

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-100, SUB 190

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of	)	<b>SUPPLEMENTAL DIRECT</b>
Biennial Consolidated Carbon Plan and	)	<b>TESTIMONY OF GLEN A.</b>
Integrated Resource Plans of Duke	)	<b>SNIDER ON BEHALF OF DUKE</b>
Energy Carolinas, LLC, and Duke Energy	)	<b>ENERGY CAROLINAS, LLC</b>
Progress, LLC, Pursuant to N.C.G.S. §	)	<b>AND DUKE ENERGY</b>
62-110.9 and § 62-110.1(c)	)	<b>PROGRESS, LLC</b>

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1 **Q. MR. SNIDER, PLEASE STATE YOUR NAME, BUSINESS ADDRESS,**  
2 **AND POSITION WITH DUKE ENERGY CORPORATION (“DUKE**  
3 **ENERGY”).**

4 A. My name is Glen A. Snider, and my business address is 525 South Tryon Street,  
5 Charlotte, North Carolina 28202. I am currently employed by Duke Energy as  
6 Managing Director of Carolinas Integrated Resource Planning and Analytics.

7 **Q. ON WHOSE BEHALF ARE YOU SUBMITTING THIS**  
8 **SUPPLEMENTAL DIRECT TESTIMONY?**

9 A. I am submitting this supplemental direct testimony on behalf of Duke Energy  
10 Carolinas, LLC (“DEC”) and Duke Energy Progress, LLC (“DEP,” and together  
11 with DEC, the “Companies”).

12 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT**  
13 **TESTIMONY?**

14 A. The purpose of my supplemental direct testimony is to update the North  
15 Carolina Utilities Commission (“Commission”), the Public Staff-North  
16 Carolina Utilities Commission (“Public Staff”), and all intervenors in this  
17 docket on substantial, material changes in the Companies’ load forecast since  
18 the preparation of the Companies’ 2023-2024 Carbon Plan and Integrated  
19 Resource Plan (“CPIRP” or the “Plan”). My supplemental direct testimony  
20 describes the Companies’ plans to make the updated load forecast information  
21 available in early December and to further evaluate potential next steps in light  
22 of these increases.

1 **Q. PLEASE ELABORATE ON WHY THE COMPANIES ARE**  
2 **PROVIDING UPDATED LOAD FORECAST INFORMATION AT THIS**  
3 **TIME.**

4 A. Long-range planning processes must rely on a “snapshot in time” and there will  
5 inevitably be some degree of evolving conditions that occurs over the course of  
6 lengthy proceedings such as this one. However, in this case, the pace and scope  
7 of the increase in the load forecast occurring since the preparation of the  
8 Companies’ initial CPIRP filing warrants the need for this update in order to  
9 ensure that the Commission and all parties are fully informed regarding these  
10 recent material changes.

11 **Q. PLEASE PROVIDE FURTHER INFORMATION REGARDING THE**  
12 **COMPANIES’ UPDATED LOAD FORECAST.**

13 A. The Companies’ CPIRP relied on a Spring 2023 load forecast and provided  
14 detailed information regarding the substantial increase in projected load relative  
15 to the Companies’ most recent resource plan presented in the initial Carbon Plan  
16 proceeding. Even under the Spring 2023 load forecast, decisive near-term  
17 actions were needed to support customer growth, maintain reliability, and  
18 continue the energy transition. However, strong and unprecedented economic  
19 development in the Carolinas has continued unabated and remains well above  
20 the Companies’ historical experience. This economic development success is  
21 the product of several factors, including the overall economic vitality of the  
22 Carolinas supported by a reliable, affordable, and increasingly clean supply of  
23 electricity and the efforts of state, county, and local leadership to attract highly

1 competitive projects to both North Carolina and South Carolina. The economic  
2 development that the Carolinas are experiencing has resulted in projected load  
3 growth across the Carolinas that substantially exceeds even the high load case  
4 included in the Companies' CPIRP filing in August.

