

estimates, the Non-Profit Utility Trade Associations note that because the most dramatic fluctuations in the cost of interconnection between initial estimates and final costs are due to instability in the study queues, the interconnection process would be better served by looking to financial incentives encouraging commitment by project developers at critical steps in the study process.

A. Interests of the Non-Profit Utility Trade Associations

APPA is the national service organization representing the interests of not-for-profit, publicly-owned electric utilities throughout the United States. More than 2,000 public power systems provide over 15% of all kilowatt-hour sales to ultimate customers and serve over 49 million people, doing business in every state except Hawaii. Public power systems own approximately 10.3% of the total installed generating capacity in the nation.

LPPC is an association of the 26 largest state-owned and municipal utilities in the nation. LPPC's membership is located throughout the nation, both within and outside RTO boundaries, and its members comprise the larger, asset owning members of the public power community.

NRECA is the national service organization for more than 900 not-for-profit rural electric cooperatives and public power districts providing retail electric service to more than 42 million customers in 47 states. NRECA's members include consumer-owned local distribution systems and 65 generation and transmission cooperatives that supply wholesale power to their distribution cooperative owner-members.

Together, the memberships of the Non-Profit Utility Trade Associations represent a diverse range of interests with respect to the issues framed by the NOPR. Many of these members own and manage large transmission systems, some within and some outside RTOs, and many operate under Open Access Transmission Tariffs ("OATTs" or "tariffs") that include the

Large Generator Interconnection Procedures (“LGIP”) and the Large Generator Interconnection Agreement (“LGIA”). Other, smaller utilities represented by the Non-Profit Utility Trade Associations do not provide interconnection service, but own or contract for interconnecting generation under an OATT. Together, the Non-Profit Utility Trade Association members believe they offer a uniquely balanced perspective on the proposals outlined in the NOPR, as many offer service to generators under the LGIP and LGIA or similar interconnection arrangements, while others take such service.

Reflecting this broad perspective in comments filed on September 8, 2015, responding to the petition of the American Wind Energy Association (“AWEA”) in Docket No. RM15-21-000, the Non-Profit Utility Trade Associations recommended an open dialogue at a Commission-sponsored technical conference as the best means of airing AWEA’s concerns. The Non-Profit Utility Trade Associations filed further comments following the Commission’s May 15, 2016 related technical conference in Docket Nos. RM16-22, RM16-12 and RM15-21.

B. Summary of Position

The Non-Profit Utility Trade Associations believe that certain of the NOPR’s proposed changes to the LGIP and LGIA hold the potential for improving transparency and process in a manner that may enhance cost certainty and predictability. The objections registered below are to those proposals (or suggestions upon which comments are sought) that may compromise grid reliability or shift risk and cost to Transmission Providers associated with developments they cannot control, in turn driving up the cost of service needlessly. The proposals that fall in the latter category are these:

- **Cost Cap for Network Upgrades:** Because most dramatic swings from cost estimates to actual costs are the result of events outside Transmission Providers’ control, capping the cost of network upgrades paid by the interconnection customer would drive up the cost of transmission service, with no corresponding efficiency benefit. The record in underlying Docket No. RM15-21 makes clear that the instability of the interconnection study queue is a central factor in cost uncertainty for project developers, and further, that a meaningful financial commitment by entities in the queue would remedy this situation.
- **Transparency Regarding Study Models:** The Non-Profit Utility Trade Associations are concerned that proposed revisions to *pro forma* LGIP section 2.3 may compromise security of the grid through the disclosure of Critical Energy Infrastructure Information (“CEII”).
- **Interconnection Service Below Generating Facility Rated Capacity:** While the Non-Profit Utility Trade Associations do not object to this proposal, it must be carefully conditioned in order not to compromise grid reliability.
- **Utilization of Surplus Interconnection Service:** Non-Profit Utility Trade Associations object to the proposal to provide a procedure for use, or transfer of, surplus interconnection service, concerned that the proposal may short-circuit important interconnection study work, and that the proposal assumes incorrectly that payment for system upgrades establishes a right to as-yet underutilized transmission capacity.

The Non-Profit Utility Trade Associations also respond below to the Commission’s request for comments on process improvements regarding coordination with, and cost

compensation for, Affected Systems. Though the Associations agree that certain improvements may be made in the timing and coordination of Affected System studies, they also seek clarification as to the rights of Affected Systems to appropriate compensation for the impact to their systems of generation interconnection.

II. COMMENTS ON PROPOSED REFORMS

A. Improving Certainty for Interconnection Customers

1. Scheduled Periodic Restudies (NOPR, PP 38-51)

The Non-Profit Utility Trade Associations do not object to the Commission's proposal to revise the *pro forma* LGIP to require Transmission Providers that conduct cluster studies to move toward a scheduled, periodic restudy process. A schedule detailing periodic restudies may provide added predictability that the Non-Profit Utility Trade Associations understand could be valuable to project developers. The Non-Profit Utility Trade Associations strongly support FERC's tentative proposal to permit regions to retain the discretion to conduct restudies outside of the established schedules at the request of interconnection customers, or when specific circumstances support such treatment. Non-Profit Utility Trade Associations are concerned that in instances in which interconnection queues are relatively thin, there may be no need to await specified dates in order to perform restudies. In those cases, a fixed schedule may hamper, rather than enhance, the interconnection process.

