along with the Commission's evaluation of its proposed path. These questions include:

1. Will the optional resource solicitation study process be expected to provide a cost allocation among generators for identified interconnection and upgrade costs? If not, how likely is it that the cost allocation that results from a generators' otherwise-assigned interconnection process will actually mirror the results modeled in the optional resource solicitation process?
2. If generators are required to maintain their queue position, and work through that system to be interconnected, how will the efficiencies identified in the optional resource solicitation study be realized? Should the Commission go further than requiring the optional resource solicitation study only for purposes of transparency and cost estimation? Should the results of the studies be made available for generators to pursue, and be a basis upon which generators could seek interconnection on an expedited basis?
3. How can the Commission ensure that this new process does not exacerbate the existing backlog of interconnection studies, given that the proposal increases the amount of study that transmission providers must conduct?

4. Under the Commission's proposal, the requesting entity (the LSE or state agency) would not have to pay for the resource solicitation studies it requests. However, is it fair for interconnecting generators to pay for studies that they may not have requested under all circumstances? Is there a process envisioned for the required coordination on this topic?

NARUC looks forward to engaging on this topic further, and the exploration of these and other questions as the Commission considers this proposal.

C. Reforms to Incorporate Technological Advancements into the Interconnection Process

NARUC agrees with the Commission that reforms are needed to the *pro forma* LGIP and *pro forma* LGIA to incorporate the consideration of technological advancements into interconnection processes. As state regulators, we are keenly aware of and concerned that certain existing generator interconnection procedures can be a barrier to ensuring the safest, most reliable, and affordable electric service for retail customers. Loss of interconnection queue positions and unrealistic modeling assumptions for advanced technologies and co-located resources, among other issues identified in the NOPR, have the practical effect of diverting ratepayer investments away from the most efficient resources and system solutions for customers. NARUC supports the Commission's efforts to ensure that advanced technologies and co-located resources can be reasonably incorporated into generator interconnection procedures. We also appreciate the Commission's attention in the NOPR to promoting a flexible and consistent interconnection process framework for advanced technologies and co-located resources and we broadly support the proposed reforms.

1. Co-Located Generation Sites Behind One Point of Interconnection with Shared Interconnection Requests

NARUC supports the Commission's proposal to revise the *pro forma* LGIP and the *pro forma* LGIA to require transmission providers to allow more than one resource to co-locate on a shared site behind a single point of interconnection and share a single interconnection request.⁸⁹ As the Commission correctly points out, interconnection requests made up of multiple generating facilities seeking to co-locate and to share a single point of interconnection may provide a host of benefits to customers as the grid continues to evolve; and in the case of pairing battery storage with intermittent generation, likely becomes critical to maintaining reliability as the penetration of renewable energy increases. NARUC agrees that all transmission providers should permit interconnection requests that are made up of more than one resource behind a single point of interconnection, and that doing so will likely improve the overall efficiency of interconnection study processes, result in more accurate queue positions, and help to ensure just and reasonable rates. Finally, we support the Commission's reasonable revision to the *pro forma* LGIA to require co-located facilities to have technology to address differences in terminal voltage between the co-located generating facilities.⁹⁰

2. Revisions to the Material Modification Process to Require Consideration of Generating Facility Additions

NARUC agrees with the Commission's finding that revisions to the material modification process to require consideration of generation facility additions in the *pro forma* LGIP would promote consistency for interconnection customers throughout the country, in addition to

⁸⁹ *Id.* at P 242.

⁹⁰ *Id.* at P 245.

promoting reliability and economic and administrative efficiency as the generation fleet continues to evolve. We share the concern that automatically considering requested modifications as material, without an evaluation, may result in unjust and unreasonable or unduly discriminatory or preferential outcomes. As the Commission points out, certain planning regions already demonstrate the ability to reliably accommodate generation facility additions that do not increase requested services levels, without considering the request a material modification. As such, we support the Commission's proposal to revise the *pro forma* LGIP to require transmission providers to evaluate proposed generation additions to an interconnection request as long as the proposed generation additions do not change the originally requested service level.⁹¹

NARUC also generally supports the proposal to require transmission providers to evaluate proposed generation additions within 60 calendar days as this seems a reasonable amount of time to evaluate whether the addition would have a material impact on the cost or timing of lower- or equally queued interconnection requests or other reliability concerns.⁹² We propose, however, that the Commission allow for some level of flexibility in this requirement, as planning regions and the industry more broadly can face challenges with respect to aligning resources and expertise with meeting increasingly aggressive schedules to perform complex interconnection studies.