5 **Q. IS THIS DYNAMIC OCCURRING IN OTHER STATES IN THE**  
6 **SOUTHEAST?**

7 A. Yes. The Companies are not alone in experiencing substantial load growth and  
8 identifying the need for urgent and decisive action to prepare to serve current  
9 and future customers' energy needs. In October, Georgia Power Company  
10 issued a 2023 Integrated Resource Plan Update identifying that recent,  
11 significant new economic development, as well as other factors, is requiring  
12 that utility to plan for increased electrical loads 17 times greater than what had  
13 been forecasted in their approved 2022 Integrated Resource Plan.<sup>1</sup> Similarly, in  
14 its 2023 Integrated Resource Plan proceeding, Dominion Energy Virginia  
15 described the materially higher load forecast for the Dominion PJM zone over  
16 their 2022 Integrated Resource Plan<sup>2</sup> and noted that the rate of growth shows  
17 "no immediate signs of slowing."<sup>3</sup>

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<sup>1</sup> Georgia Power Company's 2023 Integrated Resource Plan Update, Docket No. 55378, (filed Oct. 27, 2023) (showing that the electric load forecast between the winter of 2023/2024 and the winter of 2030/2031 grew from 400 MW in the approved 2022 Integrated Resource Plan to 6,600 MW in the 2023 Integrated Resource Plan Update).

<sup>2</sup> Dominion Energy Virginia 2023 Integrated Resource Plan at 6, Case No. PUR-2023-00066, (May 1, 2023) (showing significant increase in summer peak forecast for the PJM DOM Zone over the four previous Integrated Resource Plans (2019-2022)).

<sup>3</sup> Rebuttal Testimony of Alan W. Bradshaw on behalf of Virginia Electric and Power Company before the State Corporation Commission of Virginia at 6, Case No. PUR-2023-00066, (Sept. 21, 2023).

1 **Q. ARE THE COMPANIES DEVELOPING UPDATED LOAD**  
2 **FORECASTS FOR THE CAROLINAS?**

3 A. Yes. The Companies are in the process of finalizing an updated load forecast  
4 (“Updated 2023 Fall Load Forecast”). The Companies expect to finalize the  
5 Updated 2023 Fall Load Forecast the first week of December, at which point it  
6 will be made available to Public Staff and all intervenors.

7 **Q. WHAT IS THE PRIMARY DRIVER OF THE INCREASED ENERGY**  
8 **REQUIREMENTS AND PEAK DEMAND REFLECTED IN THE**  
9 **UPDATED 2023 FALL LOAD FORECAST?**

10 A. The primary drivers of the increases in the Updated 2023 Fall Load Forecast  
11 are actual new projects that have made material commitments to locate in the  
12 Carolinas. While our load forecast continues to rely on a projection of a variety  
13 of macroeconomic factors (consistent with past practice), we have further  
14 incorporated into the Updated 2023 Fall Load Forecast discrete economic  
15 development projects. The new economic development projects included in the  
16 Updated 2023 Fall Load Forecast are those that, at a minimum, have (1)  
17 executed an agreement indicating an intention to obtain service from the  
18 Companies or are in an advanced stage of engagement with the Companies for  
19 the same, and (2) demonstrated other indicia of material development activities  
20 with respect to the location in question (*e.g.*, obtaining site control, initiation of  
21 rezoning activities, *etc.*). Certain of the new economic development projects  
22 included in the Updated 2023 Fall Load Forecast are well beyond these  
23 milestones. In some cases, they having commenced site construction activities.

1 **Q. PLEASE COMMENT ON THE NATURE OF THE NEW ECONOMIC**  
2 **DEVELOPMENT PROJECTS.**

3 A. The new economic development projects include manufacturing and  
4 technology projects across the Carolinas (including many projects associated  
5 with the electric transportation sector). The larger projects range from 150 MW  
6 to 500 MW, in some cases with load factors higher than 90%, which  
7 necessitates around-the-clock generation supply throughout the Carolinas to  
8 maintain system reliability.

