

November 23, 2015

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive
Columbia, SC 29210

Re: DOCKET NO. 2015-362-E
In the Matter of: Joint Application of Duke Energy Carolinas, LLC, Duke Energy Progress, LLC and South Carolina Electric & Gas Company for Approval of the Revised South Carolina Interconnection Standard

Dear Ms. Boyd:

Please find attached for electronic filing *Comments of the Interstate Renewable Energy Council, Inc.* in the above-referenced matter.

Please contact me if you have any questions concerning this matter.

Sincerely,

/s/ Robert Guild

Robert Guild
Attorney at Law
314 Pall Mall
Columbia, SC 29201
Telephone: 803-252-1419
Email: bguild@mindspring.com

Attorney for the Interstate Renewable Energy
Council, Inc.

(Caption of Case)

Joint Application of Duke Energy Carolinas, LLC,
 Duke Energy Progress, LLC, and South Carolina
 Electric & Gas Company for Approval of the Revised
 South Carolina Interconnection Standard)

BEFORE THE
 PUBLIC SERVICE COMMISSION
 OF SOUTH CAROLINA

COVER SHEET

DOCKET
 NUMBER: 2015 - 362 - E

(Please type or print)

Submitted by: Robert Guild

SC Bar Number: 2358

Address: 314 Pall Mall

Telephone: 803-252-1419

Columbia, SC 29201

Fax: N/A

Other: 803-917-5738

Email: bguild@mindspring.com

NOTE: The cover sheet and information contained herein neither replaces nor supplements the filing and service of pleadings or other papers as required by law. This form is required for use by the Public Service Commission of South Carolina for the purpose of docketing and must be filled out completely.

DOCKETING INFORMATION (Check all that apply)

Emergency Relief demanded in petition

Request for item to be placed on Commission's Agenda expeditiously

Other: Routine

INDUSTRY (Check one)	NATURE OF ACTION (Check all that apply)		
<input type="checkbox"/> Electric	<input type="checkbox"/> Affidavit	<input type="checkbox"/> Letter	<input type="checkbox"/> Request
<input type="checkbox"/> Electric/Gas	<input type="checkbox"/> Agreement	<input type="checkbox"/> Memorandum	<input type="checkbox"/> Request for Certification
<input type="checkbox"/> Electric/Telecommunications	<input type="checkbox"/> Answer	<input checked="" type="checkbox"/> Motion	<input type="checkbox"/> Request for Investigation
<input type="checkbox"/> Electric/Water	<input type="checkbox"/> Appellate Review	<input type="checkbox"/> Objection	<input type="checkbox"/> Resale Agreement
<input type="checkbox"/> Electric/Water/Telecom.	<input type="checkbox"/> Application	<input type="checkbox"/> Petition	<input type="checkbox"/> Resale Amendment
<input type="checkbox"/> Electric/Water/Sewer	<input type="checkbox"/> Brief	<input type="checkbox"/> Petition for Reconsideration	<input type="checkbox"/> Reservation Letter
<input type="checkbox"/> Gas	<input type="checkbox"/> Certificate	<input type="checkbox"/> Petition for Rulemaking	<input type="checkbox"/> Response
<input type="checkbox"/> Railroad	<input type="checkbox"/> Comments	<input type="checkbox"/> Petition for Rule to Show Cause	<input type="checkbox"/> Response to Discovery
<input type="checkbox"/> Sewer	<input type="checkbox"/> Complaint	<input type="checkbox"/> Petition to Intervene	<input type="checkbox"/> Return to Petition
<input type="checkbox"/> Telecommunications	<input type="checkbox"/> Consent Order	<input type="checkbox"/> Petition to Intervene Out of Time	<input type="checkbox"/> Stipulation
<input type="checkbox"/> Transportation	<input type="checkbox"/> Discovery	<input type="checkbox"/> Prefiled Testimony	<input type="checkbox"/> Subpoena
<input type="checkbox"/> Water	<input type="checkbox"/> Exhibit	<input type="checkbox"/> Promotion	<input type="checkbox"/> Tariff
<input type="checkbox"/> Water/Sewer	<input type="checkbox"/> Expedited Consideration	<input type="checkbox"/> Proposed Order	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Administrative Matter	<input type="checkbox"/> Interconnection Agreement	<input type="checkbox"/> Protest	_____
<input type="checkbox"/> Other: _____	<input type="checkbox"/> Interconnection Amendment	<input type="checkbox"/> Publisher's Affidavit	
	<input type="checkbox"/> Late-Filed Exhibit	<input type="checkbox"/> Report	

Print Form

Reset Form

STATE OF SOUTH CAROLINA
BEFORE THE PUBLIC SERVICE COMMISSION

DOCKET NO. 2015-362-E

Joint Application of Duke Energy Carolinas, LLC; Duke Energy Progress, LLC; South Carolina Electric & Gas Company for Approval of the Revised South Carolina Interconnection of Standard))
)	Comments of the Interstate Renewable Energy Council, Inc.
)	
)	
)	

Through Act 236, the South Carolina Legislature directed the Public Services Commission (Commission or “PSC”) to promulgate standards for interconnection of renewable energy and other nonutility-owned generation facilities with a capacity of under 2,000 kW. Act 236 requires utilities to review interconnection requests and determine whether proposed projects meet the Commission’s adopted standards. To facilitate development of the standards, South Carolina’s Office of Regulatory Staff (“ORS”) initiated a series of workshops between July and September of 2015 to allow stakeholders to work collaboratively to develop interconnection standards. On October 9, 2015, Duke Energy Carolinas, LLC; Duke Energy Progress, Inc.; and South Carolina Electric & Gas Company (the “utilities”), filed their Joint Application for Approval of the Revised South Carolina Interconnection Standard (“proposed interconnection standards” or “proposed standards”).

