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May 27, 2021

North Carolina Utilities Commission
Dobbs Building, Fifth Floor
430 North Salisbury Street
Raleigh, North Carolina 27602

Re: Docket No. E-100, Sub 165; 2020 Biennial Integrated Resource Plans

To the North Carolina Utilities Commission:

My name is Rory McIlmoil and I'm the Senior Energy Analyst at Appalachian Voices. Thank you for the opportunity to submit comments on the Duke Energy Progress and Duke Energy Carolinas (the "Companies") 2020 Integrated Resource Plans (IRP's), *Docket E-100 Sub 165*.

For the reasons outlined herein, on behalf of Appalachian Voices and our members in North Carolina, I request that you reject the proposed IRP's and order the Companies to produce IRP's that properly value solar and battery storage, model a more aggressive investment in energy efficiency and demand-side resources, and model each scenario for different market structures, including regulated generation with expanded competitive resource procurement, and full wholesale competition.

It is clear from their IRP's that the Companies' intention is to build out as much new gas generation as possible in order to maximize profits (resulting in higher bills for customers), rather than invest in solar with energy storage, energy efficiency and demand response (which would lower customer bills and accelerate the transition to clean energy). Many other commenters and intervenors have spoken to the faulty cost assumptions that underlie Duke's modeling and scenario outcomes, and which produce the results most favorable to the Companies and their shareholders. It is those cost assumptions that Duke Energy uses to claim that the "No New Gas Generation" scenario, which subsequently results in the greatest amount of new onshore and offshore wind, solar and storage, will result in the highest cost for customers among the various scenarios.

It is this issue of affordability that Appalachian Voices is most concerned about. As such, and as evidenced by the modeling produced by Synapse Energy Economics, we believe that the Companies intentionally limited the potential impact of energy efficiency investments in order to argue a need for more new gas generation and to falsely claim that their scenarios that achieve the greatest carbon reductions would result in the highest cost to customers.





As stated in the Synapse report:

“[Duke’s] scenario projects that first year savings will start at approximately 0.9 percent of the retail sales in 2020 and decline to 0.4 percent by 2035. The Reasonable Assumptions [Synapse] scenario, in contrast, assumes that first year program savings will start to increase from 2022 by 0.15 percent of retail sales per year until they reach 1.5 percent and stay at this level through the study period. Reaching a 1.5 percent savings level is a reasonable scenario for Duke because leading states in energy efficiency such as Massachusetts and Rhode Island have been achieving much higher savings ranging from 2 percent to 3 percent per year over the past decade while Duke’s own savings have been at about 1 percent per year or less during that time frame.”

Such a level of savings from energy efficiency, according to Synapse, would achieve more than 2.5 times the savings projected by the Companies. Similarly, the American Council for an Energy Efficient Economy found that with an expanded portfolio of offerings and appropriate adjustments to the Utility Cost test, the Companies could reasonably achieve an average annual savings of 1.2% of baseline retail sales, with achievable maximum annual savings of 1.6% (ACEEE, How Energy Efficiency Can Help Rebuild North Carolina’s Economy: Analysis of Energy, Cost and Greenhouse Gas Impacts, September 2020).

With the more reasonable -- yet still conservative -- assumptions for energy efficiency included in their modeling, Synapse concludes that its “Reasonable Assumptions” scenario achieves rapid decarbonization while tripling solar, more than doubling energy savings, rapidly developing battery storage and onshore wind, substantially reducing the amount of existing gas generation (while achieving the “No New Gas” outcome) and retiring all remaining coal plants. More importantly, the Synapse scenario achieves all of this while reducing costs to customers by 10 percent compared to the Companies’ projections.

Getting the issue of what it will cost to achieve various outcomes in the IRP’s is important not only for providing an accurate understanding of which portfolio of future investments achieves the most rapid transition to clean energy at the lowest cost. It is also important for understanding which portfolio results in the lowest short- and long-term costs for ratepayers, particularly low-income households. By our analysis, approximately 20 percent of the Companies’ combined residential customer base, representing roughly 600,000 households, fall under 150 percent of the Federal Poverty Level and experience an average annual energy cost burden of more than 10 percent -- which far exceeds the generally accepted affordability threshold of 6 percent of household income. As such, getting it wrong on costs -- and thus the level of future investment in energy efficiency and lower-cost renewables -- will have significant and lasting impacts on customers’ ability to afford their energy bills over the next 15 years.

The question of how to make the clean energy transition in the most affordable and equitable way goes beyond current IRP requirements, however. While the Companies are not currently required to analyze their various IRP portfolios in the context of different wholesale market structures, recent analysis indicates that achieving even the Companies’ base case IRP would cost customers far less if projected resource needs were met through a competitive wholesale market.





For instance, Energy Innovation analyzed and compared the costs and benefits of achieving then-current IRP projections in the Southeast under a regulated market to doing so within a Southeast Regional Transmission Organization and concluded that:

“a competitive Southeastern RTO creates cumulative economic savings of approximately \$384 billion by 2040 compared to the business-as-usual (BAU) case. In 2040, this amounts to average savings of approximately 2.5¢ per kilowatt-hour (kWh), or 29 percent in retail costs compared to BAU. 2040 retail costs in the RTO scenario are 23 percent below today’s costs. In the RTO Scenario, carbon emissions fall approximately 37 percent relative to 2018 levels, and 46 percent compared to the IRP Scenario, in which emissions increase.” (Energy Innovation, Economic and Clean Energy Benefits of Establishing a Southeast US Competitive Wholesale Electricity Market, 2020)

Given your statutory authority and responsibility to regulate in the public interest and ensure that all costs incurred by utilities are reasonable, just and prudent, it is imperative that the Commission reject the Companies’ IRP’s in their current form and require that they remodel their various portfolios using accurate cost data, reasonable cost testing and assumptions for energy efficiency and demand response, and alternative market structures including a regional wholesale market or, at minimum, fully competitive resource procurement. Otherwise the low-income households served by the Companies will continue to bear an undue, unjust and inequitable burden of costs as we advance the clean energy transition in North Carolina.

Thank you for your consideration,

Rory McIlmoil
Senior Energy Analyst
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