

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

**Standardization of Small Generator
Interconnection Agreements
& Procedures**

Docket No. RM02-12-000

**JOINT COMMENTS OF PUBLIC INTEREST ORGANIZATIONS &
SMALL RESOURCE ADVOCACY GROUPS (“Small Generator Coalition”)
ON THE SMALL GENERATOR INTERCONNECTION NOPR
(October 3, 2003)**

I. INTRODUCTION & SUMMARY OF COMMENTS

1. The Small Generator Coalition (“SGC”), made up of the public interest and small resource advocacy groups joining this filing,¹ appreciates this opportunity to comment on the Notice of Proposed Rulemaking. The SGC organizations represent a large and very diverse group of interests, including state, regional and national consumer advocate, environmental, and energy groups (with hundreds of thousands of members), as well as equipment manufacturers, small resource developers, subsidiaries of large utilities, and wholesale electricity customers. In the view of these organizations, small and clean distributed resources are critical to the nation’s long-term energy future—its fuel diversity, energy security, and environmental quality. They are also convinced that

¹ SGC companies and organizations joining these comments: **American Council for an Energy Efficient Economy; American Solar Energy Society; American Wind Energy Association; BP Solar; Citizens Action Coalition of Indiana; Coffman Electrical Equipment; Cummins Power Generation; Elliott Energy Systems; Encorp; Environmental Law & Policy Center; Kyocera Solar, Inc.; MAN Turbomachinery, Inc.; Natural Resources Defense Council; Northeast-Midwest Institute; Northwest Energy Coalition; Pace Energy Program; Pennsylvania Energy Project; Plug Power, Inc.; Power Equipment Associates; PowerLight Corporation; RWE SCHOTT Solar, Inc.; Shepherd Advisors; Solar Energy Industries Association; Spire Solar, Inc.; U.S. Combined Heat and Power Association; & University of Oregon Solar Radiation Monitoring Laboratory.**

greater reliance on small resources is essential to making electricity markets competitive and that barriers to interconnection must be removed to enable these resources to thrive in the marketplace.

2. Many of these organizations invested substantial amounts of resources in the Commission's ANOPR process in 2002, and they did so because low-cost expedited procedures and standard objective interconnection rules are critical to the viability of small resources in regional energy markets. As the Commission has noted, the current patchwork of inconsistent, overly expensive, and sometimes deliberately obstructive interconnection procedures constitute a significant barrier to widespread use of small resources in U.S. electricity markets.

3. The critical importance of reasonable interconnection rules led small resource advocates to form a coalition in 2002 and assemble some of the best transmission and distribution engineers in the industry to develop objective criteria for evaluating interconnection proposals. The SGC's primary goal was developing objective standards—e.g., certification requirements and grid impact screens—that would both facilitate review of small resource proposals and assure safe and reliable interaction with the grid. In pursuit of these goals, the Coalition developed specific proposals with written technical support, some of which were actually adopted as consensus provisions. Many of the Coalition proposals, however, were opposed without technical justification, and this led to divergent positions on several issues that should have been agreed to on technical grounds.

4. Although SGC groups joining this filing supported the Commission's decision to develop special procedures to accommodate small power resources, they are disheartened

that the NOPR not only fails to propose procedures that will facilitate small resource interconnection, but it proffers rules and agreement provisions that would inhibit their interconnection and limit their access to energy markets. While the Commission's goals for the NOPR—to reduce interconnection costs, prevent undue discrimination, facilitate development of non-polluting alternative energy sources, etc.²—are right on target, the procedures and documents proposed will not advance most of these goals and may adversely affect many of them. In fact, several SGC groups believe that issuance of the NOPR was a step in the wrong direction—that small resource interconnection would be more difficult if the NOPR approach, rather than (for example) the NARUC model, were adopted by state regulators.

5. Among the most significant problems with the proposed rule, all of which will be discussed in greater detail below, is its failure to recognize and accommodate the minimal system impacts of very small resources—a failure that resulted from *a fundamentally flawed ANOPR process* characterized by the unwillingness of utilities participating in the Interconnection Providers caucus to make technical concessions, even those most obviously warranted, as well as insufficient technical resources among the FERC staff participants to broker solutions to the technical impasse. For example, SGC technical experts – transmission and distribution experts from a major utility with expertise unsurpassed in the industry – proposed a set of technical compatibility tests called “screens” that, if passed, would provide reasonable assurance of no adverse grid impacts from the interconnection. Although the Interconnection Providers **never**, during the months of negotiations, provided technical refutations of these screens, the IPs rejected them because of their allegedly unproven status. FERC staff did not attempt to arbitrate

² *Notice of Proposed Rulemaking*, 104 FERC ¶ 61,104, paragraph 1.

technical discussions, and they ended in an impasse – an impasse resulting in part from the staff’s limited role, rather than the inability of competent experts to reach a technical consensus. The process lacked a strong facilitator or arbitrator to force parties toward a reasonable technical consensus.

6. One of the problems directly arising from the impasse on technical issues is a NOPR that misapplies the screens, suggesting, inter alia, that FERC staff did not adequately understand the technical import of the screens. Screens designed solely for evaluating the interconnection of resources under 2 MW are applied in the NOPR to resources up to 10 MW. As the technical screens have been proposed in the NOPR, few, if any, of the smallest power resources would receive low-cost, super-expedited treatment. The NOPR adopts for these very small, low or no impact resources, the ultra-conservative and technically indefensible screens that were proposed by the transmission and distribution owners. While it is arguable that such an approach may serve the interest of grid reliability, it certainly does not advance the goal of facilitating small resource interconnection.

7. There are many other examples in the NOPR of the fundamental failure to recognize and accommodate small resource characteristics. Imposing the same types of insurance requirements on customers proposing small wind turbines that are imposed on nuclear power plants is just one of the most ludicrous. The insurance requirements in the SGIA are both onerous and wholly out of proportion to the impacts of small resources. They alone would likely assure that few, if any, utility *customers* pursue interconnection. Such requirements would constitute yet another barrier to small resource development.

8. Similarly devastating for DG development is the imposition of inaccessible or expensive dispute resolution procedures—only large developers and utilities can afford to undertake litigation or formal arbitration. Instead of adopting the *consensus* agreements on dispute resolution from the ANOPR process, thereby assuring small resource interconnection customers a low-cost, informal and expedited procedure to resolve disagreements, the NOPR permits utilities to reject any arbitration of disputes with customers or force any dispute into an expensive arbitration procedure, effectively approving a major barrier to interconnection – i.e., codifying the status quo.

9. Even more difficult to understand is the NOPR’s failure to adopt consensus agreements from the ANOPR process on the certification of small generation and interconnection equipment by national testing laboratories, the standards to be used for certification, and the creation a registry of precertified equipment to help eliminate unnecessary controversies over the safety of small resource equipment. These consensus agreements are critical to ensuring that small resources can be interconnected at low-cost in super-expedited procedures, but the NOPR proposes to leave the certification issues unresolved, “encouraging” industry participants to work out how certification will be done, by whom, and with what standards – precisely what was attempted by industry participants in the ANOPR process.

10. Yet another problem is the NOPR’s proposal to lump small resources into a single interconnection queue with the large generators. Unless queue procedures currently in use are modified significantly – e.g., to require cluster evaluations, to limit the rights of zombie plants to inhibit the interconnection of others, etc. – a single queue will likely

ensure that small resources are accorded little attention or that they are held hostage to the study and cost allocation requirements related to large generation projects.

11. Contrary to the Commission's goal of eliminating rate pancaking, the NOPR's cost allocation provisions appear to guarantee pancaked wheeling charges on energy produced by small generators (along the lines of the charges in New England for use of "non-PTF" portions of the grid – as much as \$5/MWH). Such provisions certainly will not facilitate small resource interconnection. In addition, due to apparent drafting ambiguity, NOPR provisions may permit transmission owners to require participant funding of required network upgrades with no compensation to the small generator or consideration of network benefits. Although the NOPR SGIA at ¶ 5.1.5 may give small resources an opportunity to demonstrate benefits to a utility's transmission or distribution system that would reduce their costs, the NOPR's discussion of Distribution Upgrades at ¶ 72 appears to rule out any cost reductions for distribution upgrades. In light of the evidence that downstream resources can provide meaningful system reliability benefits, the Commission's rule should allocate upgrade costs in accordance with benefits to all portions of an affected transmission system, including facilities operating at distribution voltages.

12. Finally, even if the proposed rule reasonably accommodated small resources, the jurisdictional limitations stated in the NOPR would assure that few, if any, such resources would be able actually to use the rule's provisions. Other than in the Mid-Atlantic region where PJM handles interconnections, there may be no other region in the country where small resources could interconnect on lines covered by utility OATTs. Moreover, the new jurisdictional tests may undercut PJM's existing small resource interconnection rules

– rules that are nearly universally accepted as a model for expedited interconnection.

Thus, not only will the FERC rule be unavailable to most small resources proposing to sell electricity for resale in FERC jurisdictional energy markets, it may hamper the laudable efforts by PJM and others to use small distributed resources to address congestion and localized market power problems.

13. Unless the Commission is willing to modify the proposed rule in fundamental ways, many of the groups joining this filing believe small resource development would be better served if the rule were simply withdrawn and the docket terminated. The NOPR order, they believe, fundamentally misstates the situation faced by the industry vis-à-vis small distributed resources, and the rules it proposes run counter to its stated goals. More specifically, according to the order,

The electric industry is faced with the *competing* needs for, on the one hand, maintaining electric system reliability and, on the other hand, encouraging increased generation, including generation using innovative technologies. (NOPR at paragraph 11, emphasis added.)

