



434 Fayetteville Street
Suite 2800
Raleigh, NC 27601
Tel (919) 755-8700 Fax (919) 755-8800
www.foxrothschild.com

GRAY STYERS
Direct No: 919.755.8741
Email: GStyers@Foxrothschild.com

October 12, 2020

Ms. Lynn Jarvis
Chief Clerk
North Carolina Utilities Commission
430 N. Salisbury Street
Raleigh, NC 27603

Re: NTE CAROLINAS II, LLC
Supplemental Testimony of Michael C. Green –Redacted Public Version
Docket No. EMP-92, SUB 0

Dear Ms. Jarvis:

We are herewith electronically submitting separately the **redacted** public Supplemental Direct Testimony of Michael C. Green on behalf of NTE Carolinas II, LLC in Support of Motion to Renew CPCN and to Respond to Additional EMP Questions filed today in Docket No. EMP-92, Sub 0.

If you have any questions or comments regarding this filing, please do not hesitate to call me. Thank you in advance for your assistance.

Very truly yours,

/s/M. Gray Styers, Jr.

Gray Styers

MGS:clj

Enclosure

cc: NC Public Staff
All parties of record

A Pennsylvania Limited Liability Partnership

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Oct 12 2020

**SUPPLEMENTAL DIRECT TESTIMONY OF
MICHAEL C. GREEN
ON BEHALF OF NTE CAROLINAS II, LLC
IN SUPPORT OF MOTION TO RENEW CPCN
AND TO RESPOND TO ADDITIONAL EMP QUESTIONS**

NCUC DOCKET NO. EMP-92, SUB 0

I. INTRODUCTION AND SUMMARY

1 **Q. PLEASE STATE YOUR NAME, TITLE, AND BUSINESS ADDRESS.**

2 A. My name is Michael C. Green. I am the Managing Partner of NTE Carolinas II, LLC,
3 together with its affiliate entities ("NTE"). I am responsible for the development of the
4 500 MW natural gas-fired generating facility ("Reidsville Energy Center" or "Facility")
5 proposed for Rockingham County, North Carolina, by NTE. My business address is: 24
6 Cathedral Place, Suite 300, Saint Augustine, Florida 32084.

7
8 **Q. HAVE YOU PREVIOUSLY FILED TESTIMONY IN THIS DOCKET?**

9 A. Yes, I filed Direct Testimony on July 29, 2016, and an Affidavit responding to public
10 hearing questions, on October 27, 2016. Both that Testimony and Affidavit were
11 admitted into evidence at the hearing in this docket on November 2, 2016. My Direct
12 Testimony describes my professional experience and background.

13
14 **Q. WHAT IS THE PURPOSE OF THIS SUPPLEMENTAL TESTIMONY?**

A. The purpose of my testimony is to answer seven questions (“Additional EMP Questions”) posed to NTE by the North Carolina Utilities Commission (“Commission”) in its Order in this Docket dated September 9, 2020. The seven questions, as stated and numbered in that Order, and NTE’s answers are as follows:

1. Provide the Levelized Cost of Transmission (LCOT) information for any required transmission system upgrades or modifications.

A. NTE anticipates the 500 MW Reidsville Energy Center to operate at a high capacity factor expected to be 75%, based on the facility’s efficient heat rate and corresponding low-cost energy. Based on a 75% capacity factor, 25-year lifecycle, and including anticipated efficiency and capacity degradation, it is anticipated that the total energy generated over the life of the facility will be 73,769,625 MWh.

The Large Generator Interconnection Agreement (“LGIA”), as amended, executed by NTE and Duke Energy Carolinas, LLC (“Duke”) estimated transmission network upgrade costs to be \$58,917,363. This cost estimate is comprised of \$4,880,003 for facilities directly associated with customer’s interconnection (i.e., the modification of the 230 kV Ernest Switching Station) and \$54,037,360 for required network upgrades. These estimates were the result of the Facilities Study performed by Duke and included in the Facilities Study Report dated October 25, 2017.

1 The LGIA, containing the cost estimate and payment schedule, was amended twice but
2 the total cost estimate remained unchanged following each amendment. Upon granting
3 the extension of the CPCN that is the subject of this proceeding before this Commission,
4 the construction schedule and the Levelized Cost of Transmission (LCOT) for the
5 Reidsville Energy Center may need to be amended based on updated cost estimates
6 from Duke.