We also agree that if a proposed generation addition does not have a material impact on the cost and timing of equally or lower queued interconnection requests, and importantly, does not cause any other reliability concerns, the addition should not automatically be considered a

⁹¹ *Id.* at P 255.

⁹² *Id.*

material modification.⁹³ However, the Commission should clarify the degree of flexibility afforded to transmission providers in making the determinations as to what constitutes a material reliability concern on the transmission system.

With reliable operation of the bulk power system at issue, the Commission should clarify that transmission providers should determine how to perform studies required to confirm there is no adverse impact for the addition of a generating facility to an interconnection request, so long as the process is transparent and non-discriminatory. The Commission should also clarify that transmission providers are to make the determination whether the addition of a generating facility that does not alter the service limit requires a full interconnection service study, as well as to whether the interconnection customers in the same cluster (or subsequent clusters) could be adversely impacted. However, the Commission should ensure that these processes are transparent, clearly communicated to interconnection customers, and provide a pathway for interconnection customers to mitigate the impacts and revise their modifications requests.

As the Commission points out, the CAISO's flexible process where interconnection customers are permitted to revise the modification request allows for fewer resource additions to be determined a material modification, resulting in more consistent and predictable queue outcomes, and ultimately more optimized resource investments.⁹⁴ Loss of queue position as a result of adding a generation facility that does not increase the requested service level or cause reliability issues, but rather could improve the performance and capability of a resource to manage reliability or lower the cost of energy to customers, is an inefficient and discriminatory outcome the Commission should seek to permanently remedy through this proceeding.

⁹³ *Id.*

⁹⁴ *Id.* at P 250.

3. Availability of Surplus Interconnection Service

NARUC supports the Commission's proposal to revise the *pro forma* LGIP to require transmission providers to allow interconnection customers to access the surplus interconnection service process once the original interconnection customer has an executed LGIA or requests the filing of an unexecuted LGIA.⁹⁵ As the Commission points out, it may be unjust and unreasonable to limit the use of surplus interconnection service to only those interconnection customers that have achieved commercial operation.⁹⁶ Increasing access to available surplus interconnection capacity at a time when available interconnection capacity on the existing system has been greatly reduced is critical to ensuring that ratepayer investments are directed in an optimized manner, and that transmission providers make the most use out of existing infrastructure. The Commission should clarify in the *pro forma* LGIP that an interconnection customer that has been fully studied and has an executed LGIA, or has filed an unexecuted LGIA, should be considered an existing facility for purposes of surplus interconnection service. This modest reform will increase efficiency in interconnection queues throughout the planning regions and ensure that available interconnection capacity can be efficiently utilized.

4. Operating Assumptions for Interconnection Studies

NARUC agrees with the Commission that interconnection studies used to evaluate electric storage resources should reflect reasonable and realistic operating assumptions.⁹⁷ Failure to do so may result in overestimated impact on the transmission system that can result in excessive and unnecessary network upgrades that may hinder development of new generation,

⁹⁵ *Id.* at P 264.

⁹⁶ *Id.* at P 263.

⁹⁷ *Id.* at P 280.

resulting in unjust and unreasonable rates. In its ANOPR Comments, NARUC asserted that interconnection studies used to evaluate energy storage resources should reflect reasonable operating assumptions, such as charging during off-peak hours.⁹⁸ Continued reliance on operating assumptions for interconnection studies that were developed prior to the large-scale adoption of variable energy resources and the advent of electric storage may send inaccurate price signals to interconnection customers in the form of high network upgrade costs and can result in an inefficient allocation of capital investments. Assuming that an energy storage device will withdraw energy during peak demand similar to firm end-use customer demand, for example, fails to recognize that those resources are likely to be highly responsive to price signals from the transmission provider and can *improve* reliability. Requiring that interconnecting resources – particularly energy storage resources – be modeled using similar worst-case operating assumptions ignores the real-time attributes and benefits of these technologies.