The NOPR then states that in order to encourage small generator participation in the interstate wholesale market, “the interconnection process should be affordable and the terms and conditions should be clear, *but these goals must not compromise the reliability of the electric system.*” (Emphasis added.) SGC groups believe that framing interconnection issues as a competition between maintaining system reliability and encouraging small resources is wholly inappropriate, and it gives disproportionate weight to the reliability “concerns” of transmission/distribution owners with generating units of their own. That system reliability must not be compromised goes without saying, but the need for system reliability does not compete with the goal of encouraging small resource

development via affordable and clear interconnection terms and conditions. The compatibility of small resources with the grid was proven long ago – there are literally thousands of such small resources in place and operating in the United States, safely interconnected with the grid (such as the solar array on the roof of the Commission’s own office building).

14. The underlying issue before the Commission here is not whether interconnection of small resources harms reliability. Indeed, small resources will significantly improve reliability because the true threats to reliability, as recent weeks have proven, come from grid constraints, large power plant outages, and high voltage facilities. Small resources are generally sited downstream from the points at which failures are most likely. Rather, the underlying issue in this docket is whether the public utilities that currently dominate generation, as well as transmission and distribution on the grid, can avoid the oncoming competition of a host of small generating technologies that threaten to substitute for both their generation and their wires – technologies which achieve their highest value when operated in synchronous interconnection with the grid.

15. The Commission’s commitment to ending artificial barriers to interconnection of small generators should be driven by its goal of encouraging technologies that would facilitate wholesale competition and increase customer choices. The interconnection NOPR inappropriately, we believe, focuses far too heavily on red-herring concerns about system reliability and safety, manifest by its acceptance of defensive, ultra-conservative technical measures put forward without proper justification by the IP utilities. Further, the NOPR’s unduly constrained perception of the Commission’s jurisdictional reach suggests that effective commitment to competitive access by small generators is waning.

If this is so, it is tragic because our nation's electric system can only regain reasonable reliability, system security, and power quality with a proliferation of small resources on the grid – not by reinforcing the operational and institutional monopolies that typically have blocked technical and market innovations.

16. Within the next seven days SGC groups will file small resource interconnection documents that provide recommended modifications of the NOPR's Application, SGIP, and SGIA to address the problems noted in these joint comments. In addition, the SGC will provide with the documents its explanations of why the recommended changes are needed.

II. **MAJOR NOPR PROBLEMS AND PROPOSED MODIFICATIONS**

A. **Precertification" – Ambiguous & Unresolved**

17. Parties to the consensus ANOPR filing agreed that the Commission or its designee should maintain and post a list (registry) of equipment packages that had been certified for interconnected operation with the utility grid. The detailed process worked out in the consensus document incorporated several critical elements that are completely missing in the NOPR proposal.

18. First, the parties agreed that recognized national equipment testing laboratories (e.g., Underwriters Laboratories) would be the entities to certify interconnection equipment and generator packages with integrated interconnection equipment. These laboratories test everything from small retail consumer electric appliances to air conditioners and other large electrical equipment consuming more than 2MW (the limit contemplated in the consensus documents for super-expedited generator interconnections). As national experts recognized by code officials, safety engineers,

building designers and a host of other professionals, these neutral laboratories are indisputably the best entities to certify the safe design of generators and interconnection equipment.

19. Second, the consensus filing provided national testing laboratories with a list of the national standards to be utilized in performing certification. This list included both IEEE and National Fire Protection Association standards -- standards that are both comprehensive and only promulgated after review by the best experts in the respective fields of these organizations³. However, the NOPR does not adopt these standards.

20. Lastly, the registry included certain procedural safeguards that utilities requested so that any piece of equipment to be included in the registry was subject to comment by any party. This would help assure that certified equipment was safe. Small generators agreed to this final procedural step in order to ensure that only safe electrical protection designs would be used by customers. Perhaps even more than utilities, the small generator community can ill afford to have a distributed generator cause any safety problems.

21. While the NOPR recognized that the purpose of “precertification” (“certification” in the consensus filing) is to “ensure the safety of the Generating Facility itself, not the safety or reliability of the Generating Facility's interconnection to the Transmission Provider’s Transmission System,” as well as to eliminate “the need for the Transmission Provider to study the equipment for safety and reliability purposes” (NOPR at ¶s 42-43), the proposed rule rejects the well considered ANOPR consensus that would accomplish these goals. Instead, the NOPR replaces the designation of a registry entity and explicit

³ The primary national standards are IEEE 1547, IEEE 929 (small inverters only), and UL 1741. The other standards listed in the consensus filing have all been subsumed in IEEE 1547.

standards with “encouragement” that industry participants cooperate and share information regarding precertification (NOPR at ¶ 46), which is exactly what took place during the ANOPR process, and a rule provision that requires “compliance with applicable consensus industry operational and safety standards” (SGIP at Sec. 3.1), whatever they may be. Notwithstanding the broad consensus on how to set up the registry and conduct precertification, reinforced in NARUC’s January 2003 filing (Appendix C, pages 26-27), the NOPR approach leaves the requirements for precertification unresolved and open to endless and costly debate—a confusing and ill-defined certification process at best.

22. Further, the NOPR precertification process is subject to at least the following three interpretations:

- (1) if a generator or piece of interconnection equipment is listed by a nationally recognized testing laboratory, the listing constitutes precertification for purposes of the proposed rule; or
- (2) before any equipment can be considered precertified, an “industry-recognized testing organization” must create a registry for generators and interconnection equipment that meet “consensus industry standards.” (NOPR at ¶ 46) (No guidance is provided on whether the term “industry” refers to small generator manufacturers, utilities, or both along with others. If the Commission does not designate the entity to create the registry and the standards to be applied, the “industry” could face years of controversy and/or litigation over the appropriate entity and standards); or

(3) states and “industry participants” would collectively develop a list of precertified equipment. (No guidance is provided on what will happen if all 50 states and industry participants fail to agree on a certain interconnection package or generator. If the intention here is to require all 50 states and industry participants to agree on the precertification of a particular generator or interconnection package, there may be no equipment manufacturers that ever achieve this pinnacle of precertification. Manufacturers whose equipment is accepted by certain states will face years of trails and tribulations in getting the remaining states to agree. This is the status quo for generator manufacturers and represents a major barrier to the use of distributed generation.)

23. In light of this ambiguity, the SGC requests that the Commission clarify the definition of “precertification.” If the NOPR intends precertification simply to be listing by a nationally recognized testing laboratory, we can support that interpretation as being in line with virtually all other equipment manufacturing sectors. However, the Commission should also clarify that equipment being certified may include a generator, one piece of interconnection equipment (e.g., an inverter), or an interconnection equipment package. Further, manufacturers must be assured that once their equipment receives UL approval or approval from another NRTL, its precertification will not be subject to challenge by any Transmission Provider⁴.

⁴ Section 3.1 of the SGIP uses the term “Generating Facility” to designate the equipment being certified when, in most cases, the UL approval will be for an “interconnection equipment package” (inverter or switchgear package – switches, relays, etc.). For purposes of clarity, “Generating Facility” should be defined to include “equipment package” or another definition must be added along with wording changes in Sec. 3.1. SGC groups are also concerned about use of the term “identical” in this section, as it may indicate something different than being tested and listed by a NRTL. Once a national testing laboratory approves a piece of interconnection equipment, the approval indicates the parameters a manufacturer can or cannot change without affecting the approval. Certainly if a NRTL approves a piece of interconnection equipment painted blue, a similar but non-identical red model of the same equipment would also be approved. SGC

24. If the Commission envisions something more complex for precertification, SGC groups request that the core of the consensus position on certification be adopted in the final rule. Only a single Commission-designated registry will eliminate the barriers distributed generation manufacturers face today – i.e., different rules in different states and type testing of equipment by every utility even when the identical generator is being used safely in a neighboring state or service territory.

25. If the Commission is hesitant to adopt the consensus position on a registry because of its workload or a perceived lack of authority or technical expertise to oversee such a registry, SGC groups recommend that it designate the Department of Energy or a DOE laboratory or university willing to create and maintain such a registry. The Commission would then only be called upon to address procedural complaints filed under its standard rules and procedures.

B. Screening Criteria – Misunderstood and Misused

26. The NOPR has added to the complexity of the screening process presented in the consensus ANOPR filing. Additionally, in some screen elements, the NOPR exhibits a fundamental misunderstanding of the purpose of the consensus screens and substitutes an alternative that is impractical or, in some cases, dangerous.

27. The consensus super-expedited screens focused on certified/precertified generators less than 2MW in capacity. The parties to the consensus filing attempted to develop a set of screens that would ensure that generators passing the screens would have no adverse impact on grid safety or reliability if interconnected without grid

groups are concerned that generators and equipment will be challenged by Transmission Providers based on the NOPR's "identical" requirement, even when a minor manufacturing change incorporated into a later model does not affect the NRTL listing. The NRTL should be the sole avenue of challenging whether equipment is listed and thus precertified.

modifications. Because the parties could not agree on a single set of screens, they developed two sets and proposed slightly different procedures for the different screens, with additional utility review permitted when a proposed interconnection passed the more liberal screens but failed one or more of the more conservative screens. Again, NARUC's Supplemental Comments in January 2003 supported this approach to using screens. (See Section 2, c, pages 8-11.)

