



**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

May 10, 2011

Ms. Renné Vance, Chief Clerk
North Carolina Utilities Commission
Mail Service Center 4325
Raleigh, North Carolina 27699-4325

Re: Docket No. E-7, Sub 819

Dear Ms. Vance:

Please find attached for filing the original and 20 copies of the Proposed Order of the Public Staff. By copy of this letter, I am forwarding a copy to all parties of record.

Sincerely,

Gisele L. Rankin

Gisele L. Rankin
Staff Attorney

Attachment

cc: Parties of Record

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N.C. Utilities Commission

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Accounting
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Consumer Services
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Electric
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Natural Gas
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Water
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DOCKET NO. E-7, SUB 819

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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

Clerk's Office
N.C. Utilities Commission

In the Matter of
Application of Duke Energy Carolinas, LLC)
for Approval of Decision to Incur Nuclear)
Generation Project Development Costs) **PROPOSED ORDER
OF THE PUBLIC STAFF**

HEARD: Tuesday, March 15, 2011, at 9:00 a.m., Commission Hearing Room 2115,
Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Chairman Edward S. Finley, Jr., Presiding, Commissioners Lorinzo L.
Joyner, William T. Culpepper, III, Bryan E. Beatty, Susan Warren Rabon,
ToNola D. Brown-Bland, and Lucy T. Allen

APPEARANCES:

For Duke Energy Carolinas, LLC:

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Charles A. Castle, Senior Counsel, Duke Energy Corporation, 526 South
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28201-1006

For Public Advocacy Groups:

John Runkle, Post Office Box 3793, Chapel Hill, North Carolina 27515

For the Using and Consuming Public:

Gisele L. Rankin, Staff Attorney, Public Staff-North Carolina Utilities
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Leonard G. Green, Assistant Attorney General, North Carolina Department of
Justice, Post Office Box 629, Raleigh, North Carolina 27602-0629

BY THE COMMISSION: On November 15, 2010, Duke Energy Carolinas, LLC
(Duke or the Company), filed an Amended Application for Approval of Decision to Incur

Nuclear Generation Project Development Costs. By this application, Duke seeks authority to incur additional project development costs of up to \$229 million for the period January 1, 2010, through December 31, 2013, for a total of \$459 million for the Company's proposed Lee Nuclear Station in Cherokee County, South Carolina. Duke filed this application pursuant to G.S. 62-60, G.S. 1-253, G.S. 62-2, and G.S. 62-110.7.

In response to the application, the Commission issued an Order on November 29, 2010, scheduling it for hearing to begin on March 15, 2011, and requiring the prefilings of testimony. In this Order, the Commission stated that parties who had previously intervened did not need to seek additional leave to intervene; their status as intervenors continued. This included petitions by Carolina Utility Customers Association, Inc., Carolina Industrial Group for Fair Utility Rates III, and the Public Advocacy Groups (the Groups).¹ The Attorney General's previously-filed notice of intervention pursuant to G.S. 62-20 was recognized, and the intervention of the Public Staff was recognized pursuant to Commission Rule R1-19(e).

On December 6, 2011, Duke filed a revised amended application stating that it estimates incurring project development costs of up to \$287 million dollars for a total of \$459 million.

The matter came on for hearing as scheduled. The following testified as public witnesses and generally in opposition to Duke's application: Senator Eleanor Kinnaird, Richard Fireman, Avram Friedman, Lewis Patrie, William Kinsella, Kendall Hale, Jean Larson, Beth Henry, Pat Moor, Bob Jackson, Harry Phillips, and Hope Taylor.

Duke then presented the direct testimony of James E. Rogers, Chairman, President, and Chief Executive Officer of Duke Energy Corporation; Dhiaa M. Jamil, Group Executive and Chief Generation Officer for Duke Energy Corporation and Nuclear Officer for Duke; and Janice D. Hager, Vice President, Integrated Resource Planning and Regulated Analytics for Duke Energy Business Services. Duke also presented the rebuttal testimony of witnesses Rogers, Jamil, and Hager. The Groups presented the testimony of Peter A. Bradford, an adjunct professor at Vermont Law School and President of Bradford Brook Associates. The Public Staff presented the joint testimony of Michael C. Maness, Assistant Director of the Electric Section of the Accounting Division of the Public Staff, and Kennie D. Ellis, Utilities Engineer with the Electric Division of the Public Staff.