The Interstate Renewable Energy Council, Inc. (“IREC”) participated actively in the workshops and, together with other stakeholders, we were able to reach agreement on many important improvements to the standards proposed by the utilities, but there remains disagreement on a few key issues. IREC provides these comments to assist the

Commission in evaluating the utilities' proposed interconnection standards. We encourage the Commission to adopt national best practices and alter the proposed standards as described below. These changes, along with the other already strong aspects of the utilities' proposal, will ensure that South Carolina adopts interconnection standards that will stand the test of time as distributed generation ("DG") grows across State.

IREC is a 501(c)(3) non-partisan, non-profit organization working nationally to expand and simplify customer access to reliable and affordable distributed clean energy by: (1) developing and advancing regulatory policy innovations; (2) generating and promoting national model rules, standards, and best practices; and (3) providing workforce training, education, and credentialing. IREC works independently from renewable energy industries, trade associations, and advocacy organizations. Though we promote the creation of robust, competitive clean energy markets, IREC does not have a financial stake in those markets. IREC's work is grounded in the latest research and objective analysis and helps inform and guide fact-based regulatory decision-making and workforce development efforts. Through collaborative partnerships with diverse stakeholders, IREC seeks to build consensus and achieve workable solutions to create a sustainable and economically strong clean energy future.

The scope of IREC's work includes: updating interconnection processes to facilitate deployment of distributed energy resources and remove constraints to their integration on the grid; incorporating distributed energy resource growth into utility distribution system planning and operations; ensuring realistic assumptions about distributed energy resources are reflected in utility regulatory decision-making; expanding programs that facilitate customers' ability to host a renewable energy system to directly self-supply energy needs or provide energy to the grid; and enabling reforms

that empower customers to manage their energy use, access energy data, and benefit from clean energy resources. IREC recently has been or is currently involved in similar proceedings in Illinois, Ohio, North Carolina, California, New York, Massachusetts, Iowa, and Hawaii. IREC also publishes Model Interconnection Procedures¹ that compile national best practices on interconnection and have been used by a number of states to help guide the adoption of interconnection procedures.

I. SOUTH CAROLINA SHOULD ADOPT THOROUGHLY VETTED NATIONAL BEST PRACTICES.

IREC appreciates the utilities' commitment to working collaboratively with stakeholders through the ORS process. By embracing collaboration, the utilities have helped stakeholders reach consensus on many of the proposed changes to South Carolina's interconnection standards. We would like to particularly highlight that the utilities' proposal includes higher size limits for the small inverter based review process, a pre-application report, an innovative reservation process for 20 kW inverter based projects, and improvements to the timelines and other details throughout the standards. Most of these improvements are in line with national best practices, and many were refined through discussions at the workshops.

However, the utilities' proposal lacks two important national best practices that are necessary for South Carolina's interconnection standards to handle the next stage of the State's energy future. To effectively manage growing amounts of distributed generation, South Carolina's standards need to provide an expedited review process for projects that do not pose safety and reliability impacts to the grid. Experience from virtually all states that have a significant amount of distributed generation has shown that

¹ Model Interconnection Procedures, Interstate Renewable Energy Council, Inc., 2013 Edition, available at: <http://www.irecusa.org/model-interconnection-procedures/>.

a failure to adopt efficient review processes for these projects results in queue backlogs, project delays, and increased costs that are not beneficial to customers, developers or utilities.² Fortunately, it has also been shown that it is possible to effectively “screen” for those projects without threatening system safety, reliability, or power quality.³ This can be done using a Fast Track process that is open to a sufficiently wide range of projects, along with a defined Supplemental Review process that will provide time for an additional deeper look for projects that may not require a full multi-month study process, but which fail the initial Fast Track screens. While the utilities’ proposed standards include a Fast Track and Supplemental Review process, the size limits on the Fast Track process are overly constrained, and the Supplemental Review process lacks sufficient structure to ensure it is effective.

The changes that IREC recommends here on Supplemental Review and Fast Track eligibility limits are drawn directly from the recent updates to the Federal Energy Regulatory Commission (“FERC”) Small Generator Interconnection Procedures (“SGIP”), which were intended to act as a model for state procedures.⁴ The changes adopted by FERC were built upon the procedures adopted by states with significant experience interconnecting distributed generation⁵ and have subsequently been adopted

² See, e.g., FERC Order 792 at ¶ 22 (providing citations to the record where utilities across the country have indicated their growing queue backlogs).

