

STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH

DOCKET NO. E-7, SUB 1134

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of )  
Application of Duke Energy Carolina, LLC for )  
A Certificate of Public Convenience and ) NC WARN'S BRIEF  
Necessity to Construct a 402-MW Natural )  
Gas-Fired Combustion Turbine Generating )  
Facility in Lincoln County, North Carolina )

NOW COMES North Carolina Waste Awareness and Reduction Network, Inc. ("NC WARN"), with a brief in opposition to the request by Duke Energy Carolinas ("DEC") for a certificate of public convenience and necessity (the "CPCN") for the proposed combustion turbine ("CTs") for Lincoln County. As a summary of this position, NC WARN offers the following:

- I. DEC has not demonstrated the need in the near-term for an additional 402 MW of new natural gas-fired peaking generation in its service area.
- II. The CPCN will lock DEC into a financially and environmentally risky natural gas plant.

OVERVIEW

As noted in the application, DEC proposes to construct and operate an additional 402 MW natural gas-fired CT at its current generation site in Lincoln County. As discussed below, DEC relies on its 2016 Integrated Resource Plan ("IRP"), filed in Docket E-100, Sub 147, to show the need for the plant even

though that IRP shows there is no need for any CTs in DEC territory until at least 2025.

The cost of the proposed project has been determined to be a confidential trade secret, in large part because of DEC's contractual relationship with the "advanced" turbine's vendor, the Siemens company. Approval for early construction provides Siemens with an opportunity to construct, test, and validate its new technology for an advanced gas turbine at least five years before the CT may be needed by DEC. It would be presented as a demonstration model for Siemens's expansion into the United States market.

## ARGUMENT

### **I. DEC has not demonstrated the need for an additional 402 MW of new natural gas-fired peaking generation in its service area.**

The CPCN statute, G.S. 62-110.1, and related Commission Rule, R8-61, for the application requirements for CPCNs, are intended to provide for the orderly expansion of electric generating capacity in order to create a reliable and economical power supply and to avoid the costly overbuilding of generation resources. *State ex rel. Utilities Comm. v. Empire Power Co.*, 112 N.C.App. 265, 278 (1993), disc, rev, denied, 335 NC 564 (1994); *State ex rel. Utilities Comm. v. High Rock Lake Ass'n*, 37 N.C.App. 138, 141, disc, rev, denied, 295 NC 646 (1978). In this case, the present proposal would clearly overbuild a redundant and unneeded plant that would be unreasonably costly to ratepayers.

G.S. 62-110.1(e) provides the first part of the analysis the Commission is required to undertake in reviewing an application for a CPCN, i.e., the plant

benefits the ratepayers, the plant does not burden current ratepayers, the estimated costs are reasonable, and the plant is consistent with Commission's plan for expansion of generating capacity.

As a condition for receiving a certificate, the applicant shall file an estimate of construction costs in such detail as the Commission may require. The Commission shall hold a public hearing on each application and no certificate shall be granted unless the Commission has approved the estimated construction costs and made a finding that construction will be consistent with the Commission's plan for expansion of electric generating capacity.

\* \* \* \*

In making its determination, the Commission shall consider resource and fuel diversity and reasonably anticipated future operating costs.

G.S. 62-110.1(e).

Setting a firm precedence for issues to be resolved in a CPCN for a power plant, the most heavily contested CPCN before the Commission in the recent decade was for Duke Energy's Cliffside coal plants (now the "Rogers Energy Complex"). In the Order issued by the Commission on March 21, 2007, the Commission stated in Findings of Fact 3:

The Commission must consider many factors, including the recent and future needs for power in the area; the extent, size, mix, and location of the utility's existing plants; arrangements for pooling or purchasing power; and the construction and fuel costs of the project and of alternatives, before granting a CPCN of public convenience and necessity for a new generating facility.

Docket E-7, Sub 790.

