

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-100, SUB 126  
DOCKET NO. E-100, SUB 157

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-100, SUB 126	)	
	)	
In the Matter of	)	
Investigation of Integrated Resource	)	ORDER AMENDING COMMISSION
Planning in North Carolina – Smart	)	RULE R8-60, ELIMINATING RULE
Grid Technology Plans	)	R8-60.1, AND REQUIRING
	)	COMPLIANCE FILING
DOCKET NO. E-100, SUB 157	)	
	)	
In the Matter of	)	
2018 Integrated Resource Plans and	)	
Related 2018 REPS Compliance Plans	)	

BY THE COMMISSION: On August 13, 2019, in Docket No. E-100, Sub 126, the Commission issued an Order requesting comments on its proposed amendment to Commission Rule R8-60, and the proposed elimination of Commission Rule R8-60.1 (SGTP Rule). Further, the Order suspended the filing of the 2019 updated Smart Grid Technology Plans (SGTPs) that were due to be filed by the electric utilities on October 1, 2019, pending further orders of the Commission.

Summary of Comments

Comments were filed by Duke Energy Carolinas, LLC (DEC), Duke Energy Progress, LLC (DEP, collectively Duke), Dominion Energy North Carolina (DENC), the Public Staff, Southern Alliance for Clean Energy (SACE), jointly by Sierra Club and Environmental Defense Fund (Sierra Club/EDF), and North Carolina Sustainable Energy Association (NCSEA).

Duke stated that its SGTPs have grown significantly in size and complexity, and require considerable time. Duke also stated that its effort in producing SGTPs and responding to discovery requests is often duplicative of efforts in other dockets. In addition, Duke stated that it agrees with the Commission that there are a number of alternative means that the Commission can employ to learn about new technologies, and it cited as an example its Grid Improvement Plans (GIPs) and the activities surrounding the GIPs. Finally, Duke stated that it supports the proposed amendment to Rule R8-60, and the elimination of the SGTP Rule.

DENC stated that it does not oppose the proposed amendment to Rule R8-60, and the elimination of the SGTP Rule.

The Public Staff stated that the SGTPs have been valuable tools for initiating the conversation about evolving issues, but that much of the information contained in the SGTPs is duplicative of information reviewed in electric rate cases. However, the Public Staff stated that some of the information elicited in the SGTP process was helpful, and suggested that the Commission consider requiring the electric utilities to provide additional information on distribution planning, particularly with regard to integrating distributed energy resources (DERs). The Public Staff discussed some of the challenges arising due to the proliferation of DERs, and stated that a framework for distribution planning can work toward meeting some of the challenges. The Public Staff listed several topics on which it believes the Commission should consider requiring information from the electric utilities, including: (1) plans to modernize the grid, (2) an assessment of the current state of the distribution system, and (3) an assessment of metering technology and services. Finally, the Public Staff suggested that if DEC or DEP includes a proposal on GIP in their next rate cases that it would be appropriate to bifurcate the proposal from the rate cases.

Sierra Club/EDF opined that technology has outpaced the SGTP Rule, and stated that they do not oppose the proposed amendment to Rule R8-60, and the elimination of the SGTP Rule. Further, they recommended that the Commission simultaneously move forward to establish a more effective substitute to integrate grid planning into the Integrated Resource Planning (IRP) process. Sierra Club/EDF stated that general rate cases do not serve this purpose, and suggested that Integrated Systems and Operations Planning (ISOP) is a better alternative. They stated that the Commission should open a generic docket to investigate the electric utilities' grid modernization plans, and to update the IRP rules to include ISOP.

SACE stated that it concurs in the comments filed by Sierra Club/EDF.

NCSEA noted that it was an early and consistent proponent of SGTPs, but opined that the SGTP process has not been effective. NCSEA stated that it does not oppose the proposed amendment to Rule R8-60, and the elimination of the SGTP Rule. However, it stated that the electric utilities' grid modernization plans and proposed investments should be investigated by the Commission, and that the Commission should open a generic docket to investigate such plans and investments.

## Discussion and Conclusions

The Commission appreciates the comments by the parties, and finds their observations and suggestions helpful. The Commission concludes that the SGTPs have served their intended purpose since their inception in 2014, but that their utility has become outweighed by the substantial amount of resources required to annually produce and review them, and the fast pace of renewables development and other technology changes. As a result, the Commission determines that Rule R8-60(i)(10) should be

deleted, and that Rule R8-60.1 should be eliminated. These changes are shown in Appendix A attached to this Order.