28. All parties agreed that the primary screens were sufficiently conservative that **generators of any size** that passed the screens could be safely interconnected. The primary screens were designed to assure that larger generators would fall out, reflecting the need for additional study. Because these screens are so conservative they would screen out many, if not most, generators under 2MW that would cause no adverse impact, the Small Generator Coalition developed a set of secondary screens that would pass a significantly greater number of generators with only a few "false positives" (i.e., units that would pass the screens but actually have an adverse impact). To address utility concerns that the few false positives would allow some problematic generators to be interconnected, the SGC proposed that any interconnection passing the secondary screens (but failing one or more primary screens) could be challenged by the utility, but in a dispute the utility would carry the burden of demonstrating the problem. Imposing the burden of demonstrating adverse impact on the utilities was seen as the best way to offset the great resource disparity between the parties and to ensure that utilities truly focused only on the false positives.

29. Instead of implementing the screens in this manner, or simply splitting the difference between the two sets of screens⁵, the NOPR applies the primary screens to generators less than 2MW and, inexplicably, applies the secondary screens to generators between 2 and 10MW.⁶ This approach actually destroys the intended functionality of the screens. The use of two different screen sets was intended only to establish a threshold for determining the need for further utility review and to trigger the procedures to be followed if a dispute arises.

30. The NOPR's proposed process also raises the bar on distribution level (defined by the NOPR as below 69kV) interconnections to 10MW units under the rule's expedited procedures.⁷ However, since the limitation on the use of the rule requires the generator to be less than 15% of the circuit peak load, the only way a 10 MW distributed generator could use the proposed rule would be on a distribution circuit with a peak load of 66MW (15% of 66MW = 10MW). Such distribution circuits are extremely rare, if in fact they exist anywhere at all.

31. While not directly stated in the consensus documents, one of the reasons for excluding any transmission studies in the super-expedited procedures was that a 2MW

⁵ The Massachusetts consensus tariff (Massachusetts D.T.E., In re the Department's Investigation into Distributed Generation D.T.E. 02-38-A and Tariff to Accompany Proposed Uniform Standards for Interconnecting Distributed Generation in Massachusetts, 2003) and the IREC Interconnection model (www.irecusa.org) chose this route.

⁶ The NOPR suggests in numerous places that the more liberal screens are intended for generators larger than 2MW but less than 10MW. The opening to the discussion on the Expedited Screening Criteria (paragraph 53) says the criteria "are used to evaluate the proposed interconnection of Small Generating Facilities larger than 2 MW but no larger than 10 MW with the Transmission Provider's Low-Voltage Transmission System." Later in the text of the procedure contained in Appendix C, Section 4, there is an indication that the Expedited Screening criteria may be available for all units up to 10MW in size. If the Commission intends for the Expedited screens also to apply to units less than 2MW, it should clarify that applicability in the final rule.

⁷ The consensus documents limited the screening process to units not greater than 2MW. The consensus parties agreed generators larger than 2MW to be interconnected at distribution level voltages should receive a review for power flow impacts on the transmission system.

generator that is less than 5 (or 15) percent of the distribution circuit load has little, if any, likelihood of affecting transmission power flows. This assumption becomes suspect above 2MW and is a good reason to avoid raising the limit.

32. SGC groups appreciate the recognition in the NOPR process that generators passing the primary screens are unlikely to have circuit impact and thus automatically qualify for an Agreement. In addition, the availability of the limited-scope “additional review” step for generators that fail a primary screen, but still may be safely interconnected, is an important element in keeping costs manageable for small generators. Unfortunately, the process related to the secondary screens does not have a similar limited-scope review step for the very small, under 2MW resources.

33. Perhaps the NOPR presumes that the language of SGIP Section 4.3.1 addresses the above defects: “If the Generating Facility passes the Expedited Screening Criteria, but Transmission Provider determines that the Generating Facility cannot be interconnected safely and reliably, the Parties shall conduct a Scoping Meeting.” Subsequent to that meeting presumably either party can request a Feasibility Study (although it is doubtful that a very small generator would ever take the risk of requesting additional study). Seemingly, the NOPR process assumes the Feasibility Study will be able to identify any defects or problems from the proposed interconnection even though the generator has passed the secondary screens (the Expedited Screening Criteria).

34. Although incorporating this catch-all provision into the procedures may be useful, its being an option that is both unilateral and undefined will make it easy to abuse. Transmission Providers desiring to keep distributed generation off their system for

economic reasons could routinely “determine” that a proposed interconnection will have adverse impacts.

35. In an apparent attempt to temper any abuse of this unilateral authority, the NOPR proposes that if the Feasibility Study shows no adverse impacts, the Transmission Provider must pay for the cost of the study. If, however, an adverse impact is discovered, no matter how minor under the definition, the generator must pay the cost of the study. Unfortunately, this will merely incent Transmission Providers to find adverse impacts even when none actually exist.

36. Under Section 4.3.1 of the SGIP, if the Feasibility Study discovers an adverse impact, a system impact study must then be performed. At this point, if an applicant has not completely exhausted its interconnection study budget, it may receive the results of an impact study that states that no actual impacts were found, and the generator may proceed to interconnect. The generator pays for all these unneeded studies.

37. In practical terms, the NOPR proposes to codify the worst-case scenario for small generators – i.e., being routinely faced with a very costly impact study that ultimately concludes no impacts will result from the interconnection. Many generators are currently dissuaded from interconnected operation because the utility performing the interconnection always wants to conduct an impact study.⁸ The utility justification is invariably that until the detailed impact study is performed, problems arising from the small generator interconnection cannot be absolutely ruled out.

⁸ The major problem for small generator developers is that impact studies are usually a no win proposition. If an impact study is justified, the facilities needed to address adverse impacts typically make the installation uneconomic. If the impact study shows no adverse impact, the developer is left to wonder whether it just wasted a significant sum on a needless study. Few small resource developers are willing to risk thousands or tens of thousands of dollars on such a speculative outcome.

38. In effect, the NOPR proposes a rule that will undercut the feasibility study's value. Primarily, feasibility studies are tools for generators to avoid costly impact studies. By receiving a very preliminary review and report of the problems the interconnection may pose (i.e., the results of a feasibility study), the generator can decide to proceed or cancel a project without a major investment of time and money. Since they are very preliminary reviews, all feasibility studies are conditional. Although problems may be identified in a more detailed impact study, problems identified upfront may also disappear. The NOPR has created a great incentive for the latter. In the case of a Transmission Provider that decides to deter interconnections by sending most if not all to an impact study, there is nothing in the NOPR that would deter such nefarious actions.

39. Thus, SGC groups urge the Commission to adopt in the final rule the SGC's position in the ANOPR consensus filing – namely, that if a generator passes the NOPR's proposed "Expedited Screening Criteria" but a Transmission Provider determines the Generating Facility cannot be interconnected safely, the Transmission Provider may **propose** to the generator a scoping meeting and further studies. If the generator disagrees with the Transmission Provider determination, then the Transmission Provider has the burden to initiate the dispute resolution process to prove its case.

40. Placing the burden on the TP is the only viable method to address the gross disparity in the bargaining positions of the parties and to deter the TPs from using interconnection as an arbitrary barrier to greater use of distributed generation. The SGC recognizes that there may be bad actors in the small generator community, but these will quickly be exposed and dispatched in the dispute resolution process. The limited expenditure of TP time and resources to address the few generators who wrongly object

to the need for additional interconnection study is a very small price to incur for addressing the much larger problem of utilities that use unfounded “determinations” to require unneeded interconnection studies in an effort to dissuade customers from using distributed generation to make their own electricity.

41. In the alternative, the rule should at least require the Transmission Provider to pay for interconnection studies when the Feasibility Study **or the Impact Study** shows no adverse impact. Unlike the Feasibility Study, which can be manipulated, the Impact Study is a detailed and in-depth review in which is difficult if not impossible to fudge the results to show an impact. Further, a nefarious TP would then have much more at stake—i.e., the cost of both studies.

42. Since the Feasibility Study is a very preliminary review of the same substantive inquiries made in an Impact Study, there is no logical reason to have the outcome of that study determinative of which party should pay. If the Commission’s objective is to provide some deterrent to unneeded interconnection studies, the only effective deterrent is to have the Transmission Provider pay for both studies if it finds no impacts after the Impact Study. This would provide an incentive to make a proper determination at the conclusion of the Feasibility Study and only put small generators that genuinely require an Impact Study through that in-depth (and costly) process.

C. Interconnection Studies – Inadequate Definition & Unlimited Costs

43. The three types of standard interconnection studies for small generators mirror their counterparts in the Large Generator Rule. While the proposed rule for small generators sets forth the elements of each study, nowhere is it indicated how these studies

differ from (or are to be conducted more expeditiously than) the same three study components for large generators.

44. The SGC fears that many Transmission Providers may conduct and charge for virtually identical Feasibility, Impact and Facilities Studies, irrespective of whether a generator is large or small. A fundamental reason for a small generator rule is that small resources do not require the same level of study as large, but this underlying rationale is at risk of being lost in the NOPR proposal.

45. PJM's OATT, which includes a model for expediting small generator interconnections, uses phrases like "Feasibility Study analyses can generally be expedited by examining a limited contingency set."⁹ PJM's procedure indicates that the only analysis conducted under their expedited small generator Feasibility Study is a short circuit analysis.