In the present case, the Commission is unable to determine "that construction will be consistent with the Commission's plan for expansion of electric generating capacity." See G.S. 62-110.1(e) above. Commission Rule R8-

61(b)(1) is specific in that the Commission findings of need are based on the IRPs:

- Exhibit 1 shall contain the following resource planning information:
- (i) The utility's most recent biennial report and the most recent annual report filed pursuant to Rule R8-60, plus any proposals by the utility to update said reports;
  - (ii) The extent to which the proposed facility would conform to the utility's most recent biennial report and the most recent annual report that was filed pursuant to Rule R8-60

In its application and testimony in the present case, DEC relies on its 2016 IRP to show future need for the plant. The project's expressed purpose is to generate electricity during winter peak periods that under DEC's own forecast may not be needed until 2025 or 2026. DEC has not directly addressed the issue that its own IRP does not show the need for any CTs until 2025 or even 2026 under joint planning with Duke Energy Progress ("DEP").<sup>1</sup> DEC has not provided a full explanation before this Commission of why a plant that takes one year to license, and an additional two years to construct, needs to come to the Commission eight to nine years before DEC itself maintains the plant is needed. Given a reasonable time frame and if all factors remain the same, DEC should reapply for a CPCN for this plant no earlier than 2023.

In the testimony of Public Staff witness, Mr. Hinton and Mr. Metz, and the witness for the Intervenors, Natural Resources Defense Council and the Sierra Club, Dr. Vitolo, concerns were raised about the need for the plant. Mr. Metz characterized the application for the CPCN as "premature." Tr. V. 3, p. 133.

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<sup>1</sup> 2016 IRP, DEC Resource Plan, page 45; the DEC/DEP Joint Planning Resources Plan, page 51. The IRPs are filed in Docket E-100, Sub 147.

Mr. Hinson concluded the need for a plant needed as early as 2024 would depend on the 2021 IRP to show need, rather than the 2016 one. Tr. V. 3 p. 172. Dr. Vitolo characterized the accelerated construction schedule of the plant as “problematic” because of past overestimation of growth as seen in the past fifteen IRPs. Tr. V. 3, pp. 68-70. Dr. Vitolo further concluded DEC “seeks to commit to a resource technology, resource capacity, and resource timeline now, five years before the decision must be made.” Tr. V. 3, pp. 70-71. The three witnesses agreed the sole expressed need for the plant in the next six-year period belongs to Siemens which wants to test and validate a new advanced technology and to demonstrate it to the United States market.

Again, using the Cliffside case as precedence, DEC (then operating as Duke Energy) was unable to show the justification for one of the two 825 MW coal units because the second party was not at the hearing to demonstrate its own need. The Commission issued a CPCN for the first unit but denied it for the second unit because future need for the plant was not shown. Similarly, in a more recent docket regarding the Asheville natural gas plants, Docket No. E-2, Sub 1089, the Commission in its Order Granting Application, in Part, with Conditions, and Denying Application in Part, in which the Commission stated:

[A]dditional time exists to determine whether other measures will remove the need for the CT unit at the Asheville Plant. More time exists because a CT unit takes approximately 24 months to construct and the projected need for the unit is in 2024. Even DEP admits that it may be appropriate to delay or forgo construction of the CT through reliance on EE, DSM, renewables, and other technologies. Based upon these facts, at the present time, the Commission concludes that the public convenience and necessity standard has not been met for the requested CT unit.

Order, pp. 36-37. In the present case no need for the immediate construction and operation of the proposed plant has been shown.

**II. The CPCN will lock DEC into a financially and environmentally risky natural gas plant.**

In its review of an application for a CPCN, the Commission is required to additionally consider a wide variety of factors, including environmental as well as economic risk factors. This broad and comprehensive review of a CPCN application includes alternatives to the proposed plant, the costs to ratepayers, and the size, mix, and location of existing plants, as well as whether it is in the public interest to build the plant. In the present matter, DEC needs to justify its plant in terms of whether the plant best serves both the public convenience and necessity. In the Cliffside order, the Commission referenced long settled North Carolina law,

Beyond need, the Commission must also determine if the public convenience and necessity are best served by the generation option being proposed. The standard of public convenience and necessity is relative or elastic, rather than abstract or absolute, and the facts of each case must be considered. *State ex rel. Utilities Comm. v. Casey*, 245 NC 297, 302 (1957).