2. The Interconnection Customer's Option to Build (NOPR, PP 52-64)

The Non-Profit Utility Trade Associations will not comment as a group on this proposal.³

3. Customer Self-Funding For Network Upgrades (NOPR, PP 64-77)

The Non-Profit Utility Trade Associations do not object to the Commission's proposal.

³ APPA and LPPC note that they have filed joint comments today in this proceeding addressing the Commission's proposal with respect to the Interconnection Customer's option to build.

4. RTO/ISO Dispute Resolution Procedures for Interconnection Disputes (NOPR, PP 78-87)

The Non-Profit Utility Trade Associations do not object to the Commission's proposal.

5. Cost Caps for Network Upgrades

Though it is not stated as a proposal, the Commission asks "whether it should revise the *pro forma* LGIP and LGIA to provide for a cost cap that would limit an interconnection customer's network upgrade costs at the higher bound of a transmission provider's cost estimate plus a stated accuracy margin following a certain stage in the interconnection study process."⁴

The Non-Profit Utility Trade Associations oppose vigorously any proposed change to the LGIP or LGIA that would cap the cost of necessary system upgrades within some stated variance of initial cost estimates. The basis for this objection is three-fold: (1) the most dramatic swings in interconnection cost levels are due to withdrawals from the study queues, a matter that is outside the control of the interconnecting utilities; (2) shifting the risk of inaccurate cost estimates to the transmission provider simply shifts costs to a utility's captive customers, senselessly driving up rates; and (3) because the *pro forma* LGIA calls for full refunds of customer advances for system upgrades, shifting the risk of inaccurate estimates to Transmission Providers is of marginal financial value to the interconnection customers, and a dramatic shift in business risk to utilities and their captive customers.

The Commission notes that in its petition underlying the request for a NOPR in Docket No. RM15-21, AWEA argued that the "transmission provider should assume such risk [of cost exceeding estimates] because it has control over the interconnection process."⁵ FERC itself goes on to suggest that:

⁴ NOPR, P 95.

⁵ NOPR, P 91.

increasing certainty for interconnection customers—particularly cost certainty—may decrease the number of late-stage interconnection request withdrawals from the interconnection queue, which could meaningfully ameliorate the cycle of repeated, cascading restudies. Capping costs at a certain variance above estimates could provide interconnection customers with business certainty useful to more efficiently develop an interconnection request.⁶

In fact, the overwhelming evidence on the record at the May 13, 2016 technical conference supports the conclusion that the most dramatic changes in the estimated cost of upgrades are driven by withdrawals from application queues, and the resulting shift in cost responsibility to lower-queued projects. By far and away, restudies associated with shifts in the queue were the predominant focus of speakers at the technical conference addressing the challenges of changing cost estimates.⁷ The triggering event in such cases – the withdrawal of higher-queued projects – cannot be controlled by Transmission Providers.⁸

It is in the very nature of the three-step process contemplated by sections 6 – 8 of the LGIA (*i.e.*, Feasibility Study, System Impact Study, Facilities Study) that the first studies will be based on off-the-shelf, system-wide data, in the interest of providing a rough order of magnitude for the cost of interconnection. As a number of speakers observed, there is an inevitable tension between the interests of those who are interested in a quick sanity check on potential interconnection costs, and the precision needed to pin down actual costs with some specificity.⁹

Illustrating that tension, certain speakers from the project development community have objected

⁶ NOPR, P 93.

⁷ *See, e.g.*, Tr. 26 (Gosselin – NextEra); Tr. 28 (McBride – ISO-NE); Tr. 30-31 (Vail – PacifiCorp).

⁸ To be sure, some help in minimizing this phenomenon may be extended by increased transparency and information sharing, along with incentives associated with milestone payments, including proposals to which Non-Public Trade Associations either do not object or can support, as addressed in these comments. But these proposals do not needlessly shift the risk of cost discrepancies to Transmission Providers.

⁹ *See, e.g.*, Tr. 120:4-10 (Aliff – MISO); Tr. 123:9-18 (Kelly – MISO TOs); Tr. 126:14-21 (McBride – ISO-NE); Tr. 128:1-8 (Rutty – CAISO); Tr. 154 (Martino – EDF Renewables); Tr. 156 (McBride – ISO-NE); Tr. 157 (Rutty – CAISO); Tr. 159 (Vail – PacifiCorp).

to the use of proxy (estimated per unit) data,¹⁰ while others have pressed for an increase in the use of such data in order to speed results.¹¹

In any event, System Impact Studies should be seen for what they are – an effort to provide early information on likely interconnection costs by a rough order of magnitude. If, indeed, a cost cap were imposed as a function of initial estimates, it would provide a strong incentive for the Transmission Provider to err on the high side with its early cost signals, a result that seems counter-productive. To be sure, Facilities Studies provide more specific and generally more accurate data, but the estimates detailed there are also subject to substantial revision in the event higher queued projects to which the need for substantial upgrades were previously attributed, drop out of the queue.

