

STATE OF SOUTH CAROLINA
BEFORE THE PUBLIC SERVICE COMMISSION
DOCKET NO. 2015-362-E

In re: Joint Application of Duke)	
Energy Carolinas, LLC, Duke)	INITIAL COMMENTS OF SOUTH
Energy Progress, LLC and South)	CAROLINA COASTAL
Carolina Electric & Gas Company)	CONSERVATION LEAGUE AND
for Approval of the Revised South)	SOUTHERN ALLIANCE FOR
Carolina Interconnection Standard)	CLEAN ENERGY
)	

INTRODUCTION

Through counsel, the South Carolina Coastal Conservation League (“CCL”) and the Southern Alliance for Clean Energy (“SACE”), respectfully submit these initial comments in the above-captioned docket concerning the Joint Application of Duke Energy Carolinas, LLC (“DEC”), Duke Energy Progress, Inc. (“DEP”), and South Carolina Electric & Gas Company (“SCE&G”) (collectively, the “Utilities”) for the Approval of the Revised South Carolina Interconnection Standard (“the Application”). The Application was filed with the Commission on October 9, 2015. The Commission has established an intervention deadline of November 23, 2015 for this proceeding.

As noted in the Application, the Office of Regulatory Staff (“ORS”) hosted several meetings from July–August 2015 to discuss the Utilities’ interconnection proposal. The Utilities took stakeholder feedback from these meetings into consideration and made changes to the proposal accordingly. The stakeholders and Utilities reached consensus on many issues, but not all. The purpose of these initial

comments is to highlight CCL and SACE's position on several important unresolved issues that remain for the Commission's consideration. CCL and SACE respectfully request the opportunity to provide further comments in this proceeding as needed and in response to other parties' filings.

In the comments below, CCL and SACE address the following components of the Utilities' Application: 1) Fast Track eligibility criteria, 2) Supplemental Review, and 3) Reporting Requirements. We respectfully request that the Commission promulgate interconnection standards that incorporate the Federal Energy Regulatory Commission's ("FERC") recently adopted Fast Track eligibility criteria and Supplemental Review technical screens, rather than those proposed by the Utilities. Utility reporting requirements also deserve closer scrutiny by the Commission.

SOUTH CAROLINA DISTRIBUTED ENERGY RESOURCE POLICY AND PROCEDURAL BACKGROUND

The Distributed Energy Resource Program Act, Act 236, effective on June 2, 2014, requires promulgation of new interconnection standards for South Carolina. Specifically, Section 58-39-110 of Act 236 provides that the "Commission shall promulgate standards for interconnection of renewable energy facilities and other nonutility-owned generation with a generation capacity of two thousand kilowatts (2,000 kW AC) or less to an electrical utility's distribution system." S.C. Code Ann. § 58-39-110.

The passage of Act 236 was the culmination of over a year's worth of discussion and collaboration among a diverse array of stakeholders. After Act 236 became law, most of these same stakeholders undertook a second year of

collaborative work, through seven docketed proceedings before the Commission.

Today, leasing of renewable energy facilities is legal in our State, and DEC, DEP, and SCE&G have issued Request for Proposals (“RFPs”) for utility-scale renewables and have rolled out a variety of programs designed to promote rooftop solar development across South Carolina. After years of work, the promise of Act 236 is beginning to be realized.

At the same time, the U.S. Environmental Protection Agency (“EPA”) has finalized carbon pollution standards that will continue the shift away from carbon-intensive generation and towards clean energy resources that has begun across the US electric sector. A second stakeholder group has been meeting since 2013 and is committed to continuing to work together to understand the rule and identify the most constructive course of action for South Carolina. While our State’s compliance strategy and the resources we will rely upon to further de-carbonize our power sector are yet to be determined, solar technologies have enormous potential to play a key role, even well beyond the goals laid out in Act 236. This includes rooftop solar applications as well as utility-scale solar farms.