³ See, e.g., NREL Technical Report 5500-54063, *Updating Interconnection Screens for PV System Integration* (Feb. 2012), available at <http://www.nrel.gov/docs/fy12osti/54063.pdf>; NREL Technical Report 5500-56790, *Updating Small Generator Interconnection Procedures for New Market Conditions* (December 2012), available at <http://www.nrel.gov/docs/fy13osti/56790.pdf>.

⁴ See FERC Order 792, 145 FERC ¶ 61,159 (adopting revised SGIP).

⁵ See, e.g. FERC Order 792 at ¶ 117.

in Ohio⁶, and are nearing adoption in Illinois⁷ and Iowa.⁸ These procedures have been sufficiently vetted and warrant consideration in South Carolina.

Supplemental review screens and broader Fast Track eligibility limitations will allow South Carolina to maintain a safe and reliable electric system while facilitating market growth and improving the efficiency of the interconnection process. FERC found that adoption of these two process improvements were necessary to ensure that interconnection service remained just, reasonable, and not unduly discriminatory.⁹ Safely increasing ease of access to the grid will foster development of DG projects, allowing developers' businesses to expand and create clean energy jobs in the State. These recommended procedures lower costs for all parties, including the utilities, further lowering the costs of DG and boosting the local economy.¹⁰

⁶ See PUCO Docket 12-2051-EL-ORD (adopting amended interconnection rules in Chapter 4901:1-22 of the Ohio Revised Code) (December 4, 2013).

⁷ Illinois Commerce Commission Docket 14-0135 (On Nov. 12, 2015 the Commission approved a First Notice Order adopting a Supplemental Review process with screens similar to the one adopted by FERC).

⁸ Iowa Public Utilities Board Docket NOI-2014-0001 (in this docket the investor owned utilities and other parties have filed comments supporting adoption of a Supplemental Review process identical to the one adopted by FERC).

⁹ FERC Order 792 at ¶ 3 (“With these modifications, the Commission concludes that the package of reforms adopted in this Final Rule will reduce the time and cost to process small generator interconnection requests for Interconnection Customers and Transmission Providers, maintain reliability, increase energy supply, and remove barriers to the development of new energy resources. This fulfills our statutory obligation to ensure that rates, terms and conditions for Commission-jurisdictional services are just and reasonable and not unduly discriminatory, as sections 205 and 206 of the FPA require.”).

¹⁰ See FERC Order 792 at ¶ 21 (“Without these reforms, the continued growth in Small Generating Facilities could cause inefficient interconnection queue backlogs and require some Small Generating Facilities to undergo the more costly Study Process when they could be interconnected under the Fast Track Process safely and reliably. Costs resulting from such inefficiencies in the interconnection process would ultimately be borne by consumers.”).

Our experience has shown that, as penetration increases and the volume of interconnection applications grows in a state, requiring full study for too many projects unnecessarily is most likely to result in an ever-growing queue backlog.¹¹ Allowing projects to access the Fast Track and a well-defined Supplemental Review process can help minimize the number of projects that require study. This frees up utility staff time to focus on the projects truly needing study.

II. SUPPLEMENTAL REVIEW SCREENS PROVIDE AN EFFICIENT PROCESS THAT IS TRANSPARENT FOR CUSTOMERS AND UTILITIES.

Interconnection procedures across the country generally break down the review process into tiers or levels that require different amounts of review depending on the potential risk that a project poses to grid safety and reliability. The procedures generally start with an expedited review process for small inverter-based systems that are unlikely to pose system concerns, similar to what is proposed in Section 2 of the standards. The next tier of review is known as Fast Track and is available to projects below a specified size. In the Fast Track process, a set of standardized screens are applied, which evaluate whether a project requires a full study to be able to determine that it can interconnect safely. The screens utilize conservative limits that are designed to filter out projects that have any potential for safety or reliability impacts. If a project fails one or more of the screens, it is then directed to Supplemental Review or to the full study process.

The Fast Track screens used across the country, and those that are proposed here, were designed when grid managers had very little experience with the integration of

¹¹ *See, e.g.*, FERC Order 792 at ¶ 22 (providing citations to the record where utilities across the country have indicated their growing queue backlogs); Joint Initial Comments of Duke Energy Carolinas, LLC; Duke Energy Progress, Inc.; and Dominion North Carolina Power, North Carolina Utilities Commission, Docket E-100, Sub 101, Nov. 21, 2014 (summarizing the dramatic backlog in the study queue that arose in North Carolina).

inverter based distributed generation. As experience has grown, however, it has been shown that one screen in particular, known as the 15% of peak load screen (section 3.2.1.2 of the proposed standards), may be overly conservative and cause a large number of projects to go through the full study process when they in fact do not pose safety and reliability issues.¹² Thus, state utility commissions and FERC have begun to look more closely at how the Supplemental Review process can be used to further evaluate whether projects that fail the initial review screens really warrant full study.