46. The NOPR's proposed Feasibility Study requires a Transmission Provider to undertake four analytical steps: 1) short circuit analysis, 2) thermal overloads review, 3) grounding review, and 4) an estimate of facilities costs. While all of this information may be useful to the small generator, it is likely to come with a very high price tag. Most projects will not be able to afford this costly review at such preliminary stage of the proposed installation.

47. It will be easy for Transmission Providers to turn the NOPR's proposed Feasibility Study into a mostly complete Impact Study. If this happens, the cost of such a Feasibility Study will be a barrier to many interconnections. It is important to note that small generators are not opposed to having detailed information early in the development of a project, but they cannot afford the risk and cost when a project is still in the

⁹ PJM Small Resource Interconnection Procedure Manual Section 1.02

formative stage. If the NOPR were to require that Transmission Providers pay all costs of all studies, small generators would not care if every project received a detailed impact study on day one. Small generators need to spend as little as possible to understand whether a project is viable. For extremely high value opportunities, generators may decide to proceed even if in-depth impact studies are required. For most, however, the cost of an impact study alone (not to mention that impact studies usually imply that some costly facilities will also be required) will assure that the project is not economically viable.

48. The SGC respectfully requests that the Commission modify the final rule so there is either a clear path for small generators to routinely avoid impact studies when not needed or, alternatively, a strong disincentive for Transmission Providers to require needless impact studies.

D. Distribution Network Interconnections – Impossible

49. The parties to the consensus filing achieved little agreement on interconnections to distribution networks (the low voltage Transmission System). Under the NOPR, the only method by which even a 10kW photovoltaic system could interconnect to a distribution network is to follow the procedures for generators larger than 10MW. This entails a Scoping Meeting, Feasibility Study, and, potentially, Impact and Facilities Studies. Since the cost of these studies could easily be more than the entire cost of the installation, few if any would use the Commission's proposed rule. Thus, the effect of this rule would be to bar the least problematic generators from interconnecting.

50. For example, if the Commission desired to install a 2 kilowatt PV system on the roof of its own building, that installation would be subject to interconnection rules for the

largest small generators. Since the building connects to a distribution network, there would be no limitation on, or expedition of, any of the costly interconnection studies.

51. In reality, such a small system, inherently protected with high-speed electronics in the inverter which performs the interconnection, could be interconnected without any interconnection study. The Commission should recognize the simplicity of the very smallest generators and include an exception for small inverter based systems.

Otherwise, the proposed rule will add a significant new barrier to the interconnection barriers that already exist.

E. **“Operating Requirements” & “GUP” – Utility Discretion Rules**

52. The Standard Small Generator Interconnection Agreement (“SGIA”) Section 2.2.1 provides that, “The Parties shall perform all obligations of this agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice.” “Operating Requirements” is defined to mean “any operating and technical requirements that may be applicable due to... Transmission Provider requirements, including those set forth in Appendix 4 of the Standard Small Generator Interconnection Agreement.” (Emphasis added.) “Good Utility Practice” is defined to mean, *inter alia*, “any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known...could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition.” (Emphasis added.) GUP is further defined/clarified not to mean “optimum practice” but, rather, “acceptable practices, methods, or acts generally accepted in the region.” (Emphasis added.)

53. As the Small Generator Coalition (“SGC”) pointed out in its comments on the ANOPR Consensus Documents and Annotations, the incorporation of such vague and open-ended language can produce the very problems the Commission has stated that it is trying to avoid. The Introduction to the NOPR states that, “entities seeking to interconnect generators have been hindered by the lack of standard interconnection procedures and agreements.” It also notes that the purpose of the proposed standard interconnection procedures and agreements is (*inter alia*) to “limit opportunities for public utilities . . . to favor their own generation” and to encourage small generators to participate in the wholesale market by assuring that the interconnection process is “affordable and the terms and conditions clear.”

54. Yet, given a literal reading, the NOPR appears to allow a Transmission Operator to impose on the small generator “any operating and technical requirements” and any “acceptable practices, methods, or acts generally accepted in the region,” as well as practices and acts engaged in by “a significant portion of the electric industry.”

(Emphases added.) Given that the SGC believes that a “significant portion of the electric industry” engages in “practices” and “acts” that are designed to thwart interconnection by independent small generators, there is good reason to be concerned about this language.

Indeed, how can interconnection procedures and agreements be “standard,” let alone “clear,” if they are subject to “any” obligations imposed by a Transmission Operator?

55. In the ANOPR filing the SGC suggested a modest revision to the “Operating Requirements” and “Good Utility Practice” definitions to limit the potential for confusion and abuse. This revision would add the phrase “not inconsistent with the Rules” (referring to the Commission’s interconnection rules). This recognizes that there may be

operating requirements and practices that serve legitimate purposes. The only restriction on such requirements and practices is where they would undermine the Commission's rules. SGC groups do not understand why the utility caucus opposed this language and why it was omitted from the NOPR. If the Commission truly intends to allow Transmission Operators to impose "any" requirements they see fit, even if those requirements thwart the very purpose of the rulemaking, it hardly seems worth the trouble to proceed. If not, it would be helpful to the small generator community if the Commission would say so explicitly.

F. Dispute Resolution Provisions –Major Small Resource Barrier

56. The dispute resolution process adopted in this rulemaking is of vital importance to the small generator community. This is because many of those who seek to interconnect small generating facilities are small entities with modest resources or larger entities trying to develop small projects with a correspondingly small cost margin between success and failure. In these circumstances, cumbersome and costly dispute resolution procedures constitute an insuperable obstacle, and the mere invocation of a dispute can sound the death knell of the project. Even the fear of such lengthy disputes has a chilling affect on many small generators who are loathe to pursue a project that entails regulatory proceedings of any kind.

57. The SGC urged the Commission to recognize this reality and adopt dispute resolution procedures which would be fair to all parties but, at the same time, clear and expeditious. The ability to invoke binding arbitration is, in our view, of the utmost importance in achieving this goal. Similarly, it is very important to be able to understand how disputes will be resolved, and thus how long and costly the process may be.

58. More importantly, parties to the ANOPR negotiations **agreed** on a dispute resolution process and included it in the consensus documents filed last November. As proposed in the consensus SGIP document of resources under 2MW,

If a dispute arises...either the Applicant or Interconnection Provider may seek immediate resolution through the Commission's alternative dispute resolution process, by providing written notice to the Commission and the other party stating the issues in dispute. Pursuit of dispute resolution will not affect an Applicant's position in the queue. At the outset, either party may require that such dispute resolution will be binding. Dispute resolution will be conducted in an informal, expeditious manner in order to reach resolution with minimal costs and delay. When appropriate, the dispute resolution may be conducted by phone or through Internet communications. (SGIP, Attachment A Procedures, Sec. 6, a.)

59. In addition, under Section 6, b of these consensus procedures, the following was **agreed** by the parties:

In addition to its own or other dispute resolution resources, the Commission will arrange to make available to the parties at no or minimal cost the services or one or more technical masters to resolve technical disputes arising under these procedures. The technical masters designated by the Commission will be engineers with expertise in electric power transmission and distribution interconnection requirements who are qualified and independent. (SGIP, Attachment A Procedures, Sec. 6, b.)

SGC groups find it difficult to understand why the NOPR would ignore these agreements and introduce a dispute resolution process designed for Large Generators, especially when speedy and inexpensive dispute resolution is critical to small resource development. If the Commission does not want to employ technical masters, it could contract for such services with RTOs, ISOs, national labs, universities, and/or other **independent** transmission firms, and parties to the dispute could be required to reimburse the Commission for technical masters' time under the informal procedures. NARUC recommended a dispute resolution process very similar to the one included in the

consensus documents and summarized above. (Supplemental Comments of NARUC, January 31, 2003.)

60. Unfortunately, the NOPR gives transmission providers unfettered discretion to choose not even to participate in binding arbitration and to throw the parties into an entirely undefined process as they “exercise whatever rights and remedies [they] may have in equity or at law consistent with the terms of this agreement.” (SGIA Section 8.1.) Such language is simply not helpful to a small generator who seeks only to have a neutral expert resolve a technical dispute. It allows the utility to throw the small generator into a legal briar patch at any time and thus, in practical reality, gives the utility leverage to either thwart the interconnection or demand that the interconnection proceed on whatever terms it chooses.

61. The SGC thus respectfully requests that the Commission recognize the legitimate concerns of small generators and provide a dispute resolution process similar to the one proposed in the ANOPR consensus documents. Without such a change, there is little or no chance for the interconnection status quo to change.

G. Interconnection Agreement—Too Long/Too Complex

62. The proposed standard form Interconnection Agreement (SGIA), in addition to being an overly lengthy and complex document for most small generators, contains certain provisions that completely undercut the value of the interconnection procedures. Additionally, there are numerous paragraphs of the SGIA that have no applicability to generators approved for interconnection under expedited or super-expedited procedures.

63. Section 2.1 of the SGIA (“Scope and Limitations of Agreement”) suggests that Interconnection Customers cannot export power even though they have successfully

completed all of the interconnection procedures (the interconnection agreement being the final step noted in the interconnection procedures). The problematic portion of that Section says “This agreement does not authorize Interconnection Customer to *export power* or constitute an agreement to purchase or wheel Interconnection Customer's power. The *export*, purchase, or wheeling of power and other services that Interconnection Customer may require from Transmission Provider will be covered under separate agreements...(emphasis added).”