With respect to the recommendations of the Public Staff and Sierra Club/EDF, the Commission is keenly interested in further exploring the challenges presented by DERs and the potential benefits of ISOP, as indicated by the ISOP technical conference held by the Commission on August 28, 2019. In addition, in Docket No. E-100, Sub 164, the Commission held a presentation on energy storage on October 7, 2019, and has planned a series of such presentations over the next several months. The Commission will take the parties' comments and recommendations under advisement, and intends to continue its consideration of all viable alternatives to gaining information that will help inform its decisions on new technologies and innovative systems to better serve electric utility customers in North Carolina.

#### Compliance Filings in Docket No. E-100, Sub 157

On July 22, 2019, the Commission issued an Order Accepting Smart Grid Technology Plans and Requiring Filing of Additional Information (SGTP Order) in Docket No. E-100, Sub 157 (Sub 157). The SGTP Order, among other things, accepted the 2018 SGTPs filed by DENC, DEC, and DEP (collectively utilities) in Sub 157 in October 2018. In addition, the SGTP Order required that

[e]ach of the utilities shall include a discussion of “Grid Integrated Water Heater” technology in their next SGTP Updates. In addition, the Commission orders that DEC, DEP and DENC shall update their responses to the questions posed in the Commission’s August 23, 2013 Order and include those responses in future SGTP filings. [compliance filings].

SGTP Order, at 23.

As previously noted, on August 13, 2019, in Docket No. E-100, Sub 126, the Commission issued an Order that, among other things, requested comments on eliminating the filing of SGTPs, and suspended the requirement that the utilities file SGTP Updates on October 1, 2019, pending further orders by the Commission.

Based on the foregoing and the record, the Commission finds good cause to clarify that the above compliance filings required in the SGTP Order shall be made by the electric utilities in Sub 157 on or before December 13, 2019.

IT IS, THEREFORE, ORDERED as follows:

1 That Commission Rule R8-60(i)(10) shall be deleted, and Commission Rule R8-60.1 shall be eliminated, as shown in Appendix A attached to this Order.

2. That DENC, DEC and DEP are relieved of their obligation to file 2019 updated Smart Grid Technology Plans.

3. That on or before December 13, 2019, DENC, DEC and DEP shall make the compliance filing required by the July 22, 2019 SGTP Order in Docket No. E-100, Sub 157.

ISSUED BY ORDER OF THE COMMISSION.

This the 13<sup>th</sup> day of November, 2019.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in blue ink, appearing to read "Janice H. Fulmore".

Janice H. Fulmore, Deputy Clerk

Commissioner Kimberly W. Duffley did not participate in this decision.

**Rule R8-60 INTEGRATED RESOURCE PLANNING AND FILINGS.**

(i) Contents of Biennial Reports. — Each utility shall include in each biennial report the following:

- ~~(10) Smart Grid Impacts. — Each utility shall provide information regarding the impacts of its smart grid deployment plan on the overall IRP.~~
- ~~(i) For purposes of this requirement, the term “smart” in smart grid means a system having the ability to receive, process, and send information and/or data — essentially establishing a two-way communication protocol.~~
- ~~(ii) For purposes of this requirement, smart grid technologies that are implemented in a smart grid deployment plan may include those that:~~
- ~~a. utilize digital information and controls technology to improve the reliability, security and efficiency of an electric utility’s distribution or transmission system;~~
  - ~~b. optimize grid operations dynamically;~~
  - ~~c. improve the operational integration of distributed and/or intermittent generation sources, energy storage, demand response, demand-side resources and energy efficiency;~~
  - ~~d. provide utility operators with data concerning the operations and status of the distribution and/or transmission system, as well as automating some operations; or~~
  - ~~e. provide customers with usage information or retail energy pricing information in order to allow them to interpret and adjust their energy consumption.~~
- ~~(iii) The information provided shall include:~~
- ~~a. A description of the technology installed and for which installation is scheduled to begin in the next five years and the resulting and projected net impacts from installation of that technology, including, if applicable, the potential demand (MW) and energy (MWh) savings resulting from the described technology.~~
  - ~~b. A comparison to “gross” MW and MWh without installation of the described smart grid technology.~~
  - ~~c. A description of MW and MWh impacts on a system, North Carolina retail jurisdictional, and North Carolina retail customer class basis, including proposed plans for measurement and verification of customer impacts or actual measurement and verification of customer impacts.~~

## **Rule R8-60.1 [DELETE] SMART GRID TECHNOLOGY PLANS AND FILINGS.**

(a) Purpose. – The purpose of this rule is to establish guidelines for the reporting of information regarding a utility’s smart grid technology plan in addition to that required in Rule R8-60(i)(10). The information included should describe the conceptual structure and overall organization and impact of the utility’s smart grid plans and provide details about the smart grid technologies being evaluated, designed, or implemented.