7
8 Based on NTE's projected dispatch of the Reidsville Energy Center and Duke Energy
9 Carolinas, LLC's estimated transmission network upgrade costs provided in the Facilities
10 Study Report and the LGIA, the LCOT for the Reidsville Energy Center is \$0.80/MWh.

11
12 **2. Provide any interconnection study received for the proposed facility. If you have not**
13 **received a study, provide a date by when the study is expected to be completed.**

14 A. NTE has completed the Standard Large Generator Interconnection Procedure (LGIP) and
15 has executed an LGIA (Exhibit 1). As a result of completing this process, NTE has
16 received a Feasibility Study Report (Exhibit 2), System Impact Study Report (Exhibit 3),
17 and a Facility Study Report (Exhibit 4). Copies of each of these reports are being filed
18 with the Commission in this Docket as Exhibits to this Testimony.

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20 **3. Are you aware of any system other than the studied system that is or will be affected**
21 **by the interconnection? If yes, explain the impact and basis.**

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A. No.

4. If the Applicant proposes to sell energy and capacity from the facility to a distribution utility regulated by the Commission, provide a discussion of how the facility's output conforms to or varies from the regulated utility's most recent IRP.

A. At the present time, no distribution utility regulated by the Commission is anticipated for long-term or short-term capacity contracts. However, Duke Energy has historically purchased, on a short-term/spot basis, a significant amount of energy from NTE-developed facilities in the Carolinas, given the excellent heat rate and advantageous economics offered. As an example and evidence of this arrangement, the Kings Mountain Energy Center sold 402,893 MWh to Duke Energy between August 1, 2018 and August 31, 2019. The proposed generating facility for the Reidsville Energy Center will be a duplicate of the Kings Mountain Energy Center. This resource, developed by NTE Energy, has been a proven economic backstop to Duke in meeting its load requirements, at no cost to Duke ratepayers, in addition to satisfying the needs expressed by wholesale customers in the region.

The most current IRP from DEC (*Duke Energy Carolinas Integrated Resource Plan 2020 Biennial Report*) and DEP (*Duke Energy Progress Integrated Resource Plan 2020 Biennial Report*) identify several options for future capacity additions. DEC's needs alone for

1 additional capacity in their two Base Case options are substantial (Case A “without
2 Carbon” Policy and Case B “with Carbon” Policy). Figure 12-I on page 109 of DEC’s 2020
3 IRP Report and Figure 12-F on page 105 illustrate capacity additions by technology of
4 8,389 MW for Case A and 8,439 MW for Case B. This does not include the needs
5 identified in Duke Energy Progress’ 2020 IRP, which identifies (in Figure 12-I on page 110
6 and Figure 12-F on page 107) capacity additions by technology of 8,714 MW for Case A
7 and 8,079 MW for Case B. The only remaining issues are what generation type and
8 ownership will constitute this needed additional capacity.

9
10 Generation assets proposed and developed by NTE are only built when power supply
11 agreements are executed with wholesale customers, and when built, impose no risk to
12 retail ratepayers in North Carolina. Also, to compete for wholesale customers in North
13 Carolina, and to provide the economic alternatives sought by wholesale customers in
14 North Carolina, independent power producers (“IPPs”), such as NTE, must demonstrate
15 that the project is a viable project, including the existence of a valid CPCN. (Potential
16 customers need to know the plant will be built.)

17
18 Finally, as mentioned previously, even beyond the needs of contracted wholesale
19 customers, generation assets of IPPs (including those of NTE) provide a cost-effective
20 additional resource from which incumbent utilities such as Duke Energy have willingly

purchased -- an additional resource solely funded by private capital that has no risk to their ratepayers.

5. If the Applicant proposes to sell energy and capacity from the facility to a distribution utility not regulated by the Commission but serving retail customers in North Carolina (e.g., a co-op or muni), provide a discussion of how the facility's output conforms to or varies from the purchasing distribution utility's long-range resource plan.

A. NTE is in the process and continues to respond to new requests from wholesale distribution customers in the Carolinas that are expressing an interest in both partial and full requirements power supply, as well as short- and long-term options. For example, in 2018 three contracts had already been executed for service from the Reidsville Energy Center¹:

- A 20-year, full requirements power supply contract with McCormick, South Carolina with Reidsville Energy Center identified as the designated capacity resource on January 31, 2018.
- A 20-year, full requirements power supply contract with Western Carolina University with Reidsville Energy Center identified as the designated capacity resource on April 19, 2018.
- A power supply contract with Camden South Carolina with Reidsville Energy Center identified as the designated capacity resource on September 26, 2018.