On May 3, 2011, Duke filed a notice of acceptance stating that its proposed order will adopt the Public Staff's pre-filed position that the Company's decision to incur additional project development costs of up to \$120 million from January 1, 2011, through June 30, 2012, for the proposed Lee Station is reasonable and prudent. The filing also

¹ The Groups include the following intervenors: N.C. Waste Awareness and Reduction Network (NC Warn), Public Citizen, the North Carolina Public Interest Research Group, the Nuclear Information and Resource Service, Common Sense at the Nuclear Crossroads, and the Blue Ridge Environmental Defense League.

stated that Duke continued to maintain that its decision to incur costs during 2010 was reasonable and prudent.

On April 5, 2011, Duke filed a late-filed exhibit correcting the projected total allowance for funds used during construction (AFUDC) for the Lee Station for the time period from 2011 through 2013. The corrections reduced the total AFUDC from \$128 million to \$124 million, which reduced the total estimate of project development cost from \$459 million to \$455 million.

Based on the evidence adduced at the hearing, and the entire record in this matter, the Commission makes the following

FINDINGS OF FACT

1. Duke is a public utility providing electric utility service to customers in its service area in North Carolina subject to the Commission's jurisdiction.

2. The Commission has jurisdiction over this application pursuant to G.S. 62-110.7, which allows a utility to request, at any time prior to the filing of an application for a certificate to construct a potential nuclear generating facility to serve North Carolina retail customers, for a Commission review of the public utility's decision to incur project development costs.

3. Through December 31, 2009, Duke had incurred nuclear project development costs of approximately \$172 million. Duke's application in this proceeding, as revised, requested Commission approval of its decision to incur the project development costs necessary to continue development work from January 1, 2010, through December 31, 2013, of up to \$287 million, for a total of \$459 million through December 31, 2013.

4. Duke modified its request by the filing of a notice of acceptance on May 3, 2011, stating that its proposed order will adopt the Public Staff's pre-filed position that the Company's decision to incur additional project development costs of up to \$120 million from January 1, 2011, through June 30, 2012, for the proposed Lee Station is reasonable and prudent.

5. The planning environment for electric utilities has been characterized for some time by uncertainties related to the effectiveness of new DSM and EE programs; whether carbon legislation will be enacted and, if it is, what form it will take and at what cost; whether and how much renewable energy will become available; and how well renewable technologies can be integrated into a utility's resource mix. The following have been added to these uncertainties: whether North Carolina will enact legislation that will allow Duke's rates to "track" construction work in progress in a manner similar to legislation that has already been passed in South Carolina; the amount of load lost due to the

recession that will not return and the extent to which growth in customer demand will occur as the economy improves; and the effect of the nuclear plant failures in Japan resulting from the earthquake and tsunami on March 11, 2011, on the timing and the construction costs of future nuclear plants and the costs related to spent nuclear fuel storage.

6. Of particular importance is the uncertainty as to the date in the future when Duke would need a nuclear unit to be on line. Duke's projected need in its 2006 filing in this docket for nuclear baseload generation was 1,734 MW by 2016. In its late 2007 filing, Duke had reduced the initial need to one 1,117 MW unit and delayed it until 2018. At that time, the Company anticipated filing for a certificate with the South Carolina Public Service Commission (SCPSC) in late 2008. Duke's projected need for the first unit has now been moved out to 2021, and the certificate application filing with the SCPSC is not expected until 2013.

7. Assumptions about carbon legislation have a significant effect on whether and when new nuclear units become part of the optimal resource mix under Duke's planning process. An assumption of no carbon regulation makes portfolios with no new nuclear look best, while an assumption of high CO₂ allowance prices makes a portfolio with two nuclear units look most cost-beneficial. Under Duke's reference case in the 2010 IRP proceeding, which assumed a cap and trade program with CO₂ prices based on the Waxman/Markey legislation delayed until 2015, two nuclear units in 2021 and 2023 were \$1.8 billion more cost effective than the natural gas-fired combustion turbine/combined cycle (CT/CC) portfolio. Under a no-carbon regulation scenario, the CT/CC portfolio was \$3 billion more cost effective than the two nuclear unit portfolio.

8. In Duke's IRP analysis, after selecting portfolios to test against sensitive input assumptions, in two out of four cases the portfolio that delayed nuclear until the 2026-2028 time frame proved more cost-effective than the portfolio that installed nuclear capacity for the 2021 time frame. Overall, the analysis showed that there is no difference in the present value of revenue requirements impact between completing the nuclear plant in the 2021-2023 time frame or in the 2026 time frame.