At the May 13 technical conference, NextEra’s Vice President of Transmission Services, Dean Gosselin, characterized the problem this way:

[W]hen we think about entering a queue, what's important is that we have valid solutions coming back to us in a timely manner and that they're accurate....The issue...is there's lots of restudies going on now.... [T]here's a lot of generators, new generator requests, that won't be built. And as the queue progresses and they begin to get answers back, they drop out. And that destabilizes the queue, and then the queue process starts again. So what we're seeing is more and more entrants, more and more megawatts coming at any given study queue, and then many restudies having to drag out the process of determining ultimately who's left and what are those costs and schedules for system upgrades. So what we need is an optimal solution, that's the tough part...I don't think anybody in the country has an optimal solution today.... [E]verybody's working towards it, nobody's trying to impede it. But it's difficult when that queue is not stable....¹²

¹⁰ Prepared Statement of Omar Martino (EDF Renewables) (Panel Addressing Certainty in Cost Estimates and Construction Time) at 2 (“Often, the RTO will provide a cost estimate at the system impact stage that is based on a generic per-unit cost and without full knowledge of what transmission owner actually will require.... [A]t the Facilities Study stage...[t]he difference in cost can be dramatic.”); Tr. 134 (Martino – EDF Renewables).

¹¹ Prepared Statement of Daniel Barr (ITC) at 5 (“RTOs/ISOs could make available a summary of cost information gleaned from previously developed Facilities Studies cost estimates or installed costs of Network Upgrades...to develop a database of ‘per mile’ line costs by voltage class....”).

¹² Tr. 13-14 (Gosselin – NextEra).

As Mr. Gosselin makes clear, the problem does not result from systemic bad faith or negligence in the study process. Looking at the problem this way underscores the fact that better solutions lie in information exchange and transparency -- including measures which the Non-Profit Utility Trade Associations can support -- that help developers focus at the outset on projects that are realistic, enabling them to evaluate their projects in time to avoid dropping out of the study process so late in the game that it alters others' cost studies.

By contrast, a binding cost cap would shift the risk of cost increases over which interconnecting utilities have no control to their remaining customers. That zero-sum game approach would also stand in the way of effective cost signals which should encourage project developers to locate in regions and portions of utility systems that lend themselves to interconnection opportunities most economically.

In support of the cost cap concept, FERC suggests that “increasing certainty for interconnection customers—particularly cost certainty—may decrease the number of late-stage interconnection request withdrawals from the interconnection queue,”¹³ But this hypothesis rests on the unsupported supposition that changing cost estimates are a substantially controlling factor in withdrawals from the queue. In fact, generator-applicants are free to drop their applications at any time after they are completed, and the cost of maintaining a queue position is nearly nominal for most major players. Often, the decision to remain or leave the queue is simply a function of business dynamics in an environment in which the application process may be seen as a placeholder for business plans that may or may not come to fruition, depending on financing and the value of competing investments. Sometimes, applications are withdrawn following completion of the initial feasibility or System Impact Studies, when at least a preliminary fix on

¹³ NOPR, P 93.

the relative ease or difficulty of an interconnection from a system engineering standpoint may be better understood. And sometimes, no doubt, applications are withdrawn following restudies, and the ensuing cost shifting that may occur. But it is not at all clear how prevalent that phenomenon is, or to what extent cost caps would stabilize the queues.

To the extent the Commission is interested in stabilizing utility interconnection application queues, the record at the technical conference more clearly supports the implementation of meaningful milestone payments by applicants than it does a cost cap. As NextEra's Gosselin puts it, "stringent requirements" in the form of "financial liability" will keep project developers "disciplined about what we keep in the queue."¹⁴ Gosselin advocates this and other tools (such as a requirement to demonstrate purchased land) as means to "stabilize" the queue, and secure "valid results in a timely fashion."¹⁵ This approach finds support from SPP's Charles Hendrix (Manager, Generation Interconnection Studies), who commented that the large number of ultimately unsuccessful projects moving into the Facilities Study stage "is fairly indicative that the hurdle to prevent speculative projects from moving forward into the Interconnection Facilities Study is not high enough."¹⁶ Similarly, ITC's Daniel Barr expresses support for a "cash-at-risk [m]ilestone linked to the cost of Network Upgrades [to] incentivize judicious choices in project location."¹⁷ The approach taken by MISO in this area has been favorably cited by Mr. Barr and others.¹⁸

The Non-Profit Utility Trade Associations see potential merit in the use of financial incentives, and urge the Commission to remain open to such proposals on a case-by-case basis.

¹⁴ Tr. 32:9-12 (Gosselin – NextEra).

¹⁵ Tr. 33:4-6 (Gosselin – NextEra).

¹⁶ Prepared Statement of Charles Hendrix (SPP) at 3.

¹⁷ Prepared Statement of Daniel Barr (ITC) at 5. *See also* Tr. 60 (Oye – Xcel).

¹⁸ *See also* Tr. 17-19 (Vail – PacifiCorp).

Given the level of concern that unpredictable changes in interconnection costs can thwart project development, and the evident link between restudies and project queue withdrawals, some combination of “earnest money” and study queue “off-ramps” would seem to offer an obvious solution.