9 **Q. WILL THERE LIKELY BE ADDITIONAL ECONOMIC**  
10 **DEVELOPMENT PROJECTS BEYOND THOSE INCLUDED IN THIS**  
11 **UPDATED 2023 FALL LOAD FORECAST?**

12 A. Almost certainly, yes. As explained above, this Updated 2023 Fall Load  
13 Forecast includes new economic development projects that have made material  
14 commitments. But our economic development team continues to engage with  
15 new prospective customers (*i.e.*, beyond those already committed to the  
16 Carolinas) on a regular basis. A number of these prospects are inquiring about  
17 or seeking service for loads in excess of 500 MW, with the potential to be up to  
18 1 GW in size. As such, the Companies will continue to evaluate and monitor  
19 the potential for additional development activities and how the pace of those  
20 future activities and commitments will inform long term planning including the  
21 need to incorporate such developments into future load forecast updates or  
22 potential high load sensitivity analysis.

1 **Q. HOW DOES THE DRAMATICALLY INCREASING LOAD**  
2 **PROJECTION IMPACT THE COMPANIES' APPROACH TO THIS**  
3 **PROCEEDING?**

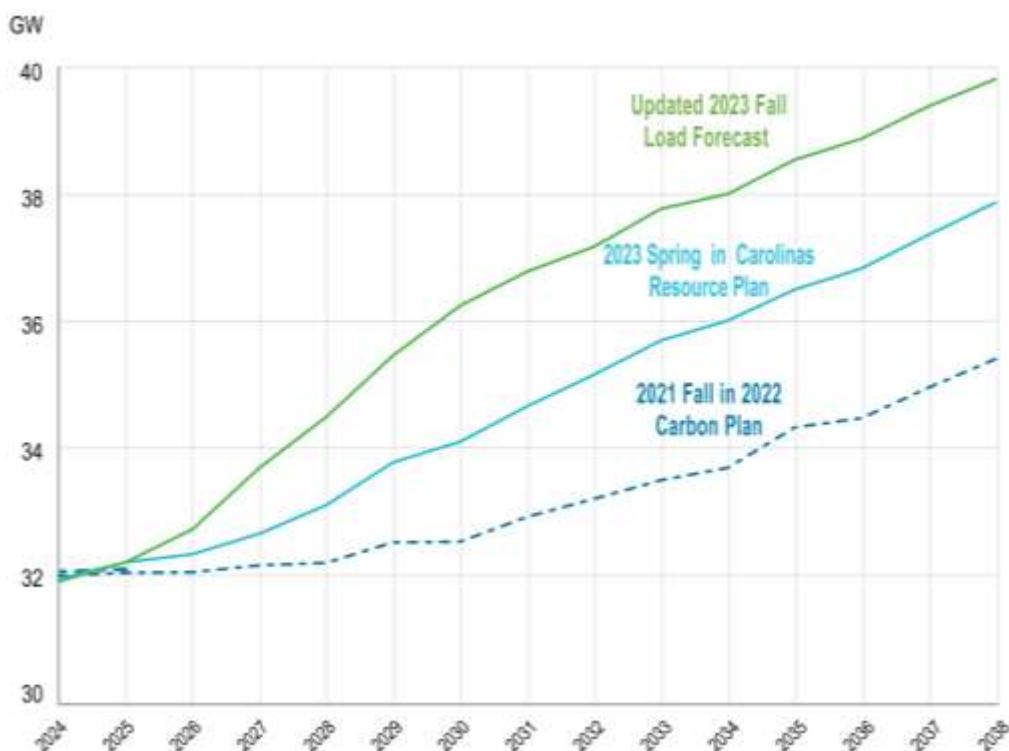
4 A. The Companies have the privilege and obligation to serve customers and  
5 recognize the mission-critical role reliable electric service plays in the  
6 economic vitality of the Carolinas. As such, it is imperative for the Commission  
7 and the parties to have a more updated view of how continued economic  
8 development success is rapidly and materially impacting the Carolinas'  
9 changing energy landscape, as well as how this increased load will likely impact  
10 the pace, scope, and scale of resources needed in the Plan. In light of these  
11 increases, it is likely that even more decisive and urgent actions will be needed  
12 to serve customers' future capacity and energy needs and to ensure system  
13 reliability is maintained. Ultimately, the Companies and the Commission will  
14 not be able to delay action given the scale of the load growth. Instead, the  
15 Companies must respond to the evidence that they are seeing, which is that  
16 economic development is driving urgent and substantial increases in the need  
17 for capacity and energy to maintain the reliability of the Carolinas system.

