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May 22, 2013

Via Electronic Filing

Ms. Gail Mount
Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Dobbs Building
Raleigh, NC 27603-5918

RE: In the Matter of: Investigation of Integrated Resource Planning in North Carolina – 2013
Docket No. E-100, Sub 137

Dear Ms. Mount:

Enclosed for filing in the referenced docket are Reply Comments of Sierra Club and Southern Alliance for Clean Energy. By copy of this letter, I am serving all parties of record on the service list. Please let me know if you have any questions about this filing.

Sincerely,

s/ Robin G. Dunn

Administrative Legal Assistant

RGD
Enclosures
cc: Parties of Record

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-100, SUB 137

In the Matter of:	)	
	)	**REPLY COMMENTS OF**
Investigation of Integrated Resource	)	**SIERRA CLUB AND SOUTHERN**
Planning in North Carolina – 2013	)	**ALLIANCE FOR CLEAN ENERGY**
	)	

PURSUANT TO North Carolina Utilities Commission Rule R8-60(j) and the Commission's April 17, 2014 Order Granting Extension of Time, Intervenors Southern Alliance for Clean Energy ("SACE") and the Sierra Club, through counsel, file these reply comments in the above-captioned docket on certain issues raised in the initial comments of other parties.

I. Initial Comments of the Public Staff

A. Load Forecasts

In its comments, the Public Staff notes that the peak load forecasts of Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, Inc. ("DEP") have exceeded actual loads for the past five years. The Public Staff's review shows that DEP's actual peak load over the five-year 2009-2013 period, compared to its forecasts, shows a forecast error of 3%, which results in an average annual overestimation of 407 MW, and that DEP's actual energy sales compared to its 2008 projections reflect a 5% forecast error. DEC's forecasts were even more excessive, with a comparison of actual peak loads and forecasted peak loads over the same five-year period yielding a forecast error of 11%, an average annual overestimation of 1,884 MW of capacity (1,680 when adjusted for weather), and actual energy sales compared to its 2008 projections reflecting an 8% forecast error. Notwithstanding the persistent trend of excessive load forecasts and an

expressed concern about DEC's pattern of over-forecasting in particular, the Public Staff concludes that each utility's peak load and energy forecasts are reasonable for planning purposes.

Based on similar observations, in its initial comments on the 2012 IRPs, the Public Staff recommended that DEC and DEP (then Progress Energy Carolinas) "review their equations and other assumptions for possible refinement to reduce the possibility of overestimation bias in future load forecasts," to the extent they have not already done so. Comments of the Public Staff (Feb. 5, 2013) at 22. It is not apparent that either utility has implemented this recommendation, which SACE and Sierra Club continue to support. Overestimation bias in load forecasting can result in DEC and PEC building or acquiring more capacity than is necessary to meet their customers' electricity needs in a reliable manner. Such excess capacity would result in an excess burden on ratepayers. Therefore, we urge DEC and DEP to examine ways to reduce the possibility of overestimation bias in future load forecasts.

B. Demand-Side Management and Energy Efficiency

With regard to demand-side management (sometimes termed "demand response" in other jurisdictions), the Public Staff recommends that the utilities should maximize their DSM resources to reduce peak demands in the future. SACE and the Sierra Club support this recommendation.

The Public Staff also makes a number of recommendations regarding the utilities' projections of DSM and energy efficiency ("EE") savings:

- The IOUs, and in particular DEP and DEC, should develop a consistent method of evaluating their DSM and EE portfolios and incorporate the savings in a manner that would provide a clearer understanding of the

year-by-year changes occurring in the portfolios and their impact on the load forecast and resource plan in future IRPs.

- The savings impacts should be represented on a net basis, taking into account any net-to-gross impacts DEP and DEC have derived through their respective evaluation, measurement, and verification processes.

- DEP and DEC should specifically identify the values of DSM and EE portfolio capacity and energy savings separately in their load forecast tables and not embed these values in the system peak load or energy.

- DEP, DEC, and DNCP should account for all of their DSM and EE program savings from programs approved pursuant to G.S. 62-133.9 and Commission Rule R8-68, regardless of when those measures were installed.