64. Since the purpose of interconnecting under the rule is to operate one’s generator so that it can provide electricity (including export power), this prohibition makes no sense. Each of the procedures in the SGIP defines the conditions a generator must meet prior to parallel operations. The entire basis for being “interconnected” with the grid is to operate in parallel, export power, and make sales. If a generator wanted only to operate to serve its own plant or premises, as the majority of customer-owned generators currently do, there would be no need to interconnect and no need to undergo the rigorous review set forth in the NOPR. Moreover, no such prohibition is included in the Large Generation Final Rule.¹⁰

65. The expedited and super-expedited procedure screens were designed so an interconnection customer’s generator would have no adverse affect on power flows when the generator is operated and power is exported. The screens ensure that any export from

¹⁰ The only restriction in the LGIA that could be interpreted as a restriction on export is found in paragraph 4.5, which states, “The execution of this LGIA does not constitute a request for, nor the provision of, any transmission delivery service under the Transmission Provider’s Tariff.” While this may be a useful restriction on large generators, it is wholly irrelevant for generators that use the super-expedited and expedited interconnection procedures. By definition, these generators cannot affect transmission power flows or deliverability. Even for the generators using the non-expedited procedures in Section 4 of the SGIP, a restriction on delivery is typically unnecessary. In fact, as PJM notes in its small resource interconnection procedures, “[i]n most cases, the addition of small capacity resources will improve local deliverability margins.”

an approved generator is a minimal percentage of the circuit load so that export appears simply as load reduction on that line. In light of this inherent constraint, no transmission system operator would need to schedule or dispatch these generators, and no restrictions or conditions on operations are needed in the interconnection agreement.

66. For small generators reviewed under the non-expedited procedures, the review will carefully consider the conditions under which the generator may or may not adversely affect power flows. These conditions will either be addressed through the construction of facilities, or conditions on the operation of the generator will be included in the IA. A typical provision is that the generator can only operate when dispatched by the system operator, but this is not often required for the very small generators.

67. It is unclear whether the NOPR intends to make the export restriction absolute, or simply to ensure that some additional technical steps are taken prior to export. If it is the former, the proposed rule is internally conflicted. A non-exporting generator cannot by definition make sales for resale in interstate commerce and, thus, could never meet the NOPR test for jurisdiction. If a generator intended to comply with such a restriction, the Commission would have no jurisdiction over its interconnection.

68. If the non-export provision is intended to indicate that the interconnection is subject to some further review not undertaken in the SGIP, the Commission needs to identify that review. The rule as proposed is incomplete unless it provides generators that ultimately want to make sales of electricity with all of the requirements needed to export power.

69. The non-export provision is particularly harsh on renewable energy systems that do not have the ability to dispatch their power. When customers install wind or solar

systems, they must export the power that is generated in excess of their on-site load – there is nowhere else for the power to go except to the grid. Thus, while on the one hand these generators benefit tremendously from grid interconnections (and, in exchange, provide substantial support to the grid), a prohibition on export makes the entire interconnection process useless for renewable energy generators.

70. It is obvious that the interconnection agreement does not require the Transmission Provider to purchase power – there is, for example, no rate anywhere in the SGIA. Thus, there should be no restrictions on the parallel operation of the generator other than those identified under the standard interconnection procedures (e.g., if relevant, real time dispatch subject to system operator approval). Sales will be made under bilateral contracts, either at rates offered in existing tariffs or under options provided in open access tariffs (e.g., load response). If the restrictive language in Section 2.1 is not eliminated entirely, it should be limited only to sales. Any restriction on export must be removed if the interconnection rule is to have any meaning at all for small generators.

71. Several sections of the SGIA are meaningless for generators processed under the super-expedited and expedited procedures. Any generator that succeeds in passing all the SGIP elements for these procedures will interconnect without the need for facilities. The following sections all address the construction of facilities by the Transmission Provider and are thus superfluous when a generator receives an SGIA pursuant to super-expedited or expedited procedures: Sections 5.1.1, 5.1.2, 5.1.3 (not required for super-expedited) and 5.2, 5.3, 5.4.1, 5.4.2.

72. Section 6.20 refers to the Large Generator Interconnection Agreement (LGIA) when it appears clear from the context of that section that it should be referring to the

Small Generator Interconnection Agreement (SGIA). That reference appears several times in this Section.

73. Overall, SGC groups believe the proposed SGIA is overly complex and confusing for most small generators and that it will serve to discourage rather than encourage more small generators to interconnect. A better alternative, in the view of SGC groups, is the Model Interconnection Agreement developed by NARUC, and the Commission should consider supplanting the SGIA in its entirety with the NARUC model. (See Supplemental Comments of NARUC, January 31, 2003)

H. Insurance Provisions – Major Barrier to Small Resources

74. Although the NOPR Order seeks comments on *whether* the final rule for small resource interconnection should, like the Large Generator Final Rule, include insurance requirements (and, if so, what kinds at what levels for what size units), the proposed 40+ page Interconnection Agreement (IA) for small resources includes over two full pages of insurance requirements. Under the proposed IA, customers proposing to interconnect a tiny on-site wind turbine, solar array, or fuel cell would—just like owners of 1,000 MW nuclear plants—be required to purchase several kinds of insurance, including Employers’ Liability/Workers’ Compensation, Commercial General Liability, Comprehensive Auto Liability, and Excess Public Liability insurances to cover a broad range of potentially insurable interests, and they would have to name the utility company, its parent, affiliates, directors, officers, agents, servants, and employees as additional insured parties. (Article 6.16, SGIA, Appendix 7 to the Standard Small Generator Interconnection Procedures)

75. SGC groups believe the proposed insurance requirements are both onerous and inappropriate. Imposing such requirements on very small resources will assure that few,

if any, utility customers will pursue interconnection. While it is arguable that a requirement for some level of general liability insurance may make sense for larger small resources (e.g., units over 2 MW), imposing such a requirement on customers with very small units will serve only to create another barrier to investment in such resources.

Under the NARUC-endorsed Model IA, “The Customer is not required to provide general liability insurance coverage as part of this Agreement.”¹¹ Among the reasons for its approach on insurance, NARUC representatives noted during ANOPR negotiations that insurance to cover customer generation resources is not available in some states.

76. NARUC’s annotated comments on ANOPR documents are helpfully instructive on this issue:

There is not unanimity among the States: in California, State rules prescribe minimum levels of coverage, while in New York, Texas and Ohio, they do not. The insurance business is competitive and local insurance carriers’ ability to cover claims is supervised by many States for economic reasons and the public good. NARUC’s model developed for use by regulators of utility service, not liability insurance, has adopted the position taken by the majority of the States with Interconnection rules and Procedures: to encourage that every Interconnection Customer protect itself with “insurance or other suitable financial instrument sufficient to meet its construction, operating and liability responsibilities,” but not to require general liability insurance coverage as part of the Agreement. (see **Section 7.0**)

As a regulator of energy service, not liability insurance, it also would be inappropriate for the federal government to step into a role whereby it would not only mandate insurance for small resource interconnection, but determine the minimum amount of coverage. This is not the Commission’s job. The unintended consequence of such action would be an unwanted uplift of the cost of premiums for such mandatory insurance, creating yet another regulatory barrier to small resource interconnection.¹²

77. In the view of SGC groups, it would make as much sense to impose insurance requirements on property owners with trees along a utility right-of-way as to impose

¹¹ *Agreement for Interconnection and Parallel Operation of Distributed Generation*, Supplemental Comments of NARUC, January 31, 2002.

¹² *Id.* at 33.

them on resources under 2MW. The threat to the utility grid of improperly maintained trees along rights-of-way is likely to be much greater than 10kW solar arrays, but there are no requirements that those property owners maintain liability or other insurances. Even though the recent hurricane caused millions of dollars in damage to the utility grid, there are no calls to require property owners to insure or properly maintain their trees so as not adversely to affect the delivery of electricity.

78. If the Commission nevertheless decides to impose insurance requirements on small resources under its rule, SGC groups urge that the standard IA require only general liability coverage, that the required coverage be limited to \$1 million, and that small resources under 2 MW be exempt from any insurance requirement under the IA. The Commission's rule should not create new barriers to small resource interconnection

I. Jurisdictional Retreat – Covers Few Resources & Wrong on the Law

79. The Commission's jurisdiction under the Federal Power Act makes the Commission the unique regulator of "transmission of electric energy in interstate commerce" and "sale of electric energy at wholesale in interstate commerce" and, consequently, of "all facilities for such transmission or sale of electric energy."¹³ Thus, it is clear that the Commission's jurisdiction over facilities is derivative of, and in service to, the Commission's jurisdiction over transactions involving interstate transmission and/or sale of power at wholesale. The Commission correctly relied on this jurisdictional approach in the ANOPR when it stated its intent, as noted in the NOPR at ¶ 24, "to assert jurisdiction when the owner of a generator seeks to interconnect with a distribution facility to make a wholesale sale of electricity in interstate commerce." In

¹³ Federal Power Act, Section 201 (b)(1). 16 U.S.C. 824

the NOPR, however, the Commission proposes to turn this jurisdictional hierarchy upside down, *denying jurisdiction over facilities necessary for jurisdictional transactions if they are not already jurisdictional for other reasons*. As a result, few, if any, small resources will be eligible to use the proposed rule.