(b) Smart Grid Technology Plan. – By October 1, 2014, and every two years thereafter, each utility subject to Commission Rule R8-60(i)(10) shall file with the Commission its biennial smart grid technology plan. By October 1 of each year in which the biennial smart grid technology plan is not required to be filed, each utility shall file with the Commission a smart grid technology update report that includes significant amendments or revisions to its biennial smart grid technology plan.

(c) Biennial Smart Grid Technology Plan Contents -- For purposes of this Rule, smart grid technologies are as set forth in Rule R8-60(i)(10) and shall also include those that provide real-time, automated, interactive technologies that enable the optimization and/or operation of consumer devices and appliances, including metering of customer usage and providing customers with options to control their energy consumption.

The plan shall include all of the following:

- (1) A summary of the utility’s strategy for evaluating and developing smart grid technologies.
- (2) A description of how the proposed smart grid technology plan will improve reliability and security of the grid.
- (3) For all smart grid technologies currently being deployed or scheduled for implementation within the next five years:
  - (i) A description of the technologies including the goals and objectives of each technology, options for ensuring interoperability of the technology with the legacy system, and the expected life of the technology.
  - (ii) The status and timeframe for completion.
  - (iii) A description of any existing equipment to be rendered obsolete by the new technology, its anticipated book value at time of retirement, alternative uses of the existing equipment, and the expected salvage value of the existing equipment.
  - (iv) A description of how the utility intends the technology to transfer information between it and the customer while maintaining the security of that information.
  - (v) A description of how third parties will implement or utilize any portion of the technology, including transfers of customer-specific information from the utility to third parties, and how customers will authorize that information for release by the utility to third parties.
  - (vi) Approximate timing and amount of capital expenditures, including those already incurred.

- (vii) Analyses relied upon by the utility for installations, including an explanation of the methodology and inputs used to perform the analyses.
- (4) For all smart grid technologies actively under consideration for implementation within the next five years, the smart grid technology plan shall include a description of the technologies, including the goals and objectives of the technologies, as well as a descriptive summary of any completed analysis used by the utility in assessing the smart grid technology.
- (5) For each pilot project or initiative currently underway or planned within the next two years to evaluate smart grid technologies:
  - (i) A description, including its objective and an explanation of how it will improve grid performance or provide improved or additional utility goods and services.
  - (ii) The status and timeframe for completion.
  - (iii) The total cost incurred to date by the utility to conduct and investigate each pilot project or initiative, including whether and to what extent these projects are or will be funded by government grants.
  - (iv) A summary of the results of any pilot project or initiative that is completed if the final results of the pilot project or initiative have not yet been included in previous plans.
  - (v) An explanation of how the results of the pilot project or initiative will be used by the utility if the explanation has not yet been included in previous plans.
- (6) A description of each project or initiative described in a previous plan that is no longer under consideration by the utility, and the basis for the decision to end consideration of each project or initiative.
- (7) For automated metering infrastructure (AMI), in addition to the information required in subsections (3) or (4) of this section, as appropriate, the utility shall also provide:
  - (i) A table indicating the extent to which AMI meters have been installed in the utility's service territory and specifically in North Carolina, the North Carolina jurisdictional customer classes and/or tariffs of customers with AMI, and the predicted lifespans of these installations. This table should indicate the number of AMI meters that has been installed both cumulatively and since the filing of the last smart grid technology plan.
  - (ii) The number of meters in North Carolina that use traditional metering technology and/or automated meter reading (AMR) technology, and the predicted lifespans for these installations.
  - (iii) Any adjustment made by the utility to its capital accounting due to AMI, including the dollar amount of write-downs of its meter inventories.
  - (iv) A discussion of what AMI services or functions are currently being utilized, as well as any plans for implementing other AMI services or functions within the next two years.

- (d) Review of Plans and Update Reports.
- (1) Within 30 days after the filing of each utility's biennial smart grid technology plan, the Public Staff or any other intervenor may file comments on any or all of the plans. Within 14 days after the filing of initial comments, the parties may file reply comments addressing any substantive or procedural issues raised by any other party. The Commission may schedule smart grid technology plan presentations by the utilities. A hearing to address issues raised by the Public Staff or any other intervenors may be scheduled at the discretion of the Commission. The scope of the hearing shall be limited to issues as identified by the Commission.
  - (2) Within 30 days of the filing of each utility's smart grid technology update report, the Public Staff shall report to the Commission whether each utility's update report meets the filing requirements of this rule. The Commission may schedule smart grid technology plan update presentations by the utilities.
  - (3) Any acceptance of a smart grid technology plan or update report shall not constitute an approval of the recovery of costs or of any specific technology or program associated with the plan.

(NCUC Docket No. E-100, Sub 126, 4/11/2012; NCUC Docket No. E-100, Sub 126, 5/06/2013; NCUC Docket No. E-100, Sub 126, 6/13/2016.)