- DEP and DEC should adopt one methodology of evaluating the DSM and EE components of the IRP and remain consistent year-to-year.

Public Staff Initial Comments at 43-45.

SACE and the Sierra Club support the above recommendations, which are consistent with the themes of transparency and methodological consistency discussed in our initial comments. While agreeing with the recommendations of the Public Staff, SACE and the Sierra Club also urge the Commission to scrutinize closely the savings projected in the DEC and DEP IRPs and take steps necessary to ensure that the companies' projections reflect achievement of all cost-effective DSM/EE, as discussed in detail in our initial comments.

C. Evaluation of Renewable Energy Resources

In its comments, the Public Staff discusses each electric utility's evaluation of resource options. The Public Staff reports that its review of model inputs indicates that DEP and DEC did not allow the level of renewable resources to be optimized based on their installed and operating costs. This is consistent with SACE and the Sierra Club's review of company data, which showed that in modeling their base cases, the companies

did not allow their expansion planning model to select ***any*** renewable resources beyond specified amounts. SACE and the Sierra Club concur with the Public Staff's recommendation that in their 2014 IRPs, DEP and DEC allow their models to select the optimum level of renewable energy generation based on relevant inputs, as well as to consider various sizes and types of solar generators.

The Public Staff also points out that despite unprecedented levels of solar photovoltaic generation in North Carolina, DEP and DEC project adding relatively little solar in the short term. DEP, in particular, assumes that only 22 MW of solar will be added between 2014-2018, despite the presence of 1,495 MW of solar in DEP's interconnection queue (as of September 1, 2013) and DEP's recent joint issuance of a Request for Proposals seeking a combined 300 MW of solar by 2015. In contrast, DEC projects adding 436 MW of solar through 2018. The Public Staff therefore recommends that, in future IRP filings, DEP factor in reasonable estimates of solar generation based on issued RFPs and a percentage of the proposed facilities in the interconnection queue coming to fruition. The Public Staff further recommends that DEP and DEC in their reply comments and future IRPs provide both information on the number and resource type of the facilities currently within the respective utility's interconnection queue and a discussion of how the potential QF purchases would affect the utility's long-range energy and capacity needs.

Implementing these recommendations, together with the recommendations in the SACE and Sierra Club initial comments, would help to improve the deficient evaluation of renewable energy resources in the 2013 IRPs, by explicitly recognizing and incorporating the benefits that renewable energy resources provide.

D. Environmental Compliance and Decommissioning Costs

The Public Staff points out that although the IRPs discuss pending environmental regulations, they make no explicit assumptions about the potential cost of compliance, other than a carbon price, even though the scope, cost, and timeframe for carbon regulation are no less speculative than for any other environmental regulation. SACE and the Sierra Club discussed this issue in depth in their initial comments and strongly endorse the Public Staff's recommendation that in the 2014 and future IRPs, the utilities include an economic analysis of the costs of compliance with pending environmental regulations, both individually and in combinations, and an environmental compliance scenario that includes reasonable assumptions regarding the costs of compliance.

In addition, the Public Staff observes that the omission of decommissioning costs from IRP modeling may introduce a bias in favor of resources with relatively high decommissioning costs that must be borne by future generations of ratepayers. Accordingly, the Public Staff recommends that the Commission require the utilities in their 2014 IRPs to include the decommissioning costs associated with each resource type in one or more of the scenarios evaluated. SACE and the Sierra Club support this recommendation, as including all costs will help to ensure that different resources compete on a level playing field.

E. Fuel Diversity and Risk

As in previous IRP proceedings, the Public Staff has raised the issue of the additional costs to ratepayers of the generation plans that include new nuclear plants, stating that "the potential of construction cost increases and other uncertainties associated with nuclear power raise additional questions on the merits of DEC's preferred plan

under both its stand-alone and Joint Planning scenarios," and that "the benefit of additional nuclear generation from a fuel diversity perspective requires further evaluation." Public Staff Initial Comments at 58.

