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February 25, 2016

VIA ELECTRONIC FILING

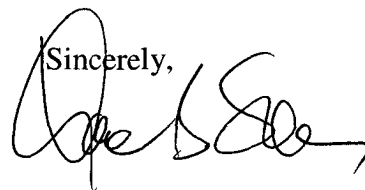
Ms. Gail Mount, Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street – Dobbs Building
4325 Mail Service Center
Raleigh, North Carolina 27699-4300

**RE: Duke Energy Progress, LLC Reply Comments to Additional
Comments of Brad Rouse
Docket No. E-2, Sub 1089**

Dear Ms. Mount:

I enclose Duke Energy Progress, LLC's Reply Comments to Additional Comments of Brad Rouse for filing in connection with the referenced matter.

Thank you for your attention to this matter. If you have any questions, please let me know.

Sincerely,


Lawrence B. Somers

cc: Parties of Record

Enclosure

OFFICIAL COPY

Feb 25 2016

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1089

In the Matter of)	
)	
Application of Duke Energy Progress, LLC for a)	Duke Energy Progress' Reply
Certificate of Public Convenience and Necessity)	Comments to Additional
To Construct a 746-MW Natural Gas-Fueled)	Comments of Brad Rouse
Electric Generation Facility in Buncombe)	
County Near the City of Asheville)	

NOW COMES Duke Energy Progress, LLC (“Duke Energy Progress,” “DEP,” or the “Company”) pursuant to North Carolina Utilities Commission (“Commission”) Rule R1-7, and respectfully files the following reply comments to the Additional Comments of Brad Rouse filed on February 24, 2016, and in support of the Company’s Application for a Certificate of Public Convenience and Necessity (“CPCN”) to construct and operate the “Western Carolinas Modernization Project” in this docket.

1. As detailed in the Company’s CPCN application, supporting exhibits, and the Company’s argument at the Commission’s February 22, 2016 Staff Conference, the construction of two 1x1 280 MW combined cycle (“CC”) units as proposed by DEP is the most efficient and cost-effective option for: (1) replacing the 379 MW Asheville coal units and the 147 MW fast start combustion turbines (“CTs”) contained in prior versions of the DEP Integrated Resource Plan (“IRP”), (2) meeting the DEP-Western Region reliability needs, and (3) serving the capacity needs of the broader DEP system given the transmission constraints into the DEP-Western Balancing Authority Area (“BAA”). In arguing for smaller-sized CC units, Mr. Rouse simply ignores cost, efficiency, and both BAA and system reliability needs. Mr. Rouse’s filed comments in this docket, his

argument at Staff Conference, and his February 24, 2016 additional comments, would not only produce a result that is inconsistent with DEP system planning and generally-accepted utility integrated resource planning requirements, but would also jeopardize the reliability of the BAA and unreasonably increase costs to all of DEP's customers.

2. Since at least the 2012 DEP Integrated Resource Plan (IRP), DEP has continually shown a system need for 147 MW (winter rating) of fast start CTs in the 2018/2019 timeframe, along with the continued operation of the combined 379 MW (winter rating) Asheville Coal Units.¹ Retirement of the coal units and cancellation of the fast start CTs leaves a DEP system resource gap of 526 MW. The combined 560 MW CC units proposed by DEP meet that system need and allow for some of the projected growth in system demand. Mr. Rouse's proposed two 185 MW units would leave a resource gap of approximately 156 MW.

3. Mr. Rouse's contention that a 185 MW generator is a more appropriately sized unit for meeting North American Electric Reliability Corporation ("NERC") Reliability Standards is also misguided. When considered in a vacuum, without consideration for the broader DEP system need, and ignoring the fact that DEP's Western Region is projected to grow by approximately 17% over the next decade, Mr. Rouse's proposed smaller units would meet only one of the applicable NERC standards, BAL-002. DEP, however, does not plan in a vacuum, considers applicability of *all* NERC Reliability Standards, and as has been detailed previously, has determined that this smaller unit size would not be the optimal unit to meet the demand requirements of the

¹ The 2015 DEP IRP showed retirement of the Asheville coal units by the winter of 2019/2020 and eliminated the fast start CTs, to be replaced by a 733 MW (winter rating) combined cycle unit and the 230 kV Foothills Transmission Line.

DEP system. As the BAA operator, DEP must always balance resources and demand, no matter what theoretically smaller sized units Mr. Rouse or other Intervenors may argue could be sited at the Asheville plant site; however, DEP submits that the increased risk and implementation of the rotating blackouts resulting from insufficient generation in the DEP-West BAA would be unacceptable to DEP, to its customers in the DEP-Western Region and to this Commission.

4. To support his argument, Mr. Rouse references an outdated GE document GER-3574G that was published in the year 2000. In particular, Mr. Rouse references unit GE S109 in Table 7 as being rated at 189.2 MW with a heat rate of 6570. This table, however, is for the 50 Hz product line and thus is not applicable to the 60 Hz standard used in the United States.

5. A current and appropriate reference to consider available technology is the 2016 GE “Gas Power Systems Catalog.”² DEP has used values in this catalog to compare a 185 MW 1x1 7EA combined cycle project (most analogous current technology to the configuration argued for by Mr. Rouse) to the CC configuration planned for the Western Carolinas Modernization Project.³ DEP’s analysis shows that the efficiency of the smaller CC unit advocated for by Mr. Rouse is approximately 18% worse than the proposed Asheville CC units, resulting in higher fuel costs for DEP’s customers. Based upon this reduced efficiency of the smaller unit, DEP has estimated an approximate PVRR increase to customers of \$125 million in fuel costs through 2030. Additionally, while DEP does not have a direct quote for a 185 MW 1x1 7EA machine, using a

² <https://powergen.gepower.com/products/pgp-catalog.html>

³ DEP’s analysis compares to “new and clean” performance of the Asheville configuration and economic evaluation that includes degradation.

generally accepted practice for rough capital cost comparison, DEP has estimated an increase in capital cost of approximately 20% on a \$/kW basis for the smaller sized configuration argued for by Mr. Rouse. Based on the capacity size of the Company's CC project, building three 185 MW CC units with a 20% increase in capital cost would result in more than \$150 million of additional costs that would be incurred by DEP's customers.⁴ In summary, Mr. Rouse is recommending a smaller unit that costs more per kW, is less fuel efficient and does not provide for growth in the region. Simply put, this recommendation is not consistent with planning principles used by the Company.