Standardized interconnection procedures are a critical enabler for the development of solar and other distributed energy technologies. Adoption of subpar interconnection standards could raise the cost of reaching Act 236 goals or even challenge the achievement of those goals altogether. Inadequate interconnection standards could also narrow the potential for additional distributed energy resource development to help meet South Carolina’s targets under the Clean Power Plan. Further, the investment and job creation that has begun in our State around solar

technologies can only reach their full potential with efficient marketplaces in which interconnecting to the grid is streamlined, transparent, and able to evolve over time as obstacles are identified and removed. While the Application is a step in the right direction, we urge the Commission to consider the following recommendations, which would significantly strengthen the proposal, help to ensure Act 236 is implemented in the most cost-effective manner possible, and preserve the option of developing additional DERs as part of a broader Clean Power Plan compliance strategy.

1) Fast Track Eligibility

CCL and SACE recommend that the Commission adopt FERC's Small Generator Interconnection Procedures (SGIP) Fast Track eligibility criteria, rather than the criteria limits recommended by the Utilities in Section 3.1 of their proposed standards. The Utilities' proposed Fast Track eligibility criteria are overly restrictive and we have not seen data to justify departure from the FERC criteria.

FERC's SGIP apply to FERC jurisdictional interconnections under 20 megawatts ("MW") and serve as a guide for states adopting their own interconnection standards. FERC requires public utilities that own, control, or operate facilities for transmitting electric energy in interstate commerce to adopt standard interconnection procedures for their open access transmission tariffs. FERC most recently revised its SGIP and Small Generator Interconnection Agreement in 2013 to "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.”¹ FERC concluded that the revisions were necessary to comply with its statutory obligation under the Federal Powers Act² sections 205 and 206 to “ensure that rates, terms and conditions for Commission-jurisdictional services are just and reasonable and not unduly discriminatory.”³

Like FERC’s original SGIP, the 2013 changes apply to FERC-jurisdictional interconnections and are also “meant to serve as a model for state interconnection rules.”⁴ Among other changes, FERC raised the overall Fast Track eligibility threshold from 2 MW to 5 MW for inverter-based systems, with a further breakdown based on line voltage. Most stakeholders providing input on the FERC revisions supported this threshold increase. The Interstate Renewable Energy Council noted that “the purpose of the eligibility limits to the Fast Track Process should be to filter out projects that are highly unlikely to pass the Fast Track screens in order to save time and set clear customer expectations ...[; h]owever, the eligibility limits do not need to duplicate or go beyond the Fast Track screens themselves.”⁵ Other stakeholders noted that the Fast Track process does not necessarily need to include any MW threshold limitations, because the Fast Track technical screens will eliminate projects that are inappropriate for Fast Track interconnection. Ultimately, FERC determined that a 5 MW threshold struck an appropriate balance.

¹ FERC Order No. 792, at 4 (Nov. 22, 2013), *available at* <http://www.ferc.gov/whats-new/comm-meet/2013/112113/E-1.pdf>.

² 16 U.S.C. 824e.

³ FERC Order No. 792, at 4.

⁴ *Id.* at p. 11.

⁵ *Id.* at p. 52.

Meeting the Fast Track Eligibility criteria does not guarantee that a project will be approved for interconnection. These criteria simply serve an initial gatekeeping function for the Fast Track review process. Even if an applicant fails the Fast Track process, this failure provides valuable information to the applicant on the potential for proceeding with that project. Applicants who fail Fast Track and choose to abandon the project have wasted far less time, money, and other resources than if they had gone through the full study process at the outset. Considering the interconnection queue clogging problems that other states like North Carolina have faced in recent years, keeping projects out of the full study process to the extent possible (by either passing or failing them in Fast Track) is a reasonable and efficient approach. Additionally, when projects that can be interconnected without adverse grid impacts are fast-tracked, cost savings will result from reduced study expenditures during project development.

For comparison, below are the South Carolina Utilities' proposed Fast Track eligibility criteria and the FERC SGIP Fast Track criteria. CCL and SACE recommend replacing the Utilities' proposed Fast Track criteria with the recently adopted FERC Fast Track eligibility criteria.