IREC supports the utilities' decision to include a Supplemental Review process in section 3.4 of their proposal. Supplemental review is an important tool that can enable projects to obtain interconnection approval efficiently when they fail some of the more conservative Fast Track screens. However, the Supplemental Review process proposed by the utilities is an open-ended one, which does not define screens for conducting the review. A vague process like this, without detail about what the review entails, does not provide sufficient information to guide the review process for the developer or the utility.

FERC and a number of other states already have experience with an open-ended Supplemental Review process like the one proposed by the utilities for South Carolina. While this procedure was lightly used in the early years, it was found to be insufficient as greater volumes of distributed generation arrived.¹³ In the recent updates to SGIP, FERC

¹² See, e.g., NREL Technical Report 5500-54063, *Updating Interconnection Screens for PV System Integration* (Feb. 2012), available at <http://www.nrel.gov/docs/fy12osti/54063.pdf>; NREL Technical Report 5500-56790, *Updating Small Generator Interconnection Procedures for New Market Conditions* (December 2012), available at <http://www.nrel.gov/docs/fy13osti/56790.pdf>.

¹³ See, e.g., California Public Utilities Commission Decision 12-09-018 (Sept. 13, 2012) at 11 (“The presently effective [state procedures] does not define the parameters or the timeline for Supplemental Review or additional detailed engineering study. As discussed further below, over time this lack of definition began to negatively impact the

determined that better defining the Supplemental Review process could allow a greater number of Fast Track projects to proceed without study, while also providing sufficient protection of the electrical system.¹⁴ To this end, FERC updated the SGIP Supplemental Review in Order No. 792, following a process that was developed and tested in three states with high penetrations of DG. Subsequently, that process has been used successfully in those states and other states are beginning to follow suit. For example, Ohio adopted procedures modeled on the FERC SGIP in 2013, and Illinois and Iowa are also likely to adopt this Supplemental Review process with screens.¹⁵

When evaluating the value of an effective Supplemental Review process it is important to keep in mind the difference, in both time and cost, between a project's ability to go through Fast Track with Supplemental Review versus the full study process. The Fast Track process, along with Supplemental Review, can generally be completed within about 40-55 business days,¹⁶ at a cost of less than \$5,000.¹⁷ When the full study

interconnection process even as the Legislature and the Commission were creating new opportunities within California's distributed generation market.”).

¹⁴ FERC Order 792 at ¶ 141.

¹⁵ See PUCO Docket 12-2051-EL-ORD (adopting amended interconnection rules in Chapter 4901:1-22 of the Ohio Revised Code) (December 4, 2013); Illinois Commerce Commission Docket 14-0135 (On November 12, 2015, the Commission approved a First Notice Order adopting a Supplemental Review process with screens similar to the one adopted by FERC); Iowa Public Utilities Board Docket NOI-2014-0001 (In this docket the investor owned utilities and other parties have filed comments supporting adoption of a Supplemental Review process identical to the one adopted by FERC.). We also note that North Carolina chose not to adopt Supplemental Review screens recently because the majority of the DG projects were in the 5 MW range and not as likely to go through Fast Track. Thus, it was determined that it would be better to focus on other queue clearing measures. This is not going to be the case in South Carolina because the Net Energy Metering program will encourage more smaller projects. Accordingly, the Supplemental Review screens are appropriate for South Carolina.

¹⁶ See Proposed Interconnection Standards Sections 3.2, 3.2.2, 3.3, 3.4, 3.4.1 (setting forth the timelines for initial review, customer options meetings and Supplemental Review).

process is completed after failing the Fast Track screens, on the other hand, it can take about 145-175 business days¹⁸ and cost upwards of \$10,000, often more.¹⁹

The Commission should adopt a Supplemental Review process identical to the one adopted by FERC that contains three technical review screens: a 100% of minimum load screen, a safety and reliability screen, and a voltage and power quality screen. Under this Supplemental Review process, all projects *above* 100% of minimum load would still go directly to full study. And projects below this level would not be automatically interconnected: they would then be subject to two other screens that address safety, reliability, voltage, and power quality concerns.²⁰ FERC found that “the three screens in the Supplemental Review are designed to strike a balance between handling the increased volume of interconnection requests and penetrations of small generators and maintaining

¹⁷ See Proposed Interconnection Standards, Attachment 3, South Carolina Interconnection Request Application Form (setting application fees between \$100 and \$500) and Section 3.3.1 (establishing a fee of \$150/hour not to exceed 30 hours for Supplemental Review).

¹⁸ See Proposed Interconnection Standards sections cited in Footnote 16, in addition to sections 4.2.1, 4.2.3, 4.3.1, 4.4.1, 5 and the System Impact Study Agreement and Facilities Study Agreement.

¹⁹ See Proposed Interconnection Standards section 1.3.1.2 (identifying an interconnection request deposit of \$10,000 plus \$1 kWac of capacity, the actual costs could be greater or lesser).