The Non-Profit Utility Trade Associations take little comfort in the Commission’s suggestion that if a cost cap were imposed, it may be avoided in “limited circumstances, such as where there is demonstrable proof that the cause of the cost increase is beyond the transmission provider’s control.”¹⁹ To begin with, the record in this proceeding lends no support for the conclusion that cost increases outside transmission providers’ control are “limited circumstances.” If anything, queue withdrawals – the most dramatically destabilizing phenomenon – are often driven by business decisions over which utilities have no control. Triggering a recurring need for Transmission Providers to demonstrate that they are not responsible for changes in cost estimates will invite ongoing litigation that, if anything, will further complicate the interconnection process and add uncertainty.

The Non-Profit Utility Trade Associations also remind the Commission that under section 11.4.1 of the *pro forma* LGIA, all upgrade costs are refunded to transmission customers within a five year period. With that, the cost of network upgrades triggered by interconnecting customers is effectively rolled into system-wide rates. Adding to that cost burden additional costs that may reflect discrepancies between initial cost estimates and subsequent costs is profoundly inequitable.

The Non-Profit Utility Trade Associations note, finally, that if the Commission chooses to follow through with some form of cost cap for interconnection costs, it would be obligated to

¹⁹ NOPR, P 95.

provide notice of its proposal under Administrative Procedure Act (“APA”). The APA requires that proposals evince sufficient specificity to provide a meaningful opportunity for comment.²⁰

With only a conceptual outline of a cost cap proposal, the Commission would be obliged to provide notice of, and elicit comments on, a particular proposal, if it were to decide to proceed.

B. Promoting More Informed Interconnection (Transparency)

1. Identification and Definition of Contingent Facilities (NOPR, PP 97- 108)

The Non-Profit Utility Trade Associations have no objection to the Commission’s proposal to revise the *pro forma* LGIP to call for transmission providers to detail the method they use to determine contingent facilities. But, with respect to the Commission’s related query as to whether transmission providers’ methods for determining contingent facilities should be harmonized among regions, and how the process for identifying these facilities could be standardized, the Non-Profit Utility Trade Associations urge the Commission to respect and permit important regional variations.

Regional variation is called for, in part, because some transmission providers perform cluster studies, whereas others perform these studies in a serial manner. The cluster study approach obviously alters the nature of facilities that will be identified as contingent by grouping transmission studies and upgrades associated with interconnection applications submitted within a specified window in time.

Further, the varying complexity of project applications, the state of the systems in issue, and substantial differences in the length of the queues on various systems will make a uniform

²⁰ The APA requires the Commission to provide notice of its proposed rulemaking adequate to afford “interested persons an opportunity to participate in the rulemaking” process. 5 U.S.C. § 553. This notice must give adequate time for comments and provide a sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully. *Florida Power & Light Co. v. U.S.*, 846 F.2d 765, 771 (D.C. Cir. 1988). If the notice fails to provide an accurate picture of the reasoning that has led the agency to the proposed rules, interested parties will not be able to comment meaningfully upon the agency’s proposals. *Connecticut Light and Power Co. v. NRC*, 673 F.2d 525, 530 (D.C. Cir. 1982).

statement of methodological approach to the determination of contingent facilities difficult. As well, Non-Profit Utility Trade Associations note that the Commission's reference to MISO's practice of listing in interconnection agreements only contingent facilities that have a five percent or greater distribution factor impact on an interconnection request will not necessarily have the simplifying effect the Commission envisions. The lengthier and more unstable is the queue, the likelier it is that such a threshold may conceal potential impacts resulting from the withdrawal of higher queued projects.

For these reasons, the Non-Profit Utility Trade Associations can support the Commission's proposal to call for transmission providers to detail the method they use to determine contingent facilities, but urge the Commission to steer clear of mandating a uniform methodological approach across regions.

2. Transparency Regarding Study Models and Assumptions (NOPR, PP 109-121)

Although the Non-Profit Utility Trade Associations support FERC's objective in enhancing transparency in the interconnection process, they are concerned that proposed revisions to section 2.3 of the *pro forma* LGIP may compromise grid security by providing unrestricted access to sensitive power flow information and transmission operational data. Currently, LGIP section 2.3 requires Transmission Providers to "provide base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon request subject to confidentiality provisions in LGIP Section 13.1." The revised provisions would provide, in addition, that "Transmission Provider will maintain network models and underlying assumptions on its OASIS site for access by OASIS users."²¹

²¹ NOPR, P 119.

The new information that the NOPR proposes would be made available on OASIS may very well lead those capable of accessing OASIS to information critical to systems operations, with the potential for abuse. Transmission Providers' base case network models and assumptions contain transmission operational data that appears appropriately to be classified as CEII under the Commission's regulations.²² These models and assumptions contain, among other things, details regarding the amount of energy that passes through any particular part of a Transmission Provider's system, including power flow information that may enable a bad actor to evaluate system strengths and vulnerabilities. Transmission Providers generally use such assumptions to test stresses on their systems – a process that involves turning certain generators on and off in order to test worst case scenarios. These tests are designed to reveal system weaknesses.