80. The NOPR proposes that the rules would apply “to interconnections to the facilities of a public utility’s Transmission System that, at the time the interconnection is requested, may be used either to transmit electric energy in interstate commerce or to sell electric energy at wholesale in interstate commerce pursuant to a Commission-filed OATT.” NOPR, ¶ 25. SGC groups submit that the Commission would err to the extent it constrains the exercise of its jurisdiction in such a manner.

81. There is nothing in the Federal Power Act that suggests that the Commission has discretion to demur or decline jurisdiction over an interconnection sought for the purpose of making a jurisdictional sale at wholesale or for the purpose of transmitting electric energy in interstate commerce merely because the Commission has not previously exercised jurisdiction over the facilities to which that interconnection is sought. Such a standard imposes an unacceptable circular illogic on the Commission’s purview: the Commission has jurisdiction over the facilities used for jurisdictional transactions, but only has jurisdiction over such transactions when they occur on jurisdictional facilities. Had this view prevailed since 1935, the Commission would regulate no post-1935 electric utility facilities at all.

82. To the contrary, a jurisdictional transaction makes the facilities involved jurisdictional, regardless of their prior status. And this applies to utilities regardless of whether they are already offering jurisdictional services to other customers. The

Commission has previously even required utilities to file OATT tariffs because their facilities would be used in jurisdictional transactions. In *Soyland Power Cooperative, Inc.*, 102 F.E.R.C. P61,244 (2003), the Commission had previously granted Soyland a waiver of the requirement to file an OATT because its low-voltage system was not a part of the integrated grid. When one of Soyland's historic members sought to purchase power from another supplier and sought wheeling on certain Soyland 69kV and 34kV lines, the Commission terminated the waiver and ordered Soyland to file an OATT for its entire system. In light of *Soyland*, it is clearly inconsistent for the Commission now to condition a generator's ability to interconnect under its rules for the purpose of jurisdictional transactions on whether the utility already has an OATT on file *or whether the relevant distribution line is already covered by the OATT*.

83. Assuming *arguendo* that the Commission could lawfully refrain from exercising jurisdiction over interconnections for purposes of jurisdictional transactions where such transactions were not already occurring under an OATT, the NOPR must nonetheless be clarified to confirm that such interconnections can be made at any point of those utility systems for which the owning or operating entity has filed an OATT, and not merely on the elements of those systems designated as "transmission" or those already engaged in jurisdictional transmission. The ambiguity arises over the term "facilities" as used in Paragraph 25 of the proposed rule:

[T]he standard interconnection procedures and contract terms would apply when an Interconnection Customer ... requests interconnection to *facilities ... that are used to provide transmission service* under an OATT that is on file at the Commission at the time the Interconnection Request is made. [Emphasis added]

84. This could be read as limiting the rule’s application to interconnections on lines already providing “transmission service” or transmitting energy for resale and exempting from the rule’s coverage interconnections on distribution lines owned, controlled or operated by an entity which has an OATT on file but which are not currently providing transmission service or transmitting power to a wholesale customer. To the extent the term is intended to include all facilities of a public utility that has an OATT tariff on file, so that a new interconnection at any point of that public utility’s system for purposes of a wholesale sale brings into play the proposed interconnection process and standards, then the Commission’s jurisdictional reach would be consistent with its previous mandates and legal precedents. But the SGC groups believe that any intent to limit FERC jurisdictional interconnections to lines already offering “transmission services” or carrying energy to a wholesale customer would constitute legal error.

85. The Commission has repeatedly made clear that its jurisdiction is not a function of the type or classification of facilities, but a function of the facilities’ use for jurisdictional transactions. In Order No. 888, the Commission took the view that wholesale transactions across both transmission and distribution lines would be subject to FERC jurisdiction. Certain state petitioners attacked this conclusion before the DC Circuit, but were unsuccessful – the court ruled that “FPA § 201(a) makes clear that all aspects of wholesale sales are subject to federal regulation, regardless of the facilities used.”¹⁴

86. Order No. 888 also included a detailed discussion of the relevant case law on jurisdiction in Appendix G of the Final Rule:

¹⁴ *Transmission Access Policy Study Group v FERC*, 225 F.3d 667, 696 (D.C. Cir. 2000) *aff’d New York v. FERC*, 525 U.S. 1 (2002).

[A] public utility’s facilities used to deliver electric energy to a wholesale purchaser, whether labeled “transmission,” “distribution,” or “local distribution” are subject to the Commission’s exclusive jurisdiction under sections 205 and 206 of the FPA...”¹⁵

87. The Commission has steadfastly maintained this view on rehearing in Order No. 888-A, and has prevailed in this view on appeal in *Transmission Access Policy Study Group v FERC*, 225 F.3d 667, 696 (D.C. Cir. 2000) *aff’d New York v. FERC*, 525 U.S. 1 (2002). In general, the Commission has taken a system-wide view of its wholesale jurisdiction, and there is no basis for the Commission to take a more restrictive circuit-by-circuit view here.

88. It is clear that transmission services can be provided over low-voltage or distribution lines. For example, in *Puget Sound Energy, Inc.*, 104 F.E.R.C. ¶ 61,272 (2003), the Company had sought a declaratory ruling classifying its system into separate high voltage transmission and low voltage “wholesale distribution facilities,” pursuant to Order No.888. Because the Commission would have rate and tariff jurisdiction over both classes of facilities, it rejected the petition as unnecessary.

89. As a second example, on October 1, 1999, Illinois implemented retail electric access and the public utilities there filed a request for declaratory orders to reclassify their facilities, under Order No. 888, as “local distribution.” The Commission limited the effect of this action:

Although we are accepting the state commissions' classification, we reiterate our finding in Order No. 888 that to the extent that any facilities, regardless of their original nominal classification, in fact, prove to be used by public utilities to provide transmission service in interstate commerce in order to deliver power and energy to wholesale purchasers, such facilities become subject to this Commission's jurisdiction and review. In addition, the rates, terms and conditions of all wholesale and unbundled

¹⁵ Order No. 888, Appendix G at 9.

retail transmission service provided by public utilities in interstate commerce are subject to this Commission's jurisdiction and review.¹⁶

90. The Commission did not consider the seven-factor test outlined in Order No. 888 to be relevant or the fact that the request for wheeling was limited to certain low-voltage lines. 102 FERC at P. 16-17. A similar result was reached in *People's Electric Cooperative*, 84 FERC ¶ 61,229 (1998), rehearing denied, 93 FERC ¶ 61,218 (2000). People's sought to file tariffs to make jurisdictional wholesale sales, and the Commission found jurisdiction, rejecting claims that the sales were non-jurisdictional simply because they were made on low voltage local distribution lines.

91. In the absence of further guidance on the interpretation of Transmission System under the OATT, Commission rules in other contexts provide guidance on the circuit-by-circuit vs. system question. In the context of system losses, the Commission has adopted a system-wide view. In *Northern States Power Co. v FERC*, 30 F.3d 177 (D. C. Cir. 1994), the Commission approved uniform loss factors for a utility's system, based on the assumption that each customer in effect uses the entire system for its wheeling. The Commission had rejected a proposal to change the loss factors so as to take into account length and direction of flow, and the Court affirmed the Commission.

92. The Commission also adopts a system-wide as opposed to circuit-by-circuit analysis in the recovery of fixed costs. The rationale for such "postage stamp" transmission rates was best articulated in *Fort Pierce Utilities Authority v. FERC*, 730 F.2d 778, 782 (D.C. Cir. 1984):

This "rolled-in" method of calculating transmission costs ... is based on the recognition that a unit of electricity does not actually travel like a railroad shipment from the point at which it enters the system to the point

¹⁶ MidAmerican Energy Company, et al., 90 FERC ¶ 61,105, at 61,337 (2000). (footnotes omitted) Accord, *Central Illinois Light Company*, 102 F.E.R.C. ¶ 61,286 at P. 4(2003).

to which it is delivered. A transmission network functions more like a reservoir: a given amount of power enters the system at one point and a like amount is delivered at another point. The costs associated with this pair of operations do not vary with the distance between the point of entry and the point of delivery, but are based on the costs for the entire transmission network.

93. Because the physics of electricity transmission makes precise determinations of which lines in a network are actually involved in every transmission of power all but impossible, the NOPR's jurisdictional approach appears to grant to transmission owners the discretion to determine which distribution lines are (or are not) currently carrying jurisdictional transactions, unless the lines are expressly covered by their OATTs. The NOPR creates no ability for a generator seeking interconnection to discover which lines or circuits of a jurisdictional utility are subject to the new rule. Thus, utilities opposing small resource interconnections could discriminate among those proposing interconnection, a problem that Order No. 888 sought to eliminate.

94. Case law supports broader FERC jurisdiction. In *Transmission Access Policy Study Group v. FERC*, 225 F.3d 667, 695 (D.C. Cir. 2000), *aff'd sub nom. New York v. FERC*, 535 U.S. 1 (2002), the Court agreed with the Commission that "when a public utility is engaged in wholesale transmission, FERC has jurisdiction regardless of the nature of the facility...." Similarly, *Detroit Edison Company v. FERC*, No. 02-1013 (D.C. Cir. July 8, 2003), summarized this finding favorably (slip op. at 4):

By contrast, when a local distribution facility is used in a wholesale transaction, FERC has jurisdiction over that transaction pursuant to its wholesale jurisdiction under FPA § 201(b)(1). Order 888 at 31,980; *TAPSG*, 225 F.3d at 695.