South Carolina Utilities' Proposed 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	<i>Not eligible</i>	<i>Not eligible</i>

FERC SGIP 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

2) Supplemental Review

CCL and SACE fully support the inclusion of a supplemental review process in Section 3.4 of the proposed standards for projects that fail Fast Track but that may still be able to safely interconnect to the grid. Still, greater clarity is needed regarding what the utilities will specifically consider in their supplemental review process under that Section. Clear screens and guidelines are crucial to establishing an objective process for supplemental review and will help applicants that are denied an interconnection application understand *why* they have been denied. In the aggregate, this information will also better inform the Utilities, the Commission, Office of

Regulatory Staff, interconnection applicants, and interested stakeholders about any recurring issues or problems in the interconnection review process that should be addressed.

As with the Fast Track eligibility criteria, FERC updated its SGIP supplemental review process in 2013, and included three specific technical screens. CCL and SACE recommend that the Commission add these screens to the South Carolina procedures. In addition to a 100% Minimum Load Screen, described in greater detail below, the FERC SGIP supplemental review includes a Voltage and Power Quality Screen and a Safety and Reliability Screen.⁶ The supplemental review language currently proposed by the Utilities in Section 3.4 of the proposed standards alludes to these considerations but lacks the specificity and clear guidance of the FERC supplemental review screens. This will create a “black box” of utility review, which will (1) make it difficult for interconnection applicants to get clear information on why they may fail supplemental review, and (2) contribute to a lack of public information on South Carolina grids and interconnection processes, as discussed further below.

Including the 100% Minimum Load Screen in the Supplement Review process will also address concerns that the peak load screen included in the Utilities’ proposed standard is outdated and overly conservative. The Utilities have proposed the following Fast Track screen in Section 3.2.1.2 of their proposal: “For interconnection of a proposed Generating Facility to a radial distribution circuit, the aggregated generation, including the proposed Generating Facility, on the circuit shall

⁶ Federal Energy Regulatory Commission, Small Generator Interconnection Procedures (SGIP), at Section 2.4 (Sept. 19, 2014), *available at* <http://www.ferc.gov/industries/electric/indus-act/gi/small-gen.asp>.

not exceed 15% of the line section annual peak load as most recently measured at the substation.” This screen is frequently called the “15 percent rule or screen.” This particular screen is often the one that causes otherwise viable projects to fail the Fast Track process. A report in 2012 from National Renewable Energy Laboratory (“NREL”), Sandia Laboratory, and Electric Power Research Institute (“EPRI”) describes in greater detail the origin and problems associated with the 15% peak load screen—which was developed as a proxy for minimum load—and recommends transitioning to screens that will allow more projects to pass Fast Track review while maintaining safety and reliability of the grid.⁷ The report offers several alternatives to the 15 percent screen, including use of a 100% minimum load screen in supplemental review once the 15% of peak load screen is triggered. This is the approach adopted in the recent FERC SGIP updates in 2013.

For more information on the 15 percent screen and the importance of supplemental review generally, the following report is instructive: NREL’s Technical Report 5500-56790, *Updating Small Generator Interconnection Procedures for New Market Conditions*, pp. 22–24, 30–31 (Dec. 2012), *available at* <http://www.nrel.gov/docs/fy13osti/56790.pdf>. Significantly, the report’s two recommendations to provide for “a more defined and transparent” supplemental review process were the following:

- “Incorporate a requirement that generators below 100% of minimum load on a distribution feeder line section, measured during the hours the proposed facility will be online, be allowed to proceed through Supplemental Review.”

⁷ Michael Coddington, et al., *Updating Interconnection Screens for PV System Integration* (Feb. 2012), *available at* <http://www.nrel.gov/docs/fy12osti/54063.pdf>.

- “Include specific screens for Supplemental Review that provide additional guidance on the power quality, voltage regulation, safety, and reliability considerations that will be reviewed.”

3) Reporting Requirements

Finally, CCL and SACE recommend more robust reporting recommendations than what the Utilities have proposed in their Application at pages 10–11. At a minimum, the Commission should require the Utilities to report on compliance with interconnection standard timelines and why projects fail the interconnection process, particularly Fast Track review, in addition to what the Utilities have already proposed to report. Robust reporting requirements provide transparency and accountability for the Utilities, the Commission, Office of Regulatory staff, interconnection applicants, and other interested stakeholders.