Although the current version of LGIP section 2.3 provides that related information (though not network models themselves) would be made available to interconnection applicants upon request, subject to a confidentiality agreement, the level of personal contact required for that information to change hands is a significant security check that would be removed if the information were simply posted to OASIS. While certain credentials are required in order to obtain access to OASIS, the OASIS credentialing process was not designed to protect CEII. If it were, routine background checks of the individuals and organizations which have access to OASIS would be required, along with the suite of remote access protections routinely associated with sensitive information. These mechanisms are not currently in place, and while it seems possible that security for OASIS access may be enhanced, further discussion of that is needed

²² See 18 C.F.R. § 388.113(c)(2) (defining CEII to mean “specific engineering, vulnerability, or detailed design information about proposed or existing critical infrastructure that . . . [r]elates details about the production, generation, transportation, transmission, or distribution of energy. . . [c]ould be useful to a person in planning an attack on critical infrastructure . . . [and] [d]oes not simply give the general location of the critical infrastructure.”).

before proceeding. Alternatively, some processes may be put in place to permit more routinized access to transmission provider models, again subject to reliable security protocols. The Non-Profit Utility Trade Associations urge the Commission to engage the industry in a discussion of available security techniques, perhaps in the context of a technical conference, before proceeding with the proposed OASIS posting requirement. To the extent the Commission ultimately decides to make such network models and assumptions more widely available, the Non-Profit Utility Trade Associations ask the Commission to ensure that such access be subject to existing Commission CEII practices.

3. Congestion and Curtailment Information (NOPR, PP 122-133)

The Non-Profit Utility Trade Associations are sensitive to the interest expressed in the NOPR in added transparency with respect to congestion and curtailment information that would assist potential interconnection customers in understanding the state of the transmission grid. The Associations understand the interest that interconnection applicants have in a better understanding of grid operations in order to help them anticipate the cost of interconnection and make more informed decisions regarding location of proposed facilities. Having said this, the Non-Profit Utility Trade Associations strongly counsel the Commission to take a step back and consult with the industry on the varied manner in which relevant information is kept across the nation, in what format the information may be reasonably supplied, and what type of information would be genuinely useful to market participants.

The Non-Profit Utility Trade Associations note that the term “transmission congestion” is one that is generally employed within and not outside an ISO/RTO framework. While transmission systems both within and outside ISOs/RTOs may evidence transmission constraints – a term which generally refers to an element of the transmission system such as a transformer or

substation which limits power flows – transmission congestion is a concept used in an RTO/ISO setting in order to calculate the incremental generation cost of resolving a transmission constraint through the redispatch of generation, generally at market-based rates. This distinction is well-explained in the 2015 National Electric Transmission Congestion Study prepared by the Department of Energy (“DOE”).²³ There, DOE comments on the diverse ways in which related information is kept across systems within and outside ISOs/RTOs. As DOE puts it:

Despite widespread agreement on the strategic importance of electric transmission infrastructure—to our economy, our quality of life, and our national security—there is little comprehensive, consistent information available on transmission usage, congestion and its economic consequences, or transmission investment. Transmission Open Access and the formation of ISOs and RTOs over the past two decades have dramatically increased the transparency of planning and operations information in various areas of the country. However, certain challenges remain.²⁴

DOE goes on to point out that constraint and congestion-related information even within ISOs/RTOs is transparent, but available in highly diverse formats and models, and that this information is generally not kept outside ISOs/RTOs, making “it difficult to compare transmission infrastructure availability, usage, investment, constraints, and congestion on a nation-wide basis.”²⁵

For this reason, Non-Profit Utility Trade Associations urge the Commission to hold off at this time in issuing a rule calling for utilities to post congestion-related information. With no common understanding of what information is available across systems, and no consensus regarding how the information might be presented, a rule at this time would be a prescription for needless controversy. Instead, Non-Profit Utility Trade Associations suggest that the

²³ See DOE, 2015 National Electric Transmission Congestion Study, Executive Summary at pp. viii – ix, available at: <https://energy.gov/.../2015%20National%20Electric%20Transmission%20Congestion%20>.

²⁴ *Id.*, p. xx.

²⁵ *Id.*, p. xxi.

Commission convene a technical conference in order address three related topics: (1) to what extent information related to transmission congestion and constraints is kept across utility systems within and outside ISOs/RTOs; (2) in what format that information exists (or does not); and (3) what information would be genuinely useful to potential interconnection customers.

4. Definition of Generating Facility in the Pro forma LGIP and LGIA (NOPR, PP 134-139)

The Non-Profit Utility Trade Associations do not object to this proposal.

5. Interconnection Study Deadlines (NOPR, PP 140-151)

The Non-Profit Utility Trade Associations do not object to the NOPR proposal.

6. Coordination with Affected Systems (NOPR, PP 152-159)

Recognizing that *pro forma* LGIP section 3.5 calls only for Transmission Providers to coordinate interconnection studies with Affected Systems and, if possible, include those results within applicable results from the LGIP study process, the Commission asks whether it should “impose study requirements and associated timelines on affected systems that are also public utility transmission providers” and “standardize the process for coordinating an affected system analysis.”²⁶ Further, the Commission seeks comment on what additional steps may be taken, including a workshop or technical conference, to address issues regarding Affected Systems.