NARUC believes the Commission has proposed a reasonable process: Where interconnection customers would propose the operating assumptions that should be studied as a part of an interconnection request, and transmission providers can hold interconnection customers to the intended operation through memorializing the operating restrictions in the LGIA requiring control technologies where appropriate.⁹⁹ We agree also that interconnection customers should be considered in breach of the LGIA if they fail to operate their electric storage resource, or co-located resource containing an electric storage resource, as intended. Such a consequence, in combination with technology and software that can limit the operations of an energy storage device, should sufficiently mitigate behavior that deviates from planned

⁹⁸ NARUC ANOPR Comments at 9.

⁹⁹ NOPR at P 281.

operations. Further, NARUC supports the proposal to require interconnection customers to utilize control technologies to ensure that operation does not deviate from the proposed operational plan when studied and modeled below their full generating capacity.¹⁰⁰ This is consistent with requirements for requesting interconnection service below full generating capacity and provides transmission providers further assurances that the device will operate as intended. NARUC proposes, that in RTO/ISO regions, Independent Market Monitors may be well-positioned to track deviations from proposed operational limits in real-time operations. For non-RTO/ISO regions, it may be appropriate for an independent transmission monitor or North American Electric Reliability Corporation (“NERC”) regional reliability entity to serve in such a role.

Finally, the Commission should expand this reform to address the operating assumptions for additional generating technologies, such as variable energy resources, that may now be inaccurately modeled. It is reasonable to allow interconnection customers to request that transmission providers not study interconnecting generating facilities in ways that are not physically possible, subject to the same proposed requirement that the generator be equipped with sufficient control technologies and penalties for deviations.

5. Incorporating Alternative Transmission Technologies into the Generator Interconnection Process

NARUC agrees with the Commission’s preliminary finding that failing to consider alternative transmission technologies that can be deployed both more quickly and at lower costs than network upgrades may render Commission-jurisdictional rates unjust and unreasonable. As

¹⁰⁰ *Id.* at P 283.

such, NARUC supports the Commission’s proposal to revise the *pro forma* LGIP and *pro forma* Small Generator Interconnection Procedures (“SGIP”), to require transmission providers, at the request of the interconnection customer, to evaluate alternative transmission solutions during the LGIP cluster study and the SGIP system impact study and facilities study processes. We also broadly support the Commission’s proposed list of alternative transmission technologies specified in the NOPR that an interconnection customer may request for evaluation, including advanced power flow control, transmission switching, dynamic line ratings, static synchronous compensators, and static VAR compensators.¹⁰¹ In addition, NARUC further supports the inclusion of storage that performs a transmission function, synchronous condensers, and voltage source converters in the list of alternative transmission technologies.¹⁰²

Specifically, dynamic line ratings (“DLRs”) can reduce congestion and enhance the value and functionality of the transmission system in real-time operations. While incorporating DLRs into transmission planning processes likely presents additional challenges that would need to be resolved, including issues specific to the interconnection study process, NARUC supports the Commission’s efforts to encourage greater consideration of these and the other alternative transmission technologies specified in the NOPR. The Commission could also consider requiring an evaluation of the accuracy of line ratings on surrounding and/or impacted transmission facilities if requested by an interconnection customer. Indeed, transmission owners may, at little or no cost, be able to evaluate their local line ratings, methods, and contributing data, and make modifications that may obviate the need for an identified network upgrade

¹⁰¹ *Id.* at n.405.

¹⁰² *Id.* at P 300.

facility. As DLRs become more commonplace following implementation of Order No. 881,¹⁰³ there may be additional ability and experience to incorporate DLRs as an alternative to identified network upgrades in interconnection planning processes.

NARUC is supportive of the alternative technology evaluation process laid out in the NOPR, by which interconnection customers may request the consideration of the identified transmission technologies to be evaluated by the transmission provider at an initial scoping meeting.¹⁰⁴ NARUC suggests that transmission providers should establish a formal time window within their GIPs when they will evaluate interconnection customer-requested alternative transmission solutions to prevent any additional cluster study delays. To maintain cost certainty and equity among interconnection requests within a cluster, additional costs incurred for evaluating alternative transmission technology study requests should be allocated to the requesting interconnection customers. The Commission should clarify also that transmission providers, based on the transmission system needs identified in the LGIP cluster study or the SGIP system impact study and facilities study, need not perform a separate evaluation or study for each requested transmission technology alternative.