Failure to meet interconnection timelines is a frequent occurrence across the country. NREL recently analyzed data from more than 30,000 residential and small commercial solar photovoltaic system interconnections from 16 states, with a particular focus on five states with active solar markets. NREL found that interconnection process delays are common and range from days to weeks.⁸ While the actual installation of a solar PV system often takes only a few days, the study concluded that the median timeline for the residential and small commercial interconnection process is 53 days. In nearby North Carolina, clogged queues and delayed interconnection process times have been problematic in recent years. The

⁸ A recent utility survey conducted by the Solar Electric Power Association also revealed that 28.3% of utilities surveyed were “slow in processing a below average number of interconnection applications.” Solar Electric Power Association, Distributed Solar Interconnection Challenges and Best Practices, at 8, *available at* <https://www.solarelectricpower.org/media/224744/SEPA-Interconnection-Report-1014-email.pdf>.

North Carolina Utilities Commission recently issued an order requiring quarterly and monthly reporting on interconnection queue status and compliance with interconnection deadlines.⁹

Tracking and reporting compliance with deadlines would provide transparency around any unreasonable interconnection delays in South Carolina and inform any necessary corrections in the future. Additionally, data reporting on Fast Track and Supplemental Review failures can help track patterns within those processes that may need to be addressed in later revisions of the interconnection standards.

The Application includes the following proposed data reporting at pages 10–11:

- (1) Monthly web-based interconnection queue update, containing
 - a. Queue number of the request;
 - b. Operational status of the project;
 - c. Fast Track status, if applicable;
 - d. Capacity of the project;
 - e. Energy source of the project;
 - f. Feeder/circuit to which the project will be interconnected; and
 - g. Substation to which the project will be interconnected.

- (2) Semi-annual report to the Commission and the ORS, containing
 - a. each interconnection request identified by Queue Number and fuel type;
 - b. date of issuance of Queue Number;
 - c. the interconnection request's capacity;
 - d. the substation to which the project will be interconnected;
 - e. the feeder/circuit to which the project will be interconnected;
 - f. the date the interconnection facilities (along with any required upgrades) were completed and available for operation;
 - g. any interconnection requests that have been denied or withdrawn.

⁹ See N.C. Utilities Commission, Order Approving Revised Interconnection Standard, Docket No. E-100 Sub 101 (May 15, 2015).

If reporting is limited to just these items, stakeholders will be unable to identify whether timelines within the interconnection process are being met, whether there are obstacles to streamlined interconnection that should be addressed, or whether additional utility resources and investment are justified to improve processing. If issues do arise, they could manifest as difficulties interconnecting sufficient capacity to meet Act 236 goals, higher than necessary power purchase agreement (“PPA”) prices and rooftop solar costs, and clogged queues, with no information available to explain why South Carolina processing and markets may be struggling while others regionally and nationally are thriving.

CCL and SACE suggest that, at a minimum, a few modest requirements should be added to the proposed data reporting to provide greater transparency and an opportunity to improve interconnection processes as necessary, and to get ahead of future challenges as they begin to arise. Other additions may be warranted, but at this time CCL and SACE propose adding the following three items to the monthly interconnection queue updates:

- If Fast Track failed, which screen(s) failed;
- Supplemental Review status, if applicable;
- If Supplemental Review unsuccessful, screen failed or brief description of reasons (e.g., exceeded minimum load, voltage issues identified, etc.).

In addition, CCL and SACE propose that at least the following item be added to the semi-annual report:

- Start date and complete date for fast track, supplemental review, system impact study and facilities study (as applicable).

CONCLUSION

Distributed Energy Resource markets in South Carolina cannot expand and thrive without interconnection standards that reflect industry best practices. The strength of these standards will have implications both for Act 236 implementation and for ensuring that South Carolina has a deep toolbox at its disposal for purposes of meeting Clean Power Plan goals. We have appreciated the productive stakeholder discussions held by the ORS, which shaped the Application in a positive way. We believe the additional changes recommended herein will strengthen South Carolina's interconnection procedures and facilitate continued growth in local DER markets.

Respectfully submitted this 20th day of November, 2015.

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CERTIFICATE OF SERVICE

I hereby certify that the parties listed below have been served via first class U.S. Mail or electronic mail with a copy of the Initial Comments of South Carolina Coastal Conservation League and Southern Alliance for Clean Energy.

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This 20th day of November, 2015.

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