Docket E-7, Sub 790.

The electricity market is rapidly changing and by 2021 many of the present assumptions will be out-of-date or even completely invalid. Commission Rule R8-61(b)(4) demonstrates that the risk factors associated with both the construction and operation of the plant are to be considered by the Commission:

Exhibit 4 shall contain the following construction information:

(iv) Risk factors related to the construction and operation of the generating facility, including a verified statement as to whether the facility will be capable of operating during the lowest temperature that has been recorded in the area ...

The testimony of the Public Staff and Intervenor witnesses raised concerns about the financial risks from prematurely granting a CPCN for a natural gas plant before it is necessary. As expressed by the Public Staff witness, Mr. Metz, the economic risks include:

Given the time frame associated with the construction of the Project, by the time it is completed, other CT technologies as well as non-CT based technologies, such as utility-scale energy storage, could be available that are more efficient and less expensive to operate.

Tr. V. 3, p. 146. He characterizes the Siemens advanced turbine as an “unproven technology.” Tr. V. 3, p. 71. In his testimony, Mr. Hinton stated his contention that

if the various capital cost assumptions and fuel price projections incorporated in the Company’s 2016 IRP are not realized, then this capacity addition will not be least cost and customers will be paying for a generation asset before it is needed.

Tr. V. 3, p. 172. In his testimony, Dr. Vitolo concluded:

DEC is foregoing significant optionality, including avoidance of procuring a resource and procuring a lower cost resource if future prices and performance improvement recommend a different preferred resource, thereby imposing significant risks on ratepayers.

Tr. V. 3, p. 70. NC WARN agrees that the financial risks from an unneeded asset and the strong potential for stranded costs presented by the three witnesses provide uncontroverted proof the proposed CT does not meet the CPCN test for convenience.

The application for the CPCN is further fatally flawed in that DEC did not provide any analysis of the impacts of the proposed Lincoln County CTs on significant environmental factors, including the contribution of natural gas on the climate crisis. In previous proceedings before the Commission, NC WARN has provided affidavits and comments on the climate impacts from natural gas plants.<sup>2</sup> Recent studies, and findings from agencies as the Intergovernmental Panel on Climate Change, demonstrate conclusively that methane venting and leakage is from the use of natural gas is one of the principal drivers of the climate crisis. However in this proceeding, NC WARN did not present testimony on these issues as DEC did not make even a preliminary showing on what the impacts from proposed plant would have on the environment and the climate.

With the overwhelming financial risks to ratepayers associated with the proposed Lincoln County CT and without analysis on environmental and climate impacts, the Commission is unable to determine whether the proposed is in the public interest and should deny the application.

### CONCLUSION

Given the fatal flaws in the DEC application, the Commission should DENY the application for the CPCN. DEC has failed to meet its burden in this docket on the need for the proposed plant and its risk to the environment and the climate. All in all, the CPCN for the proposed Lincoln County CT is not in the public convenience and is not necessary.

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<sup>2</sup> See for example, the testimony of Mr. Powers on behalf of NC WARN in Docket EMP-92, SUB 0 regarding the CPCN for Application of NTE Carolinas II, LLC.



Respectfully submitted, this the 9<sup>th</sup> day of October 2017.

FOR NC WARN

*/s/ John D. Runkle*

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#### CERTIFICATE OF SERVICE

I hereby certify that I have this day served a copy of the foregoing NC WARN'S BRIEF upon each of the parties of record in this proceeding or their attorneys of record by deposit in the U.S. Mail, postage prepaid, or by email transmission.

This is the 9<sup>th</sup> day of October 2017.

*/s/ John D. Runkle*

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