²⁰ *Updating Interconnection Screens for PV System Integration*, National Renewable Energy Laboratory Technical Report NREL/TP-5500-54063, at 6-9 (Jan. 2012), available at www.nrel.gov/docs/fy12osti/54063.pdf; *Updating Small Generator Interconnection Procedures for New Market Conditions*, at 22-25, 30-31 (Dec. 2012), available at <http://www.nrel.gov/docs/fy13osti/56790.pdf>; MA DPU Order 11-75-F at 12-14, available at <http://web1.env.state.ma.us/DPU/FileRoomAPI/api/Attachments/Get/?path=11-75%2fOrder.pdf> (“Given this experience, the unanimous recommendation of the technical standards review group, and the support of the Distribution Companies and the non-utility parties to the Working Group, we are persuaded that a 100 percent of minimum load penetration level is both safe and appropriate.”).

the safety and reliability of the electric systems.”²¹ It concluded that these “Supplemental Review screens provide the flexibility to identify circumstances when additional studies may be required while avoiding an unjust and unreasonable increase in expense and delay in interconnection.”²²

An open-ended Supplemental Review process without defined screens, as proposed by the utilities here, does not ensure that the utilities will make their best efforts to efficiently interconnect projects efficiently as penetration grows on their systems. Defining screens for Supplemental Review, including the 100% of minimum load screen, would create a more transparent process for Supplemental Review. Specifically, with defined screens, a utility is obligated to be specific in identifying which technical issues warrant further study when projects are below 100% of minimum load. IREC considers such a Supplemental Review process with screens to be one of the most important ways to expedite interconnection and lower costs for solar projects as penetration of distributed generation increases. This would better achieve South Carolina’s interconnection goals without adding a financial burden on the utilities, which are compensated by the Supplemental Review fee for the time spent on this process.

It is better to adopt screens for a Supplemental Review process now instead of waiting to see if problems arise with the utilities’ proposed process. As we explained, both FERC and a number of states have already attempted such open-ended Supplemental Review processes, determined that they are inefficient, and subsequently adopted processes with defined screens. Because these other jurisdictions have already gone through the growing pains of developing an effective Supplemental Review process,

²¹ FERC Order 792 at ¶ 141.

²² *Id.*

South Carolina does not have to, and the Commission should adopt a robust Supplemental Review process with a 100% of minimum load screen now.

Finally, it must be noted that each of the South Carolina utilities is already obligated to follow FERC's Supplemental Review process with defined screens for their FERC-jurisdiction projects. It is always easier to follow one set of rules, rather than two, and by adopting a Supplemental Review process with defined screens, like FERC's, the Commission will help avoid any confusion that may result from utilities attempting to implement varying Supplemental Review procedures.

IREC urges the Commission to adopt this FERC-approved approach for Supplemental Review. Our attached redline of the utilities' proposal is in line with the process vetted and adopted by FERC and other states.

III. THE PROPOSED ELIGIBILITY LIMITS FOR FAST TRACK ARE UNDULY RESTRICTIVE AND MAY RESULT IN UNNECESSARY STUDIES AND COSTS.

The utilities' proposed standards include a table setting forth the eligibility limitations for Fast Track review that would restrict access to projects under 2 MW or even smaller in many cases. This proposal is unduly restrictive and lacks a sufficient technical basis and should be modified to allow projects up to 4 MW on the state's largest distribution lines.

As set forth above, Fast Track review increases efficiency by allowing eligible systems to interconnect without undergoing the full multi-month study process if they pass a set of technical screens. The purpose of limiting Fast Track eligibility by size is to filter out projects that would be highly unlikely to pass the Fast Track screens and to instead direct them immediately towards the study process. The eligibility limitations do not guarantee that a smaller project will be given Fast Track review; they just allow the

technical screens to be applied to the project to determine whether study is required first. Only after passing the screens is a project qualified to interconnect under Fast Track. *In other words, there is no safety or reliability risk associated with allowing larger projects to use the Fast Track process, the eligibility limits are purely administrative.*²³ For many smaller projects under 5 MW, passing through Fast Track is the only way the project would be able to afford to move forward because the time and cost associated with the full study process are prohibitive. Thus, it is important not to set limits that unnecessarily screen out projects that might be able to pass the Fast Track screens.

The discussion about Fast Track eligibility limits has evolved in recent years, culminating in a significant change to the FERC SGIP limits. Originally, the FERC SGIP used a straight 2 MW limit on the Fast Track process, no matter where a project was located on the distribution system. As far as we know, this number was arbitrarily determined²⁴ and not based upon an assessment of what sized projects could potentially pass the screens in different locations. As the demand for DG has grown, it has become apparent how important access to the Fast Track process is for smaller projects. Thus, in the proceeding leading up to the adoption of the new FERC SGIP, there was a proposal to either entirely eliminate the size limit or to move to a 10 MW limit. FERC settled upon an approach that was first recommended by the National Renewable Energy Laboratory

²³ *See, e.g.*, FERC Order 792 at ¶ 109 (“The Commission acknowledges NYISO & NYTO’s comment that certain facilities in New York may require a detailed study to ensure safety and reliability. However, the Fast Track Process itself will identify such facilities so they need not be eliminated from Fast Track eligibility.”).

²⁴ There is no record on how the 2 MW limit was originally selected. The lawyers participating in the process of adopting the original SGIP have recounted to IREC that the number was selected based purely upon an estimation of the largest DG projects that were currently in development at the time.