6. Mr. Rouse also references the Alaskan-based Chugach Electric Association's 183 MW Southcentral Power Project CC that came into service 22 months after construction started, in support of his argument that DEP has time to "go back to the drawing board" to design and construct smaller units and still meet the January 31, 2020 deadline for the Ashville coal units retirement as set forth in the Mountain Energy Act. Mr. Rouse's timing argument is misleading, because he fails to disclose that the Development and Preliminary Engineering phase of the Alaskan project began *four* years before construction even started, and Owner Procurement activities started nearly *three* years before construction started.⁵ DEP has been submitting requests for proposals, reviewing bids, and negotiating with suppliers and EPC contractors for the Western Carolinas Modernization Project since July 2015. As explained at Staff Conference, if DEP were to "go back to the drawing board," and restart the entire process for a 185 MW

⁴ DEP filed its detailed project cost estimate under seal as part of its CPCN filing, so the numbers used herein are approximate to preserve that confidentiality.

⁵ Risse, P. *Southcentral Power Project Rural Energy Conference* [PDF Document]. Retrieved from http://www.uaf.edu/files/acep/2013_REC_The%20New%20Chugach%20Power%20Plant_Paul%20Risse.pdf

CC unit configuration,⁶ it simply could not be completed in time to comply with the Mountain Energy Act timing requirements.⁷

7. Finally, DEP stands by its argument at Staff Conference that Mr. Hahn's Exhibit C can only reasonably be interpreted as his assertion that DEP should run its existing 185 MW Asheville CT units as baseload, because the only DEP-Western area generation listed in Mr. Hahn's Exhibit C are the existing Asheville CT and DEP hydro units. Under the unrealistic scenario proposed by Mr. Hahn in his Exhibit C, which would retire the Asheville coal units and not replace them with any new generation in the DEP-Western Region, DEP would have no choice but to run its existing Asheville CTs at much higher capacity factors and resulting in significantly higher production costs, in order to attempt to meet DEP-Western Region load, voltage and reliability requirements. Clearly, such operation is far beyond their peaking design (again, even assuming environmental permits would allow such extended operation). Furthermore, under Mr. Hahn's proposed generation resource mix and transmission import capability proposed in his Exhibit C, based upon DEP's projected peak demand forecast in 2020, the Company would be 95 MW short of meeting peak demand even if it were able to run the Asheville CTs and area hydro units at maximum capacity.

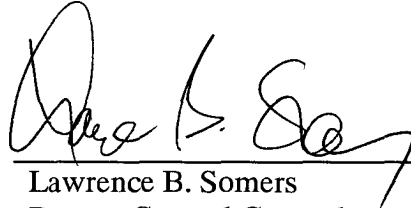
WHEREFORE, for all the foregoing reasons, and as detailed in the Company's CPCN Application and as argued at Staff Conference, Duke Energy Progress respectfully requests that the Commission issue a Certificate pursuant to N.C. Gen. Stat. § 62-110.1

⁶ Notwithstanding the fact that units of such size would not meet DEP customer and system needs.

⁷ DEP also notes that the final cost of the Alaskan project was more than \$1,960/kw, significantly more expensive than DEP's proposed CC unit cost. *See* Chugach Electric Association 2013 Annual Report http://www.chugachelectric.com/system/files/annual_reports/2013_annual_report_for_web.pdf.

that the public convenience and necessity require construction of the Western Carolinas Modernization Project as proposed by the Company.

Respectfully submitted, this the 25th day of February 2016.



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ATTORNEYS FOR DUKE ENERGY PROGRESS,
LLC

STATE OF NORTH CAROLINA)
)
COUNTY OF MECKLENBURG)


VERIFICATION

Glen A. Snider, being first duly sworn, deposes and says:

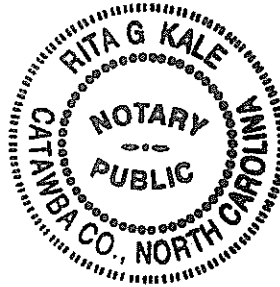
That he is Director of Carolinas Integrated Resource Planning and Analytics for Duke Energy Corporation; that he has read the foregoing Duke Energy Progress Reply Comments to Additional Comments of Brad Rouse and knows the contents thereof; and that the same is true of his own knowledge.


Glen A. Snider

Sworn to and subscribed before me
this 25 day of February, 2016.


Notary Public

My Commission expires: 6/17/2017



CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Progress, LLC's Reply Comments to Additional Comments of Brad Rouse in Docket No. E-2, Sub 1089, has been served by electronic mail, hand delivery or by depositing a copy in the United States mail, postage prepaid to the following parties:

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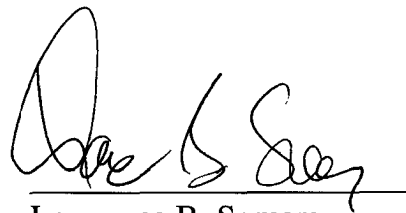
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This the 25th day of February, 2016



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