The Non-Profit Utility Trade Associations support exploring more routinized coordination of studies undertaken by Affected Systems. It is not hard to understand that interconnecting generators have reason to want information regarding the cost impact of their plans on third party systems in the same approximate time frame within which this information is provided by directly interconnecting utilities. Indeed, certain public utility transmission providers have already implemented procedures to facilitate such coordination within the flexibility

²⁶ NOPR, P 159.

afforded under the current LGIP. For example, the California Independent System Operator Corporation (“CAISO”) recently revised its tariff (in Docket No. ER16-693) to improve coordination with affected systems, including creation of a 60-day notice requirement for affected systems to participate in the CAISO study processes. For this reason, the Non-Profit Utility Trade Associations would consider to be reasonable additional features specifying coordinated studies by Affected Systems in a timeframe that works together with that of the interconnecting utility’s study process. Any changes to the *pro forma* approach should be broad enough to permit regional variations that work for participating stakeholders.

The Non-Profit Utility Trade Association further recommend that these coordination procedures operate on a “best efforts” basis, given the difficulty in adjusting schedules that are not, as of this time, necessarily designed to coordinate with one another. Further, the Associations recommend that specific operational details regarding these practices be included in documented business practices. In addition, the LGIP should provide for compensation by the interconnecting customers for costs incurred by Affected Systems undertaking coordinated study processes.

Non-Profit Utility Trade Associations further recommend that the Commission use this opportunity to clarify the obligation of interconnecting generators for costs incurred by Affected Systems as a consequence of an interconnection. Compensation is appropriately provided when Network Upgrades identified by an Affected System as necessary to protect the reliability of its system result from an interconnection. Which party ultimately bears responsibility for such upfront costs to accommodate an interconnection is a question not easily answered on the face of the LGIP and LGIA, and FERC’s precedent on the matter is not altogether clear.

Presently, LGIP section 3.5 requires Transmission Providers to coordinate with Affected Systems in connection with an interconnection request and the determination of any modifications that might be needed to the Affected System as a result.²⁷ The LGIP further requires Interconnection Customers to cooperate with Transmission Providers in this regard. Neither the LGIP nor the LGIA go so far as to expressly condition an interconnection on the Interconnection Customer assuming responsibility for the costs of upgrades on an Affected System that are necessary to accommodate that interconnection. Indeed, the Commission in Order No. 2003 stated that “unless the interconnection alone will endanger the reliability of an Affected System, a Transmission Providers may not require an Interconnection Customer, as a condition of interconnection, to accept responsibility for Network Upgrades on other systems.”²⁸

But in that same order, the Commission, in modifying LGIA section 11.4, stated that “prior to the Commercial Operation Date, an Affected System Operator may require the Interconnection Customer to pay for all Interconnection Facilities and Network Upgrades constructed to accommodate the Interconnection Customer’s Interconnection Request.”²⁹ Subsequently, in Order No. 2003-A, the Commission made it plain that “the Interconnection Customer *must* pay upfront for any Network Upgrades needed on the Affected System.”³⁰ Quite clearly, then, the Commission decided that the Interconnection Customer is responsible for such

²⁷ NERC’s planning standards similarly require Transmission Providers to work together to minimize effects on each other’s systems. *See Standardization of Generator Interconnection Agreements and Procedures*, Order No. 2003, FERC Stats. & Regs. ¶ 31,146 at P 122 (2003), *order on reh’g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160, *order on reh’g*, Order No. 2003-B, FERC Stats. & Regs. ¶ 31,171 (2004), *order on reh’g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190 (2005), *aff’d sub nom. Nat’l Ass’n of Regulatory Util. Comm’rs v. FERC*, 475 F.3d 1277 (D.C. Cir. 2007).

²⁸ Order No. 2003 at P 120.

²⁹ *Id.*, P 738.

³⁰ Order No. 2003-A at P 636 (emphasis added).

upfront costs associated with Network Upgrades needed on an Affected System as a result of the interconnection. This is further supported by the text of LGIA 11.4.2, which states:

[...] Interconnection Customer and Affected System Owner shall enter into an agreement that provides for such repayment [of amounts advanced to Affected System Owner for Network Upgrades]. The agreement *shall specify the terms governing payments to be made by the Interconnection Customer to the Affected System Operator* as well as the repayment by the Affected System Operator. (emphasis added).

Yet, while the text of the *pro forma* LGIP and LGIA contain language articulating this principle, neither document features an express obligation that the Interconnection Customer is responsible for upfront costs associated with Network Upgrades on an Affected System as a result of an Interconnection Customer's interconnection request.

The absence of an express requirement in the Commission-sanctioned tariff should be remedied. The matter is of particular importance for non-utility Transmission Providers that are also Affected Systems, who lack statutory standing before the Commission to impose a tariff obligation. One can easily conceive of a circumstance in which an Affected Entity is faced with a potentially substantial impact to the reliability of its system as a direct result of an interconnection on a neighboring system. And while such an Affected Entity may be part of the study process and negotiations among the transmission provider and Interconnection Customer, the obligation for payment of upfront costs associated with Network Upgrades on an affected system by a non-utility Transmission Provider may not be clear.

Such an obligation has been expressly stated by at least one RTO. PJM Tariff, Sec. 218.1, provides that “[i]n the event that transmission facilities or upgrades on an Affected System are required to accommodate a New Service Request, the New Service Customer shall be

responsible for the costs of such facilities....”³¹ The Non-Profit Utility Trade Associations see the PJM tariff language as a good starting point to resolve their concerns, but recognize that there are many considerations that may affect the equity of such an arrangement, including potentially counterbalancing pre-existing power flows among the utility systems. With no clear record in this docket on how these matters might be resolved, the Non-Profit Utility Trade Associations suggest that the Commission pursue further discussion and study of this matter through workshops or technical conferences.