(“NREL”) in a report on updating the Fast Track screens.²⁵ This approach looked at two key factors in determining the likelihood of a project to pass the screens depending on its size: the voltage of the line it was connecting to and the distance from the substation.

The numbers in the FERC SGIP table were ultimately developed via a voluntary stakeholder working group that included all of the major national utility organizations, the national laboratories, the solar industry, and IREC.²⁶ During the working group discussions, the participants came to agreement on limits that were more conservative than what was originally proposed in the NREL report and the no-limits or 10 MW limit approach sought by the petitioners.²⁷ The table adopted by FERC is as follows:

Table 1: FERC SGIP Fast Track Eligibility Size Limits for Inverter-Based Systems

Fast Track Eligibility for Inverter-Based Systems		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility on a Mainline and < 2.5 Electrical Circuit Miles from Substation
< 5 kV	≤ 500 kW	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 2 MW	≤ 3 MW
≥ 15 kV and < 30 kV	≤ 3 MW	≤ 4 MW
≥ 30 kV and ≤ 69 kV	≤ 4 MW	≤ 5 MW

²⁵ NREL Technical Report 5500-56790, *Updating Small Generator Interconnection Procedures for New Market Conditions*, at 19-21 (Dec. 2012), available at <http://www.nrel.gov/docs/fy13osti/56790.pdf>.

²⁶ FERC Order 792 at ¶ 14 (“The stakeholders that participated in the SWG [stakeholder working group] indicated in their comments that the SWG came to agreement on certain revisions to the proposals for the pre-application report and the threshold for participation in the Fast Track Process. The National Rural Electric Cooperative Association, Edison Electric Institute and the American Public Power Association (NRECA, EEI & APPA), the Interstate Renewable Energy Council (IREC), SEIA, and National Renewable Energy Laboratory (NREL) submitted SWG proposed revisions with their comments.”).

²⁷ FERC Order 792 at ¶ 14, 102-110.

The FERC table reflects a more accurate prediction of whether a project will be capable of passing the Fast Track technical screens and is sufficiently conservative to serve the administrative function of directing projects that cannot pass the Fast Track screens directly to study. Here, the utilities have proposed a similar table approach, but have used drastically smaller size limits, which are likely to screen out many projects that could potentially pass the Fast Track screens. The utilities’ proposed table is below:

Table 2: PROPOSED Fast Track Eligibility Size Limits for Inverter-Based Systems

Fast Track Eligibility for Inverter-Based Systems		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility on a Mainline and < 2.5 Electrical Circuit Miles from Substation
< 5 kV	≤ 100 kW	≤ 500 kW
≥ 5 kV and < 25 kV	≤ 1 MW	≤ 2 MW
≥ 25 kV	not eligible	not eligible

The utilities have not yet identified any unique technical constraints on the distribution system in South Carolina that would justify such drastically smaller limits. Indeed, IREC believes it is likely that conditions in the State will allow significant numbers of strategically located projects that exceed the limits identified by the utilities to pass through Fast Track. Because the amount of deployed DG is still quite modest in South Carolina, it is very likely that DG projects up to 4 MW could interconnect using Fast Track with Supplemental Review on the higher voltage distribution lines in the State. As penetration of DG grows, the number of opportunities for Fast Track review for larger projects may decrease, but at this time, it does not make any sense to impose such conservative limits. This will be particularly true if the Commission adopts the

proposed pre-application report process and the improved Supplemental Review process. By using the pre-application report, developers can identify locations where there are conditions that would allow them to pass through the Fast Track process with larger projects. They will also be able to predict if a project is likely to fail the screens. Thus there is less risk that projects will apply for review under Fast Track if there is little chance of passing. Finally, the Supplemental Review process will also allow more projects to proceed without full study even if they fail the initial Fast Track screens. Unduly lowering the Fast Track size limits would limit the potential benefits of Supplemental Review.

As explained in the section above regarding Supplemental Review, unduly limiting access to Fast Track will have real financial consequences for developers and will likely limit the opportunities for development of projects in the 100 kW to 4 MW range. On the other hand, there is no system safety and reliability risks associated with using higher Fast Track limits because the screens will identify projects requiring more review. The utilities will also benefit from having to conduct fewer full studies of projects that could have instead been efficiently evaluated through Fast Track. During the workshop discussions, there were already some reports that the utilities are not keeping up with their current study queue. Adding more projects to this queue unnecessarily does not help anyone.

By adopting the FERC-recommended eligibility table, the Commission would allow more projects to undergo Fast Track review, thereby opening access to Fast Track while maintaining the safety and reliability of the system. IREC understands that there may not be any distribution lines in South Carolina sized above 25 kV so we recommend eliminating the last line in the FERC SGIP table but otherwise maintaining the limits for

the other sized lines. The limits for Fast Track eligibility that we recommend the Commission adopt have been thoroughly vetted by FERC and a broad range of stakeholders, including all of the major national utility groups. Further, the experiences of other high-penetration states have demonstrated that full study of higher volumes of interconnection applications is neither necessary nor realistic, and the cost savings associated with the Fast Track process can be extended to more projects within appropriate technical parameters.²⁸ The support by such a wide range of participants of the limits set forth in Table 1 speaks to the reasonableness of this approach.²⁹

IREC recommends the Commission require adoption of the following table for Fast Track eligibility.