The Commission should further clarify that interconnection customers bear the burden of designing the alternative transmission technology solution and preparing all related technical data to submit to the transmission provider for evaluation against the network upgrade solution, whether it is to be deployed as an alternative network upgrade or to go into service on a temporary basis to enable provisional interconnection service. The Commission should also ensure that there is an opportunity for an information exchange with the transmission provider

¹⁰³ *Managing Transmission Line Ratings*, Order No. 881, 87 FR 2244 (Jan. 13, 2022), 177 FERC ¶ 61,179, at PP 235, 238 (2021).

¹⁰⁴ NOPR at P 299.

for interconnection customers that require specific technical information from the transmission provider to design an alternative to a network upgrade. As such, NARUC supports that such a time frame to facilitate that information exchange should be included in the evaluation process proposed in the NOPR.

Finally, NARUC supports the proposed revisions to the *pro forma* LGIP and *pro forma* SGIP to require transmission providers to submit an annual informational report to the Commission that details whether, and if so how, alternative transmission technologies were considered in interconnection requests from the preceding year.¹⁰⁵ We agree with the Commission that future interconnection customers and transmission providers may benefit from the information as to why an alternative transmission technology was considered but not deployed, but we also suggest that a variety of market participants and technology developers – not to mention state regulators – may also benefit from this additional transparency.

6. Modeling and Performance Requirements for Non-Synchronous Generating Facilities

NARUC supports the Commission’s proposed requirement that interconnection customers proposing non-synchronous facilities be required to submit models during the generator interconnection process that accurately reflect the behavior of their proposed generating facility.¹⁰⁶ We agree with the Commission that without a requirement that interconnection customers provide sufficiently accurate and validated models, interconnection studies may not identify the appropriate interconnection facilities and network upgrades needed for that interconnection request; resulting in skewed study results and ultimately unjust and

¹⁰⁵ *Id.* at P 302.

¹⁰⁶ *Id.* at P 328.

unreasonable rates.¹⁰⁷ All interconnection requests should be modeled accurately, and all generating facilities have a responsibility to operate in a manner that preserves reliability. As such, we support the Commission’s proposal to revise the *pro forma* LGIP and *pro forma* SGIP to ensure that all non-synchronous generating facilities requesting interconnection must provide the transmission provider with the models needed for accurate interconnection studies.

NARUC supports requiring all newly interconnecting larger generating facilities to “ride through” abnormal frequency and voltage conditions and expanding the definition of ride through to include the ability of a large generating facility to stay connected to and synchronized with the transmission system during system disturbances and within under-voltage and over-voltage conditions, in addition to under-frequency and over-frequency conditions. We also agree with the Commission that adding clarity to the expectations for all generating facilities to provide ride-through capability will ensure that all future interconnection customers are subject to clear and consistent frequency and voltage ride-through requirements. The absence of such requirements may unfairly place the responsibility for maintaining system reliability on the generators that are able to ride through disturbances.

Continuing to allow non-synchronous generators to fail to ride through disturbances and provide power during reliability events – particularly *en masse* – represents an unacceptable risk to the reliability of the bulk power system. Given the prevalence and expected increase of inverter-based resources as a share of the resource mix over the near and long-term horizons, NARUC supports the Commission’s proposed revisions to the *pro forma* LGIA to require all newly interconnecting large generating facilities to ride through under- or over-frequency and under- or over-voltage conditions.

¹⁰⁷ *Id.* at P 319.

V. CONCLUSION

NARUC respectfully requests that Commission consider these comments. NARUC thanks the Commission for the opportunity offer its views. Through the NOPR process and engagement in the Task Force, NARUC looks forward to working collaboratively with FERC in continuing to explore these reforms and others.

Respectfully submitted,

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Dated: October 13, 2022

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, DC: October 13, 2022

Respectfully submitted:

/s/ Jennifer M. Murphy