C. Enhancing Interconnection Processes

1. Requesting Interconnection Service Below Generating Facility Capacity (NOPR, PP 162-180)

The Commission proposes “to allow interconnection customers to request a level of interconnection service for a generating facility that is lower than the generating facility’s capacity.”³² The Commission believes this flexibility will enable generating facilities that do not intend to use their full generating facility capacity to avoid constructing network upgrades and interconnection facilities they may not need.

The Non-Profit Utility Trade Associations do not object conceptually to the Commission’s proposal, on three conditions: (1) that companion provisions are adopted, as contemplated in the NOPR, assuring that interconnecting Transmission Providers may fully study the system impact of maximum generating output if that is thought necessary, and may install and secure compensation from interconnecting customers for necessary control technologies and protection systems; (2) that the costs associated with control technologies and protection systems should be treated as directly assigned costs, since they are not useful to other

³¹ (Local Upgrades and Network Upgrades on Affected Systems).

³² NOPR, P 161.

customers; and (3) that provisions are made for cost-sharing of upgraded systems funded by subsequent interconnecting customers if the generation-limited entity chooses to take advantage of that additional investment by subsequently increasing output.

As to the first of these conditions, the Non-Profit Utility Trade Associations support the proposed revisions to LGIP sections 3.1, 6.3, 7.3 and 8.2 ensuring that Transmission Providers may study the interconnecting generator at full output, and may install and secure cost recovery from interconnecting customers for necessary control technologies and protection systems. The ability to study full output may be needed, if, in the judgment of the Transmission Provider, there is some risk that the interconnecting generator may run at maximum output, protective systems and penalties notwithstanding. Such a study may be needed to determine the necessity of protective systems (as opposed simply to penalties) and to address concerns regarding the efficacy of control systems. Transmission Providers should be permitted to exercise their reasonable judgment in this matter.

As to control technologies and protective systems, it is critical that utilities be permitted to install such equipment as they, in their reasonable judgment, believe is needed. The potential harm to the grid if such systems are not installed and the network is insufficiently robust to accommodate the flow of power is considerable. Protective systems and control equipment designed to ensure power flows within acceptable limits are a critical reliability feature. The Non-Profit Utility Trade Associations ask the Commission to treat the cost of these protective systems as directly assigned costs, not subject to refund, credit or a balloon payment, as are the costs of network upgrades. The Commission's crediting/refund policy was designed to reflect the view that system upgrades in an integrated network are useful to all customers.³³ By

³³ Order No. 2003-A at P 585.

contrast, the investment in protective systems and control equipment that may be needed in order to constrain the output of a particular generator is needed only by the interconnecting facility, and is of value to no one else. Under the section 1.10 of the *pro forma* OATT, “Direct Assignment Facilities” are defined as those that ‘are constructed by the Transmission Provider for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff.” The cost of such facilities is not rolled into system-wide rates. For the very same reason, neither should be the cost of protective systems and control equipment necessitated by a single generator.

The Non-Profit Utility Trade Associations further ask the Commission to provide for cost-sharing of upgraded systems funded by subsequent interconnecting customers in the event the generation-limited entity chooses to take advantage of that additional investment by increasing output. It is not hard to hypothesize that after the interconnection of an output-limited generator, a subsequent interconnecting facility may be called upon to fund a system upgrade that increases system-wide capability in a fashion that makes additional output by the initial interconnecting facility possible. In that event, should the initial interconnection customer seek to increase its output, equity calls for cost sharing of the upgraded facilities, the benefits of which may be extended by credits or direct payments.³⁴ Such crediting has the added benefit of ensuring that the system of sequential studies and cost assignments contemplated by the *pro forma* LGIP will not be gamed by unscrupulous entities with the aim of foisting upgrade costs upon subsequent interconnecting entities.

³⁴ The Non-Profit Utility Trade Associations see this recommended mechanism as one strictly limited to the instance of a generator interconnection application for service at a level lower than a generator’s rated capacity, due to the obvious potential for increased output by the very facility underlying the application. We do not see the potential for the application of this principle in any other context.

Finally, the Non-Profit Utility Trade Associations recommend that the Commission consider the possibility of a directive for a NERC standard that would constrain generation interconnection customers operating at levels below their rated capacity to the rating at which the facilities are studied. The injection of energy at an unanticipated level has the clear potential to threaten grid reliability.

2. Provisional Interconnection Service (NOPR, PP 181-190)

The Non-Profit Utility Trade Associations do not object to the NOPR proposal.

3. Utilization of Surplus Interconnection Service (NOPR, PP 191-211)

For several reasons, the Non-Profit Utility Trade Associations object to FERC's proposal to establish an expedited process for interconnection customers to utilize, or to transfer, surplus interconnection service at existing generating facilities. First among them is the concern that the expedited study process contemplated by the NOPR may be inadequate to study fully the expanded use of the grid that the use of so-called surplus capacity represents. Although the Commission contemplates that certain additional studies will be undertaken when expanded use of an interconnection is undertaken,³⁵ the underlying premise of the proposal – that surplus capacity may be readily exploited because the electrical characteristics of the interconnection have already been studied -- is inaccurate. The electric grid is a dynamic environment in which power flows change frequently as demand fluctuates and power sources are added and subtracted, not only on the interconnecting utility's system, but on neighboring systems. In this environment, it is incorrect to assume that interconnection capacity that may at one point in time be assumed to be surplus will remain so. The passage of time exacerbates this phenomenon, and with no temporal limitation on the Commission's proposal, it would be wrong to presume that

³⁵ NOPR, P 202.

the engineering studies that preceded enhanced use of the grid through the exploitation of so-called surplus capacity may be relied upon.