Table 3: IREC’s Proposed Fast Track Eligibility Size Limits for Inverter-Based Systems

Fast Track Eligibility for Inverter-Based Systems		
Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility on a Mainline and < 2.5 Electrical Circuit Miles from Substation
< 5 kV	≤ 500 kW	≤ 500 kW
≥ 5 kV and < 15 kV	≤ 2 MW	≤ 3 MW
≥ 15 kV and < 30 kV	≤ 3 MW	≤ 4 MW

²⁸ See CPUC, Decision (D.) 12-09-018, at 16 (Sept. 13, 2012); KEMA, Massachusetts Distributed Generation and Interconnection Report (prepared for Mass. DOER and Mass. Clean Energy Ctr.) at viii-ix and 123 (July 25, 2011) (attached to Mass. DOER, Petition to Address Interconnection (filed Aug. 18, 2011)); Vote and Order Opening Investigation, DPU 11-75, at 2-3 (Investigation of the Department of Public Utilities on its own Motion into Distributed Generation Interconnection) (Sept. 28, 2011).

²⁹ FERC Order No. 792 at ¶¶ 102-110. We also note that FERC rejected Duke’s arguments for lower limits in Order No. 792 at ¶¶ 92 and 102-110.

IV. ADEQUATE REPORTING IS NECESSARY TO ENSURE GOOD DECISION-MAKING GOING FORWARD AND WILL NOT IMPOSE A SIGNIFICANT BURDEN ON THE UTILITIES.

Public reporting and a useful public queue are essential for regulators, interconnection customers, and utilities to understand how the interconnection process is working and to identify areas that may need modification to ensure the process continues to work smoothly. Here, the public queue and reporting requirements proposed by the utilities provide for disclosure of scant information, thus failing to provide even minimally adequate information to enable developers to track their projects and also providing no basis for good decision making going forward. IREC believes that South Carolina's interconnection goals will be better served by requiring the utilities to make public more detailed information.

A key characteristic of adequate reporting is that it provides for sufficient transparency to ensure the interconnection process is operating optimally. Including more detailed information, like that which we enumerate below, will allow the Commission and stakeholders to track how projects proceed through the review process and determine whether the utilities are keeping up with their timelines for review. Public availability of this information helps developers establish reasonable expectations about how long it will take utilities to process their applications. It also can help the Commission identify whether there are issues that need to be addressed if projects are getting bogged down. Our experience in other states has shown that this can happen for many different reasons, including many outside of the control of the utilities. However, without good information about the sticking points, it is hard to accurately know what to fix.

Reasonably detailed reporting is valuable for everyone, including utilities, because the information compiled for these reports provides a data-based record of the interconnection process. The data allow for periodic assessment of the effectiveness of current procedures and facilitate informed decision-making about what changes to the process may be necessary to improve it. It is our experience that too often the data are not gathered or retained at all absent a specific requirement from the State. Utilities often do not track the progress of projects carefully or document each application’s milestones. This makes it hard for the utilities, the State, and other stakeholders to accurately determine what the true problem areas are or what the appropriate solutions may be. To avoid this problem, we encourage the Commission to join other jurisdictions that have adopted more robust reporting requirements to this end.³⁰

Though preparing reports and updating public queues puts some modest additional responsibilities on the utilities, the benefits of the transparency far outweigh any burden. The information that we recommend be included in a public queue will help all parties—including the utilities—evaluate actual conditions and respond accordingly. This will increase efficiency, reduce costs, and accelerate solar penetration of the grid. And maintaining a detailed public queue requires minimal additional labor from the

³⁰ The examples from California and Massachusetts are relevant. *See* Distributed Generation and Interconnection in Massachusetts: Interconnection, <https://sites.google.com/site/massdgc/home/interconnection> (“Interconnection activity”); MA DPU 11-75-F, Order on a Timeline Enforcement Mechanism (July 31, 2014) (Appendix B to the order contains a clean version of the mechanism); Pacific Gas and Electric Company (PG&E), www.pge.com/en/b2b/newgenerator/index.page (“What’s New: Public Queue”); San Diego Gas & Electric Company, www.sdge.com/generation-interconnections/electric-rule-21 (“SDG&E Generation Interconnection Request Queue” (WDAT & Rule 21)); Southern California Edison Company (SCE), <https://www.sce.com/wps/portal/home/regulatory/open-access-information> (“Public WDAT-Rule 21 Queue”); CPUC, Energy, Interconnection (Rule 21), www.cpuc.ca.gov/PUC/energy/rule21.htm (“Q3 Interconnection Quarterly Reports”).

utilities. In order to comply with the timelines established in the proposed standards, the utilities will already need to have internal processes for tracking interconnection projects, and the utilities can simply make it their procedure to update the public queues at the same time that they update their own records.