18 **Q. HOW DOES THE UPDATED LOAD FORECAST COMPARE TO THE**  
19 **COMPANIES' PRIOR LOAD FORECASTS?**

20 A. Supplemental Direct Figure 1 below provides a preliminary preview of those  
21 forecasts, illustrating the rapid and significant increase in the Companies'  
22 forecasted load growth over the past few years. In total and on a preliminary  
23 basis, the Updated 2023 Fall Load Forecast shows a marked increase in

1 projected peak load in the near-term planning horizon since the 2022 Carbon  
 2 Plan, with approximately 4 GW of projected load growth between 2024 and  
 3 2030. To put this in perspective, the current projected peak demand growth by  
 4 2030 is now approximately eight times the peak load growth projected in the  
 5 2022 Carbon Plan proceeding over the same time horizon. Furthermore,  
 6 compared to the 2023 Spring load forecast used to develop the 2023 CPIRP, the  
 7 peak load growth in the Updated 2023 Fall Load Forecast has increased by  
 8 approximately 2 GW.

9 **Figure 1 – Load Forecast Evolution, 2021 to 2023**  
 10 **(Carolinas Combined Winter Peak)**



11

12 **Q. WHAT ARE THE ANTICIPATED RESULTS OF THE INCREASE IN**  
 13 **LOAD FORECAST?**



1 A. As previously referenced, the Companies included in the CPIRP a high load  
2 case sensitivity, which showed that in a high load scenario, resource needs both  
3 increased and accelerated as compared to Core Portfolio P3 Base. Given that  
4 the Updated 2023 Fall Load Forecast is above the high load case sensitivity, it  
5 is reasonable to assume that the Updated 2023 Fall Load Forecast will drive the  
6 need for new supply-side resources across all available technologies (to the  
7 extent greater amounts are executable), consistent with the “all of the above”  
8 approach reflected in the initial Near-Term Action Plan. In the same vein, the  
9 Companies will continue to explore ways for energy efficiency (“EE”) and  
10 demand-side management (“DSM”) programs to continue to play a significant  
11 role in shrinking the challenge. It will be critical that the parallel proceeding to  
12 update the EE/DSM Cost Recovery Mechanism continues to incent  
13 achievement of the Companies’ ambitious levels of EE/DSM.

14 **Q. PLEASE COMMENT ON THE POTENTIAL FOR FURTHER**  
15 **ANALYSIS IN LIGHT OF THIS SIGNIFICANT INCREASE IN THE**  
16 **LOAD FORECAST.**

17 A. The Companies intend to engage Public Staff and intervenors to assess  
18 reasonable next steps in light of the current procedural posture of the  
19 proceeding. The Companies acknowledge the updated load forecast  
20 information is being introduced while Public Staff and intervenors are engaged  
21 in their review and evaluation of the Companies’ initial CPIRP filing and  
22 modeling. However, as previously stated, the magnitude of the change is such  
23 that the Companies believe the Commission should be informed and the parties

1 should have access to the updated load forecast information as soon as it is  
2 available. After receiving feedback from Public Staff and intervenors, the  
3 Companies will assess what further analysis is warranted and then update the  
4 Commission regarding the scope and timing of such further actions through  
5 subsequent filings in the docket.