¹ Due to delays in construction, these contracts were subsequently transferred to another generator.

The Reidsville Energy Center and other generation alternatives are essential to a robust wholesale market in North Carolina. NTE and other IPPs compete to serve wholesale customers, but at no risk to North Carolina retail ratepayers. Below are a few examples of other wholesale purchasing entities in the Carolinas that are currently evaluating the benefits of the Reidsville Energy Center:

North Carolina Wholesale Customers Currently Evaluating Proposals:	Current Supplier	Estimated Peak Demand (MW)
[REDACTED]	[REDACTED]	20
[REDACTED]	[REDACTED]	400
[REDACTED]	[REDACTED]	675
Total		1,095

In addition to these North Customer distribution utilities, NTE is in active discussions with additional distribution utilities in neighboring states who have also requested proposals for capacity and energy from the Reidsville Energy Center. The approximate aggregate peak demand of all of the distribution utilities evaluating proposals from the Reidsville Energy Center totals 3,360MW.

The wholesale customers identified in this answer have all identified their needs for energy and capacity that have been, are, or will be part of their respective RFP

solicitations. In addition to these ongoing evaluations and new expressions of interest, NTE-developed generation assets have already proven to be valuable to the wholesale market in the Carolinas, with 12 municipalities switching from their previous supplier to NTE.

This demand for capacity and energy is a product of the significant, and proven, benefits provided to wholesale customers by NTE's facilities (including the proposed Reidsville Energy Center):

NTE's wholesale customers have all-in power pricing contracts that combine capacity and energy, the sum of which is far more economical than what is otherwise available in the wholesale market. As evidenced in actual invoices (which can be made available to the Commission confidentially), all-in power costs (capacity and energy combined) for wholesale customers served by the Kings Mountain Energy Center averaged \$39.56 /MWh in the months of April/May, of 2020, and the highest price paid by any one wholesale entity served by the NTE-developed facility in the past year peaked at \$46.26/MWh in (October 2019). Retail customers of the wholesale entities served by NTE have seen significant rate reductions, resulting from the more economic wholesale rates their distribution utility had negotiated with NTE.

1 In addition to the reduced cost of capacity and energy components provided by NTE,
2 NTE wholesale customers also receive a reimbursement for transmission charges
3 imposed by Duke: including Energy Imbalance, Spinning Reserve and Supplemental
4 Reserve charges.

5
6 NTE's wholesale customers also participate in natural gas "pre-pay" arrangements,
7 which enable them to benefit from their tax exempt status / lower cost of capital
8 financing structure. This is saving wholesale customers of NTE approximately an
9 additional 10% on the energy component of their power supply bills. Finally, if the
10 wholesale customer has a desire for hedging fuel prices, that opportunity exists with
11 NTE contracts.

12
13 The Reidsville Energy Center and other generation alternatives are essential to a robust
14 wholesale market in North Carolina. NTE and other IPPs compete to serve wholesale
15 customers, but at no risk to North Carolina retail ratepayers. As demonstrated by the
16 success of the Kings Mountain Energy Center and the executed PPAs and expressions of
17 interest from additional wholesale customers for the Reidsville Energy Center, the
18 output from the Reidsville Energy Center will certainly conform to and meet the needs
19 of these wholesale customers' long-range resource plans, for the reasons explained in
20 this answer. The Reidsville Energy Center success is contingent upon meeting the needs
21 of utilities' long-range resource plans. If long-range resource plans were not met, output

from the Facility would not be subscribed, construction of the Facility could not be financed, and the Facility would not be built – under any scenario, at no risk to ratepayers. That is one of the reasons that the requirements and standards for a CPCN for a merchant plant under R8-63 are very different – and lower – than those for public utility rate-base generation under N.C.G.S. § 62-110 and R8-61.

6. If the Applicant proposes to sell energy and capacity from the facility to a purchaser who is subject to a statutory or regulatory mandate with respect to its energy sourcing (e.g., a REPS requirement or Virginia’s new statutory mandate for renewables), explain how, if at all, the facility will assist or enable compliance with that mandate. Provide any contracts that support that compliance.

A As a clean, efficient natural gas-fired combined cycle facility, the proposed Reidsville Energy Center is not anticipated to generate Renewable Energy Certificates and thus will not contract for compensation for environmental attributes for the output of the facility. However, the Reidsville Energy Center reserves the right to do so in the future, if allowed by applicable law.