95. Although *Detroit Edison* held that FERC did not have jurisdiction over wheeling over distribution lines for retail customers, it left standing FERC's Federal Power Act jurisdiction over wheeling over distribution lines for wholesale customers.¹⁷

Accordingly, these cases support the jurisdictional view taken in the Small Generator ANOPR that the Commission properly has the jurisdiction over an interconnection on a "distribution" facility for a wholesale transaction.

96. Finally, asserting jurisdiction over interconnections for wholesale transactions on "distribution" lines, without regard to whether the lines are currently used for such transactions, is sound policy. Were FERC to allow Transmission Providers to refuse interconnections under the proposed rule to low-voltage distribution portions of their systems not already used for jurisdictional transactions, small resource development would be inhibited if not eliminated. Transmission providers could pick and choose among interconnection applicants based on any criteria they elected to employ. Further, such a policy would put such small generators at a disadvantage in comparison with Qualified Facilities that are eligible to require interconnections on "distribution" lines. See, *Laguna Irrigation District*, 95 FERC ¶ 61,305 at 62,039 (2001), *aff'd sub nom.*, *Pacific Gas & Electric Co. v. FERC*, 44 Fed. Appx. 170 (9th Cir. 2002). The Commission has equal authority to regulate the interconnection of both Qualified Facilities and other interconnection customers seeking to engage in wholesale transactions.

97. SGC groups recognize the highly charged political climate that currently surrounds federal versus state and local jurisdiction over elements and services provided

¹⁷ "When a local distribution facility is used to delivery energy to an unbundled retail customer, FERC lacks any statutory authority, and the state has jurisdiction over that transaction. Order 888 at 31,981; *New York*, 535 U.S. at 22–23."

by the nation's electricity system. However, the SGC also believes that the Commission fully and adequately defers to state jurisdiction where appropriate – where distribution facilities have a “dual use” for both wholesale and retail transactions, the Commission's jurisdiction over the facilities extends only to the wholesale transaction. The rule would apply to interconnections to these facilities only for the purpose of making sales for resale in interstate commerce. Further, the NOPR makes it clear that interconnection under the FERC procedures does not accord any particular rights to services over the system after the interconnection has been made. Thus, the Commission could readily assure that only appropriately jurisdictional services are authorized over the interconnection, and the state and utility where the interconnection is made could assure that is not utilized for retail or intrastate transactions barred by state authority. To deny interconnection under the new FERC rules, where an applicant has the clear predicates for a jurisdictional transaction, on the basis that the particular line or circuit to which the interconnection is proposed has not previously been used for such a transaction, carries deference to state jurisdictional authority to an excessive and unlawful extreme. In effect, this approach puts an affected utility or state in the position of determining who can and cannot engage in jurisdictional transactions under the Federal Power Act. At a time when the Commission seeks to improve the competitive climate in wholesale electricity markets, the Commission should not issue an interconnection rule that could deny thousands of potential market participants, albeit small ones, the ability to use its rules to facilitate their access to the markets via grid interconnection.

98. In conclusion, the Commission should adopt a final rule consistent with the Small Generator ANOPR, making clear that any interconnection for purposes of a jurisdictional

transaction is entitled to be covered by the adopted procedures regardless of the prior jurisdictional status of the facilities to which the interconnection is proposed. The Final Rule must not retreat on jurisdiction if the Commission wants effectively to encourage small resource development and assure its benefits to the grid.

J. Queuing Process – Critical to Expedition of Small Resources

99. The NOPR proposes to create a single queue of generating facilities, without regard to size, for purposes of performing the requisite studies, assigning upgrade costs, and performing the interconnections. The single queue would be formed based upon the times generator interconnection applications were deemed complete.

100. Unless the queuing process is standardized and reformed to require cluster evaluations, prevent zombie (or stalled) plants from inhibiting the advance of units ready to move forward, etc., SGC groups believe that requiring a single queue will undercut whatever progress may be achieved in creating separate Small Generator Interconnection Agreements and Procedures to expedite interconnection of small generators. In light of their relatively simple interconnections, off-the-shelf equipment, and low impacts, small resources (unlike large generators) can be interconnected and operating a short time after their interconnection applications are filed and approved. However, the NOPR's proposed queuing procedures may inhibit completion of required but simple studies for small generators, as they could be delayed by the much more time-consuming studies required for large generators higher in the queue, which are subject to frequent and expensive restudies. In addition, small resources would be subject to project-killing financial uncertainties about their responsibility for system upgrades that are entirely

dependent on the actual interconnection of higher queue-position large generators who may or may not absorb all existing system transfer capacity.

101. Inexplicably, the NOPR ignored entirely the SGC position taken at the Technical Conference cited in ¶ 60. It summarizes the positions of some conference participants but not the position of the SGC. The SGC representative recommended that all generators, regardless of size, should participate in separate queues within the appropriate geographic regions: (1) Feasibility and Impact Study Queues [“Study Queue(s)”] for the purpose of conducting the necessary feasibility and impact studies, and (2) System Facilities Queues [“Facilities Queue(s)”] for the purpose of determining and allocating the costs of necessary system facilities and proceeding to actual interconnection once the facilities were designed and costs were paid.

102. More specifically, the SGC proposed that small generators have a separate Study Queue from large generators, in order to complete feasibility and impact studies, so that the promised expedition inherent in limited study periods would have some real meaning – so that small resources would not be put on hold while the much longer and complicated studies to be performed for large generators higher in the queue were completed. Small and large generators would then join in a single common Facilities queue, based on the dates that their necessary feasibility and impact studies were completed, for the purpose of performing common system facilities studies focused on the impacts of the fully studied projects, large and small, associated in an appropriate common cluster of projects. All projects participating in the System Facilities queue would be equally ready to move forward, would be allocated a pro-rated share of the necessary system facilities costs (based on their respective generating capacities and

locations relative to their intended loads), and would then be required post a bond for their shares of such costs, permitting the interconnection of their facilities without any further financial uncertainties and regardless of other participants' actions or delays.

103. This proposal would have the general benefit of eliminating excessive restudies of the impacts of one generator as a result of changes in the status or timing of other generators ahead in the common queue. For small generators, a separate queue for feasibility and impact studies alone would give them the benefit of their relative lack of such impacts; however, small resources would be treated equally with other interconnecting generators to the extent those studies demonstrated impacts for interconnection timing and cost-responsibility purposes.

104. The NOPR states that small generators are not “necessarily” delayed by being lumped together with large units in a single queue, because if they meet the “Super-Expedited” or “Expedited” screening procedures, they would have no cost responsibility for upgrades. This, however, appears to contradict language in the Expedited Procedures which makes it clear that generators that qualify to be interconnected under the Expedited Procedures may still be required to pay the costs of the “Provider’s Interconnection Facilities and Upgrades necessary to accomplish the interconnection.”¹⁸ SGC groups, therefore, believe the final rule should clarify this situation and provide that in no event would a small generator qualified under either the Super-Expedited or Expedited procedures be obligated to pay for system upgrade costs. If such a clarification were made, the negative impacts of being queued together with larger generators would indeed

¹⁸ See generally Section 4.8 of the Standard Small Generator Interconnection Procedures, Appendix C to the NOPR. Section 4.8.4, for example, states that the interconnection agreement will only be provided after “the agreement of Interconnection Customer to pay for Interconnection Facilities and Upgrades identified in the Interconnection Facilities Study...” Even Super-Expedited customers may be required to pay for “minor system modifications” pursuant to the proposed rules (at Section 3.4).

be minimized, because the financial uncertainties concerning future facilities costs would be eliminated. As the rule now stands, however, it appears that cost responsibility for system upgrades may well be visited upon a small generator, and this financial uncertainty would almost certainly kill most small projects

105. In addition to facing potential upgrade costs under the NOPR's provisions, small generators would also be subject to huge uncertainties about the level and timing of such costs that derive automatically from being queued with large generators who, while ahead of them in the common queue, may be years behind them in terms of actual readiness to interconnect. If a higher-queued large generator eventually decides to proceed with an interconnection, small generators whose interconnections were completed years earlier may suddenly be obligated to share the costs of new system upgrades required to interconnect the large generator because the large generator's queue position entitled it to avoid those costs. To illustrate, if there is available system transfer capacity at the time a small generator interconnects, no upgrade may be necessary. However, if that transfer capacity has effectively been "pre-dedicated" to a large generator whose interconnection may be made years later, until it is clear whether that large generator will actually proceed to interconnection, it will not be clear whether the small generator may be required to pay retroactively for the transfer capacity it has been using. Such financial uncertainty, potentially unresolved for some years, by itself may kill small generation projects that would be otherwise fully prepared to proceed if the financial terms were clear.

106. Small resources do not ask for a separate queue for all purposes including facilities cost responsibility and construction, because small generators and large are in

fact interconnecting to common systems. But a separate queue for study purposes is required to achieve any expedition for small generators. In the Large Generator Final Rule (at ¶¶ 144, 149), the Commission indeed suggests that IPs may want to conduct interconnection studies on a clustered basis (received within the same 90-day period) to diminish the inherent uncertainties of long lead-time projects. If the Commission required that small generators be clustered separately from large generators for such studies, and that studies for both clusters could proceed simultaneously, that approach might provide the benefit of separate Study Queues. But as drafted, the small generators could be afterthought applicants whose impacts are negligible relative to large projects clustered with them for studies and other steps determined by the queue process, but they would be subject to all the inherent delays and uncertainties derived from the relatively long lead-times, high costs, large impacts, and major system facilities requirements of the larger projects.