SACE and the Sierra Club agree. Development of new nuclear generation is subject to numerous risks and uncertainties, as discussed in detail in the SACE and Sierra Club Initial Comments. These factors weigh strongly against over-reliance on nuclear generation in the DEC and DEP IRPs. The Public Staff points out that DEC had spent $382 million as of December 31, 2013 just to maintain the Lee nuclear site as a viable generation alternative. In contrast, over the 2010-2013 period, DEC and DEP together spent $294 million on DSM/EE programs—an investment that, unlike the Lee expenditures, is generating real dollar savings for customers. It bears emphasizing that the company is spending hundreds of millions of ratepayer dollars on a plant that may never be built, when there are cleaner, cheaper, less risky options available. If the goal of "fuel diversity" is to reduce the risk of fuel cost increases, utilities should be investing these ratepayer dollars in EE/DSM and renewables, which are more effective at mitigating fuel cost risks than a conventional supply-side resource such as nuclear.

F. Procedural Issues

The Public Staff points out that since amendment of the Commission's rules in 2007, the annual IRP process has typically taken more than a year to complete. SACE and the Sierra Club have also participated in multiple IRP proceedings and have likewise observed that by the time a final order on the prior year's IRP is issued, development of the new IRP is already well underway (or even, sometimes, complete), and many key inputs and decisions have been finalized. In addition to the time lag problem, the Public

Staff accurately observes that the current process is "sometimes disjointed and reactive, rather than constructive and deliberate." One option considered by the Public Staff is a process in which annual updates are more limited, and "full" IRPs are only submitted every other year, with more stakeholder involvement in the development of the inputs and scenarios to be used. SACE and the Sierra Club have previously recommended formation of a collaborative working group to inform development of the IRPs, and we continue to support this potential approach.

The Public Staff recommends that the Commission request comments from the IOUs and other parties on the potential changes to the IRP process that may assist in making the process more robust and effective for all of the parties involved. SACE and the Sierra Club strongly support this recommendation and look forward to offering suggestions for a more constructive IRP process, should the Commission adopt the Public Staff's recommendation.

II. NCSEA's Corrected Comments

The North Carolina Sustainable Energy Association ("NCSEA") makes a number of important points in its comments regarding the policy context for the IRP process and its relationship to other proceedings, as well as the need for utilities to be pushed to exceed their base case DSM/EE projections and meet the performance targets they agreed to in connection with the merger of Duke Energy and Progress Energy. SACE and the Sierra Club agree with these points, which are consistent with many of the points discussed in detail in their initial comments.

NCSEA also makes several specific recommendations: first, that the Commission reaffirm the foundational importance of the IRP proceeding and need for consistency

with other proceedings. SACE and the Sierra Club agree. The IRP proceeding is critically important as it serves as the basis for new unit certifications and other key decisions facing the Commission. At the same time, assumptions used in the IRP process are often at odds with other proceedings—for example, avoided cost proceedings and annual DSM/EE rider proceedings. Inconsistent assumptions and inputs across multiple proceedings create a "moving target" for stakeholders and create uncertainty in the marketplace. These assumptions and inputs should be harmonized, or where there is a reasoned basis for divergent assumptions to be used, this basis should be explained.

Second, NCSEA recommends that the Commission require the utilities to set out concisely in their IRPs the key policy landscape assumptions upon which their plans are based. SACE and the Sierra Club agree, and in addition to the examples offered by NCSEA of different policy assumptions regarding renewable energy policies, submit that assumptions regarding federal and state environmental policies and regulations that form the bases for scenario and sensitivity analyses should be clearly laid out.

Third, NCSEA states that the Commission can provide the needed "push" for DEC and DEP to achieve their performance targets by strongly encouraging them to work with stakeholders to develop new programs and measures, including a combined heat and power ("CHP") program. As discussed in detail in their comments, SACE and the Sierra Club agree and have made numerous program recommendations in their comments, in comments and testimony filed in other proceedings, and through participation in DEC's Carolinas Energy Efficiency Collaborative.