7. Provide any PPA agreements, REC sale contracts, or contracts for compensation for environmental attributes for the output of the facility.

A. As mentioned in response to Question #5, three PPAs for service from the Reidsville Energy Center are being provided confidentially, under seal, as Exhibits 5, 6, and 7 to

1 this Testimony. Also, several current proposals have been submitted to, and are under
2 review by, wholesale purchasers in the Carolinas. Copies of those proposals can be
3 provided under seal, if requested.
4

5 **Q. ARE YOU ASKING THAT THE NORTH CAROLINA UTILITIES COMMISSION RENEW THE**
6 **CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE FACILITY AND**
7 **ANCILLARY TRANSMISSION FACILITIES?**

8 A. Yes. There is still very much the need for the additional generation in North Carolina,
9 and the Reidsville Energy Center will provide highly reliable, competitively priced, and
10 necessary new capacity. In addition, this new capacity will be developed and financed by
11 private companies, rather than ratepayers. The construction costs of the Facility will not
12 be considered in a future determination of the rate base of any public utility under
13 N.C.G.S. § 62-130 et seq. The management team of NTE has demonstrated its ability to
14 successfully develop, finance, construct and commission the Kings Mountain Energy
15 Center and looks forward to enabling additional private investment in North Carolina's
16 electric generation infrastructure with this proposed Reidsville Energy Center in
17 Rockingham County. Delays in the construction of the facilities have necessitated a
18 request for renewal of the CPCN. The Reidsville Energy Center and other IPP generation
19 alternatives are essential to a robust wholesale market in North Carolina.
20

1 **Q. IS THERE ANY OTHER INFORMATION THAT YOU WOULD LIKE TO ADD FOR THE**
2 **COMMISSION’S CONSIDERATION AT THIS TIME?**

3 **A.** We would like to call to the attention of the Commission that on May 21, 2020, the
4 United States Federal Energy Regulatory Commission (“FERC”) issued an Order on
5 Petition for Declaratory Order 171 FERC ¶ 61,128, Docket No. EL20-8-000. A copy of this
6 Order is attached as Exhibit 8 (“FERC Order”), and I would ask that the Commission take
7 judicial notice of this order. In the FERC Order, NTE obtained confirmation about Duke’s
8 obligations with respect to the LGIA. The FERC Order rejected Duke’s allegations that an
9 interconnection agreement can be unilaterally terminated without FERC’s approval. The
10 FERC Order expressly stated that “a transmission provider seeking to terminate a
11 conforming LGIA over an interconnection customer’s objection must receive
12 Commission approval to do so” and that “a transmission provider may not knowingly
13 post inaccurate information”. Therefore, Duke’s claims in their Motion to Intervene in
14 this proceeding is directly contrary to that FERC Order.

15
16 **Q. DOES THIS CONCLUDE YOUR PRE-FILED TESTIMONY?**

17 **A.** Yes, at this time.

CERTIFICATE OF SERVICE

I, M. Gray Styers, Jr., hereby certify that the foregoing public-redacted **SUPPLEMENTAL DIRECT TESTIMONY OF MICHAEL C. GREEN ON BEHALF OF NTE CAROLINAS II, LLC IN SUPPORT OF MOTION TO RENEW CPCN AND TO RESPOND TO ADDITIONAL EMP QUESTIONS AND ALL NON-CONFIDENTIAL EXHIBITS** thereto has been served this day on counsel of record by electronic email as follows:

Christopher J. Ayers, Esq.
Dianna Downey, Esq.
North Carolina Utilities Commission - Public Staff
430 N. Salisbury Street
Raleigh, North Carolina 27611
chris.ayers@psncuc.nc.gov
dianna.downey@psncuc.nc.gov

Lawrence B. Somers
Deputy General Counsel
Duke Energy Corporation
P. O. Box 1551 / NCRH 20
Raleigh, NC 27602-1551
Bo.somers@duke-energy.com

Dwight W. Allen
Allen Law Offices
1514 Glenwood Ave., Suite 200
Raleigh, NC 27604
dallen@theallenlawoffices.com

John Runkle
Attorney At Law
2121 Damascus Church Road
Chapel Hill, North Carolina 27516
jrunkle@pricecreek.com

This 12th day of October, 2020.



M. Gray Styers, Jr.