6 **Q. ARE THE COMPANIES CONSIDERING NEW SOLUTIONS WITH**  
7 **RESPECT TO SERVING THESE NEW ECONOMIC DEVELOPMENT**  
8 **CUSTOMERS?**

9 A. Yes. The Companies intend to engage with future economic development  
10 customers to explore opportunities to work in collaboration to optimize the  
11 amount of new resources needed on the system to serve their new load. This  
12 could include increasing the amounts of curtailable load (where possible in light  
13 of the nature of the customer in question) or partnering with customers on  
14 customer-sited generation. However, the Companies have an obligation to serve  
15 new customers and past experience suggests that new customers will have limits  
16 on their ability to flex or reduce their load in a way that materially reduces the  
17 need for new resources.

18 **Q. ARE THERE ANY SPECIFIC ACCELERATED ACTIONS THAT THE**  
19 **COMPANIES ARE CONSIDERING WITH RESPECT TO NEW**  
20 **RESOURCES?**

21 A. Yes. In light of the likely need for incremental resources as demonstrated by the  
22 Companies' high load case sensitivity filed with the CPIRP, the Companies are  
23 considering a range of potentially accelerated actions due to the increasing load

1 forecast, including the accelerated deployment of customer programs, utility  
2 scale storage and new natural gas resources in both North Carolina and South  
3 Carolina, as well as further actions to continue exploration of the potential for  
4 offshore wind generation located off the coast of North Carolina. This is  
5 consistent with, and builds upon, the need for an "all-of-the-above" approach  
6 to resource additions as outlined in the Companies' Plan and in prior plans.

7 **Q. PLEASE COMMENT ON THE POTENTIAL ACCELERATION OF**  
8 **THE NEED FOR OFFSHORE WIND GENERATION.**

9 A. In Chapter NC of the Plan, the Companies noted that while offshore wind was  
10 not selected in the Core Portfolio P3 Base until the 2040s, the need for offshore  
11 wind could be accelerated under a variety of potential circumstances, including  
12 under the high load case sensitivity. Because the Companies now believe that  
13 load is increasing relative to the assumptions made in the initial Plan, it is likely  
14 that further actions with respect to offshore wind off the coast of North Carolina  
15 are warranted and the Companies will present such actions to the Commission  
16 for further consideration at the appropriate time.

17 **Q. WHAT ACTIONS ARE THE COMPANIES CONSIDERING TO**  
18 **ADVANCE NEW NATURAL GAS GENERATION?**

19 A. The Companies are advancing development options for new natural gas  
20 generation located in South Carolina in addition to the natural gas units being  
21 pursued in North Carolina to meet the customers' strong and growing demand  
22 for electricity across the dual-state systems. As noted, the robust economic  
23 development success the Companies are experiencing in the Carolinas, which

1 stems from the states' continued attention to attracting jobs and growing the  
2 economies, has produced economic development successes in such number we  
3 must continue advancing our "all of the above strategy" of not only diversity of  
4 generation types but locational diversity to serve our rapidly growing region.  
5 Understanding the vision of leaders in both states, the Companies intend to keep  
6 supporting the tremendous success both states have achieved with reliable and  
7 affordable electricity, and natural gas generation in South Carolina is expected  
8 to be a part of that mix.

9 **Q. DO YOU HAVE ANY CONCLUDING COMMENTS AT THIS TIME?**

10 A. Yes. This recent pace of change in projected electric demand associated with  
11 economic growth in the Carolinas is something I have not seen in my thirty plus  
12 year career. As previously mentioned, these extraordinary circumstances  
13 necessitated this update despite the somewhat unique timing from a procedural  
14 perspective. The need for timely and decisive action, which was already  
15 described by the Companies in their initial Plan, has only increased as a result  
16 of these forecasted increases. The Companies look forward to further  
17 engagement with the Commission, Public Staff, and all parties as they navigate  
18 this dynamic environment, recognizing that there are likely to be differences in  
19 perspectives from some parties on the exact path forward to meet this growing  
20 demand. However, from the Companies' perspective, there is simply no doubt  
21 that an accelerated execution of an "all of the above" strategy will be required  
22 to provide reliable electric service to a growing economy in the Carolinas.

1 Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT  
2 TESTIMONY?

3 A. Yes. It does.