107. Further, there is a potential conflict between the inclusion of small generators in a common queue with large generators for required studies of impacts and facilities on the one hand, and the inclusion of firm 30-calendar-day deadlines for completing such studies in the case of interconnection study agreements for small resources. The Commission should clarify that where a small generator study is required under such an agreement to be completed by a given date, but a pending study or other work is not completed for a project higher in the queue, the agreement timeline must nonetheless be observed. SGC groups are concerned that interconnection providers could defer starting the simple studies required for small generators until all requisite studies for projects higher in the queue are completed. If the Commission's rule requires small generators to

share the same queue for studies with large generators, the Commission must at a minimum explicitly provide that the time periods and deadlines set forth in the small generator interconnection procedures and agreements must be honored regardless of the small generator's position in the queue.

108. The SGC representative stated in the Queuing Technical Conference that “to small generators, interconnection obstacles from costly studies, delays, and uncertainties cannot be distinguished from the effects of queuing policy. Queuing policy is an integral aspect of interconnection policy.”¹⁹ In short, the Commission cannot offer small generators any meaningful expedition in interconnection policies if it insists on holding them subject to a queuing policy that makes no distinction between them and large generators. A distinction for study purposes is required at a minimum, along with the ability to actually interconnect ahead of projects higher in the queue with economic certainty concerning system upgrade costs. The Commission could easily accomplish this, and simultaneously could honor the consensus among proceeding participants that established meaningful time frames for study completion.

K. Application Form – Errors and Proposed Modifications

109. Due to the rush at the end of the ANOPR consensus process, some technical errors remained in the consensus document. For example, the application form in the NOPR has certain generator technical parameters in the wrong place, is missing others, and includes a couple that are rarely found in similar interconnect applications forms because they are either not generally available from the manufacturer or are hard to construct.

¹⁹ Comments of John W. Jimison on behalf of U.S. Combined Heat & Power Association and Small Generator Coalition, January 21, 2003.

110. In addition, we suggest adding a question on type of prime mover (more relevant than fuel type) and correcting the references to Point of Common Coupling. Please see the separately filed modified application that shows the edits we recommend.

L. Point of Common Coupling – Definition Changes Required

111. Another element of the ANOPR consensus document that was technically incomplete was the definition of Point of Common Coupling (PCC). This is an industry standard term defined in, for example, the IEEE Std1547. This technical confusion remained in the NOPR and should be corrected or it will cause substantial confusion with those parties seeking to use the small generator interconnection process.

112. The PCC is functionally the spot in the interconnection of the generator and the Electric Power System (EPS) where ownership changes from the customer to the EPS operator. In a typical customer facility, this location is usually the location just downstream of the electric revenue meter, generally found where the electric service lines enter the building of the customer.

113. The customer's generator is usually not connected at the PCC, but somewhere deep in the building, sometimes near specific loads it serves or to which it contributes power. The location where the generator itself connects to the building's electrical infrastructure is known as the Point of Interconnection (PI).

114. The PCC is also usually located near the service transformer for a customer's building. The EPS operator or the customer may own this transformer. The low side of the transformer provides the relatively low service voltage of the building infrastructure, typically 480/208 volts. The high side of the transformer matches the voltage level of the

EPS secondary distribution system, or is sometimes connected at the primary distribution level (depending on the level of service).

115. Please see the attached set of 4 diagrams. The first diagram shows the current Chart 1 in the NOPR. The second diagram shows the original diagram submitted in the ANOPR consensus document. Diagrams 3 and 4 show the technically correct chart, one where the customer owns the service transformer, and the other with the EPS operator owning the transformer. It is comparatively irrelevant which of these two diagrams is used. The first situation is more common in smaller installations such as commercial buildings, and the latter is more common with large customers such as industrial plants.

116. The following changes are needed: Every reference to "point of change of ownership" should be deleted (two definitions and one body text change); every "point of interconnection" reference should be renamed "point of common coupling" (6 locations); use the correct definition and leave the "point of common coupling" references alone since they are correct (in the screens); and Chart 1 should be replaced with a corrected version (either page 3 or 4 in the attachment).

M. Flawed ANOPR Process – Remedy Required in Final Rule

117. The Small Generator Coalition dedicated enormous effort and resources to the proposition that the Commission intended to adopt new rules for interconnecting small generators in a low-cost, standardized, and expedited manner. To accomplish this goal, it is obvious that the interconnection rules would have to include meaningful constraints on the ability of interconnection providers to impose unnecessary costs, requirements, or delays on the process. Alternatively, the proposed rules could require neutral but effective third party involvement to discipline utilities opposed to interconnecting small

resources. *The proposed rules, however, fail to provide effective constraints or require neutral third-party involvement, and they even eliminate some of the protections that emerged from the ANOPR consensus-seeking process.*

118. In the consensus-seeking process, small generator groups were at an enormous disadvantage: their bargaining counterparties, transmission and distribution utilities grouped together as the Interconnection Providers, negotiated as though they had nothing whatsoever to gain from a successful process. The utilities already had a situation that was as positive as possible from their points of view – they could offer small generators no special treatment and maintain full discretion to deny such interconnections for any reason real or imaginary. The only leverage that the Small Generator Coalition enjoyed during the one-sided bargaining process was the leverage that came from the ANOPR’s announced determination to institute small generator interconnection standards that would provide cost-control, standardization, and expedition. The reluctance of some Interconnection Providers to be perceived as opposing the Commission’s objectives provided a bit of leverage to the SGC but not nearly enough to facilitate consensus.

119. Unfortunately, the Commission staff involved in the process did not forcefully push the ANOPR’s objectives in the consensus-seeking process, but attempted to play the role of neutral conveners or merely observers, depriving the Small Generator Coalition of its only leverage and putting it in the position of having to concede ground from the Commission’s ANOPR proposal to win any agreements at all. Although the Commission had stated in its ANOPR that it was willing to consider changes to the ANOPR only if they improved it, the Commission staff involved in the proceeding were grateful to accept any agreement from the parties whether or not it improved the

procedures. The Commission staff rarely took positions for or against proposals offered by the Small Generators or the IPs, allowing the IP position to harden over time. In addition, the external political climate in which the process was playing out, including the increasing Congressional pressure on the Commission to back away from its Standard Market Design proposals, further emboldened the IP caucus to resist any meaningful concessions. These were the primary reasons the consensus-seeking process in fact produced so little consensus. The IP group perceived that it had nothing to lose by failing to reach consensus, and the Small Generator Coalition gradually realized it would never receive meaningful counter-proposals to improve the ANOPR's proposals.

120. For this reason, the entire bargaining process consisted of the Small Generators offering concessions from the Commission's initial ANOPR proposals in an effort to entice the IP group into support of consensus on interconnection procedures that could be enforced and could promise low-cost, standardized, and expedited processes. Despite the unwillingness of the Commission staff to be pro-active in defense of the Commission's stated objectives in the process, a precious few meaningful agreements were reached that had some promise of actually improving the situation from the Small Generator point of view.

121. In reviewing the NOPR, however, the Small Generator Coalition found that some of the few measures of meaningful discipline for interconnection providers were not included in the proposed rules. For example, under the NOPR utilities are effectively offered unlimited discretion to reject interconnections merely by alleging violations of "good utility practices" as defined by the utilities themselves.

122. The SGC does not share the apparent conviction of the NOPR that the good faith and good utility practices of IPs will, without mandates or cost limits, assure the interconnection of small generators even though many IPs would prefer not to see small resources interconnecting to their systems for competitive or other reasons.

Unfortunately, SGC members have long years of bad experience with utility discretion on study timing, costs, and other factors used to erect artificial barriers to interconnection.

As proposed, the NOPR will not reduce those barriers.

123. What is worse, the NOPR rejects critical roles for the Commission on which the parties reached consensus, without objection at the time from Commission staff, leaving dispute resolution without a low-cost neutral arbitrator and leaving the interconnection equipment certification processes without any designated certification providers. Rather than accept the limited FERC role of establishing and maintaining a list of pre-certified equipment, the NOPR “encourages cooperation and information sharing among the States and industry participants regarding pre-certification of generating equipment.” Lack of such cooperation and information sharing is precisely what has led to the current lack of general acceptance of small generator interconnection equipment. Pre-certification of small generator interconnection equipment is essentially put off indefinitely as an option to expedite interconnections by the NOPR’s refusal direct how the process should be set up.

124. Similarly, the NOPR’s failure to provide access to FERC’s alternative dispute resolution resources or to designate technical masters to be called upon in the event of a dispute effectively assures that disputes will not be resolved in a low-cost manner. Any party can simply refuse the other’s proposed technical masters. During the ANOPR

process the IPs suggested that only their own personnel would be adequately familiar with their systems to judge disputes over interconnections, and the NOPR leaves the door open for an IP to insist that its own employees must serve as the technical masters in disputes over proposed interconnections to its system.

CONCLUSION

125. For the reasons noted above, SGC Groups respectfully urge the Commission to make the modifications they have recommended in this document in a Final Rule issued on small resource interconnection rules and procedures.

Respectfully submitted,

[Electronically Filed]

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