So far as the Non-Profit Utility Trade Associations can see, moreover, the Commission's reliance on the approval of MISO's "Net Zero Interconnection Service" is inapposite. As the Commission explains, the MISO tariff is designed to enable an interconnection customer to ratchet down use of its initially studied interconnection capacity, while substituting another resource at the same point of interconnection. That program, and the limitation inherent in its very description – that it has a "net zero" effect -- stands in contrast to the proposal in the NOPR that would enable interconnection customers effectively to reserve capacity in excess of their initially designated service.

The Non-Profit Utility Trade Associations further note that the process by which additional transmission uses, whether for transmission or interconnection service, are planned and funded presumes that system upgrades which are necessitated by incremental service may be put to further use as the grid evolves. Customers have no property right to particular facilities, but instead pay for service on a grid managed by the utilities which serve them. For that reason, it is incorrect to think of "Surplus Interconnection Service" as a contractual right which may be transferred. Indeed, thinking of the grid this way would call for engineering models to be revised in order maintain a set-aside for fallow transmission capacity, reserved for use at some unspecified point in time. This is not the way the grid currently operates, and it would be a waste of resources.

Closely related to this observation, the Non-Profit Utility Trade Associations are concerned that if upgrades to the grid are thought to confer future property rights upon interconnecting customers, it may give rise to gamesmanship in which customers overstate their

immediate needs in anticipation of some point in the future in which the transmission capacity to which they lay claim has additional value.

Finally, the Non-Profit Utility Trade Associations note that it is not altogether clear what problem the NOPR proposal solves. To the extent its purpose is to facilitate the expeditious consideration of new interconnection service at points that have available capacity, existing procedures appear to serve the goal, and hold less potential for mischief. Existing procedures under the LGIP call for transmission provides to undertake Feasibility Studies following an application, the point of which is to ascertain by rough orders of magnitude the impact that a potential interconnection may have. If, at that juncture, it is ascertained that there is available transfer capability based on earlier system upgrades, expedited study processes under existing procedures would seem to be the appropriate solution.

4. Material Modification and Incorporation of Advanced Technologies (NOPR, PP 212-223)

The Non-Profit Utility Trade Associations have no objection to this proposal.

5. Modeling of Electric Storage Resources For Interconnection Studies (NOPR, PP 224-230)

The Non-Profit Utility Trade Associations have no objection to this proposal.

III. APPLICATION OF NOPR TO SMALL GENERATOR INTERCONNECTION PROCEDURES AND SMALL GENERATOR INTERCONNECTION AGREEMENT

At P 11 of the NOPR, the Commission asks for comment on “whether any of the proposed reforms should be applied to small generator facilities and implemented in the *pro forma* Small Generator Interconnection Procedures (SGIP) and Small Generator Interconnection Agreement (SGIA).” The Non-Profit Utility Trade Associations do not believe that the proposals made in this docket can be applied to the *pro forma* SGIP and SGIA without additional

notice and comment under the Administrative Procedure Act (“APA”). The SGIP and SGIA are substantially different in form and substance from the LGIP and LGIA, raising a host of different issues that follow from the divergent impact of smaller generators on utility systems. The nature of these differences formed the backdrop for separate proceedings under the APA, leading to the promulgation of Order No. 2006.³⁶ The instant proceeding does not provide adequate notice that the proposals in play here will have application to the *pro forma* SGIP and SGIA, obligating the Commission to promulgate a new NOPR if the concepts are to be extended.³⁷

IV. CONCLUSION

The Non-Profit Utility Trade Associations see room for improvement in the industry’s approach to generation interconnection. Because so much of the cost uncertainty that bedevils project developers results from the untimely withdrawal of projects from study queues, the Non-Profit Utility Trade Associations urge the Commission to focus its attention on improvements such as information access and methodological transparency that will facilitate early decision-making, while encouraging financial incentives that will promote project commitment and discourage later withdrawal. The Non-Profit Utility Trade Associations urge the Commission to steer clear of proposals for cost caps that fail to address the underlying cause of cost uncertainty and will result in no more than a pointless shift in cost and risk to Transmission Providers and their customers. Consistent with the comments above, the Non-Profit Utility Trade Associations also ask the Commission to avoid proposals that would compromise grid security and reliability or would increase the cost of utility service needlessly.

³⁶ *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, FERC Stats. & Regs. ¶ 31,180, *order on reh’g*, Order No. 2006-A, FERC Stats. & Regs. ¶ 31,196 (2005), *order granting clarification*, Order No. 2006-B, FERC Stats. & Regs. ¶ 31,221 (2006).

³⁷ *See supra*, fn.20.

Respectfully submitted,

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Dated: April 13, 2017