IREC recommends that the utilities maintain a public queue, posted on their websites and updated on a monthly basis, which contains the data listed below. The data selected include basic information about project type and location along with dates that track the major milestones in the interconnection standards. Again, it is important to recognize that the utilities will already need to be tracking this information if they intend to comply with the timelines in the standards. Where applicable, we have included the section numbers that each field relates to from the proposed standards.

1. Queue number - § 1.6 (this will be used to identify projects and to prevent sharing of potentially confidential developer information)
2. Interconnection request status (i.e. withdrawn, on hold, in process)
3. Generator type (i.e. solar, wind, biogas, etc.) – Attachment 3³¹ or Attachment 7³²
4. Total generator nameplate rating (i.e. 7 kW, 5 MW) – Attachment 3 or Attachment 7
5. Substation to which the project proposes to interconnect – Attachment 3 or Attachment 7
6. Date the interconnection request application was submitted - § 1.3.1
7. Date the interconnection request application was deemed complete by the Utility - § 1.3.1 to 1.3.4
8. Date the 20 kW inverter process review results were provided to the applicant - § 2.2.1³³
9. 20 kW inverter process review results, and, if applicable, any screens failed (i.e. passed or failed screens 2, 4, and 6) - § 2.2.1
10. Date the Fast Track initial review results were provided to the applicant - § 3.2

³¹ Attachment 2 is the proposed South Carolina Interconnection Request Application Form and contains fields requesting the information referenced herein.

³² Attachment 7 is the Interconnection Request Application form for Interconnecting a Certified Inverter-Based Generating Facility No Larger than 20 kW.

³³ Not all fields will be applicable to every project, i.e., for those projects not going through the 20 kW Inverter Process these fields would be left blank.

11. Fast Track initial review results, and, if applicable, any screens failed (i.e. passed or failed screens 2, 4, and 6) - § 3.2
12. Date Supplemental Review requested (if applicable) - § 3.4
13. Date Supplemental Review results were provided (if applicable) - § 3.4.1
14. Supplemental Review results, and, if applicable, any screens failed (i.e. passed or failed screen 2).³⁴
15. Date the System Impact Study was provided to the applicant - § 4.3 and Attachment 8
16. Date the Facilities Study was provided to the applicant - § 4.4 and Attachment 9
17. Date the Interconnection Agreement was provided to the applicant - § 5.2.1
18. Date the Interconnection Agreement was signed - § 5.2.2
19. In service date
20. Notes³⁵

Finally, we would like to note that, while both a public queue and regular reporting have value, IREC would be satisfied with a regularly updated queue that includes the information listed above, combined with a once-a-year report that summarizes the major data points. The yearly report should include information on the number of pre-application reports that were provided and the time in which they were provided (this information cannot be tracked in a queue since the requests are not tied to applications with queue numbers).

V. CONCLUSION

Thank you for considering our comments. We look forward to continuing to participate in this process.

³⁴ We have proposed including screens in the Supplemental Review process, if the Commission determines not to include screens, this field would only include the review results.

³⁵ The Utility may find it helpful to be able to record any additional relevant information in this field, including technical reasons identified for screens failure, or notes on reasons for unusual delays or different treatment.

DATED: November 23, 2015

LAW OFFICES OF ROBERT GUILD

By: /s/ Robert Guild
ROBERT GUILD

DATED: November 23, 2015

SHUTE, MIHALY & WEINBERGER LLP

By: /s/ Sky C. Stanfield
SKY C. STANFIELD
Application for Pro Hac Vice
pending

Attorneys for INTERSTATE RENEWABLE
ENERGY COUNCIL, INC.

CERTIFICATE OF SERVICE

**STATE OF SOUTH CAROLINA
BEFORE THE PUBLIC SERVICE COMMISSION**

DOCKET NO. 2015-362-E

In the Matter of:)	
)	
)	
Joint Application of Duke Energy Carolinas, LLC, Duke Energy Progress, LLC and South Carolina Electric & Gas Company for Approval of the Revised South Carolina Interconnection Standard)	CERTIFICATE OF SERVICE
)	
)	
)	

The undersigned, Amy Zehring, does hereby certify that the following persons have been served with in the above captioned proceeding by electronic mail and/or U.S. First Class

Mail at the addresses set forth below:

Andrew M. Bateman, Counsel
Office of Regulatory Staff
1401 Main Street, Suite 900
Columbia, SC 29201
Email: abateman@regstaff.sc.gov
Phone: 803-737-8440
Fax: 803-737-0895

Charles A. Castle, Associate General Counsel
Duke Energy Corporation
550 South Tryon Street/DEC45A
Charlotte, NC 28201-1006
Email: alex.castle@duke-energy.com
Phone: 704-382-4499
Fax: 960-373-8534

E. Brett Breitschwerdt, Counsel
McGuireWoods LLP
434 Fayetteville Street, Suite 2600
Raleigh, NC 27601
Email: bbreitschwerdt@mcguirewoods.com
Phone: 919-755-6563
Fax: 919-755-6579

Frank R. Ellerbe, III, Counsel
Robinson, McFadden & Moore, P.C.
Post Office Box 944
Columbia, SC 29202-0944
Email: fellerbe@robinsonlaw.com
Phone: 803-779-8900
Fax: 803-252-0724