Finally, NCSEA recommends that the Commission strongly encourage the utilities to advance their data access protocols, including making their forms for customer

authorization of sharing usage information with a third party accessible via the internet.[1] SACE and the Sierra Club agree that access to customer data is an important issue and a potential barrier to maximum implementation of DSM/EE. The utilities' current practices appear aimed at frustrating, rather than facilitating, customers' ability to authorize third-party access to their own electricity usage data. Accordingly, SACE and the Sierra Club support NCSEA's recommendation that customer authorization forms be made available via the internet.

III. Initial Comments of MAREC

In its Initial Comments, the Mid-Atlantic Renewable Energy Coalition ("MAREC") contends that as with their 2012 IRPs, the DEC and DEP 2013 IRPs again fail to adequately address wind energy resources. According to MAREC, wind energy is increasingly cost-competitive with other forms of power generation. MAREC also points out that wind energy offers numerous benefits, including providing a hedge against rising and volatile fossil fuel costs, as well as a hedge against greenhouse gas regulations; promoting in-state economic development; and dispatching prior to traditional resources with higher fuel costs. MAREC argues that the companies must conduct more scenarios with greater amounts of renewable energy being selected and discuss why the companies chose not to pursue any of the renewable resource scenarios not selected.

SACE and the Sierra Club agree with these points raised in MAREC's comments regarding wind energy resources. As discussed in detail in our Initial Comments, wind energy offers distinct advantages compared to conventional supply-side resources: lower production costs (and zero fuel costs), a smaller environmental footprint, and a modular

[1] NCSEA also makes two recommendations regarding the utility REPS compliance plans; SACE and the Sierra Club are not addressing these recommendations as they lack sufficient information to take an informed position on them.

nature that matches load growth more closely than larger capacity additions. Given these attributes, DEC and PEC should evaluate wind energy not only for REPS compliance, but as a system resource.

MAREC proposes, as it did in its comments regarding the 2012 IRPs, that DEC and DEP each be required to engage in a competitive solicitation for new renewables. SACE and the Sierra Club support this concept. The prudency of competitive proposals in response to the RFP would need to be ensured, either through a pre-approved price cap or through Commission review. An RFP process would represent a clear and transparent path to project success. Establishment of an RFP process would signal to wind and other renewable energy developers that the state welcomes their investment and the benefits that renewable energy resources bring to North Carolina's ratepayers, economy and environment.

IV. Comments of NC WARN

A. NCWARN's Responsible Energy Future

In its comments, N.C. Waste Awareness and Reduction Network ("NC WARN") critiques the DEC and DEP IRPs as overly reliant on costly, risky fossil fuel and nuclear plants. NC WARN addresses the conflict between the load forecasts in the IRPs and remarks by Duke Energy representatives, as well as national efficiency experts. NC WARN then proposes an alternative energy future that eliminates all coal plants and new conventional generation, replacing it with energy efficiency, solar power and other forms of distributed generation. According to NC WARN, this approach can provide an estimated annual savings for customers of more than $2 billion.

SACE and the Sierra Club have not had an opportunity to review in detail the assumptions and methodology underlying NC WARN's comments; however, they agree with general points made by NC WARN that the DEC and DEP load forecasts are overstated, and that the IRPs should include higher levels of renewable energy and energy efficiency, which are consistent with the points made in our initial comments.

B. Evidentiary Hearing Request

In light of the contradictory load growth forecasts in the IRPs and those put forth by Duke Energy executives, NC WARN requests an evidentiary hearing. If the Commission allows NC WARN's motion, SACE and the Sierra Club respectfully submit the issues raised in their Initial Comments for the Commission's consideration as possible issues for an evidentiary hearing. In the alternative, if the Commission does not schedule an evidentiary hearing, SACE and the Sierra Club recommend that the Commission convene a workshop and/or collaborative working group on issues related to integrated resource planning.

Respectfully submitted this 22nd day of May, 2014.

s/Gudrun Thompson
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CERTIFICATE OF SERVICE

I hereby certify that the persons on the service list have been served with the Reply Comments of Sierra Club and Southern Alliance for Clean Energy either by electronic service or by deposit in the U.S. Mail, postage prepaid:

This 22nd day of May, 2014.

s/Robin G. Dunn