9. It is not appropriate to approve any specific amount of nuclear project development costs nor is it appropriate to approve a cumulative amount from 2006 through 2013 as requested by Duke in its application.

10. In light of Duke's position that it will not proceed with construction absent legislation allowing recovery of construction work in progress (CWIP) financing costs outside a general rate case, and the fact that no such legislation is now pending before the General Assembly, it is not appropriate to approve Duke's application at this time. Instead, the approval granted by this order should be limited to Duke's decision to incur only those nuclear project development costs that must be incurred to maintain the status quo with respect to the Lee Nuclear Station, including Duke's COL application at the NRC.

Accordingly, while the Commission cannot find that such costs should be incurred during a certain period of time, it will order that the costs be subject to a not-to-exceed cap of the North Carolina allocable portion of \$120 million.

11. It is appropriate to require Duke to file and serve reports similar to the reports required by the Commission in the declaratory ruling order it issued in this docket on March 20, 2007, as more specifically described hereinafter.

12. Should Duke decide to cancel the Lee Nuclear Station prior to the issuance of a certificate, any approval granted by the Commission in this proceeding should not be considered to be approval to record any abandoned project development costs in a regulatory asset account. Any such treatment requires that an application be filed by Duke.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 1 AND 2

The evidence supporting these findings of fact is contained in the verified Application, the testimony in this docket, and the statutes and rules governing the authority and jurisdiction of the Commission. These findings are informational, procedural and jurisdictional in nature and are not contested by any party.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 3-10

The evidence for these findings of fact is found in the testimony of Duke witnesses Rogers, Jamil, and, Hager, the testimony of the Groups' witness Bradshaw, and the testimony of Public Staff witnesses Maness and Ellis.

Duke witness Rogers testified that the Company was seeking approval of its decision to incur total development costs of \$459 million through December 31, 2013, for the proposed Lee Nuclear Station, and that the allocated North Carolina retail portion of those costs is approximately 68%. (T. Vol. 1, p. 106) He stated that Duke was continuing with the development of the Lee Nuclear Station because the Company has an obligation to plan for and meet its customers' needs in a reliable and cost-effective manner in the face of the uncertainties surrounding future economic, environmental, regulatory, and operating circumstances. Mr. Rogers' further testified that he believed that the Lee Nuclear Station will provide "significant value" to the customers in light of those uncertainties. (T. Vol. 1, p. 107) He stated that the Lee Nuclear Station, along with other supply-side resources, as well as increased energy efficiency, demand-side management, and renewable energy resources, is a key component of Duke's strategic comprehensive modernization plan, which is designed to meet growing customer capacity and energy needs, as well as respond to changing regulatory circumstances, which have brought about commitments to retire approximately 1,667 MW of older, more polluting, and less efficient coal generating units. (T. Vol. 1, pp. 107-108)

Mr. Rogers further testified that the planned commercial operation date of the Lee Nuclear Station has been changed from 2018 to 2021, but that the Company still anticipates receiving a commercial operating license from the Nuclear Regulatory Commission (NRC) by December 31, 2013, which is the basis for the date chosen for its approval request in this proceeding. He stated that with the very long lead time involved in developing and constructing nuclear generation facilities, there is a great deal of development work to be done and costs to be incurred in order to meet a commercial operations date in 2021. In fact, in order to obtain a commercial operating license (COL) in 2013, he stated that the Company will need to incur up to the \$459 million of costs identified in its request for approval. Mr. Rogers stated that Duke is seeking approval of its decision to incur additional nuclear project development costs from 2010 through 2013 because seeking such approval is consistent with the legislation passed in North Carolina and South Carolina expressly providing for such approval, which also provides additional assurance of recovering nuclear construction-related financing costs. (T. Vol. 1, pp. 108-109) Mr. Rogers testified that even with the approval requested in this proceeding, the Commission will retain significant oversight over the project development process, and that the Company was not asking the Commission to make any determination with respect to recovery of the costs incurred to develop the Lee Nuclear Station. (T. Vol. pp. 113-114)

He further testified that even with the uncertain future of carbon legislation, new nuclear generation resources are the right choice for Duke to make. He stated that new nuclear generation will operate at high capacity factors and provide carbon emission-free energy at relatively low fuel costs for over 50 years. He testified that Duke's current reliance on nuclear generation for over 5,000 MWs of capacity and approximately 50% of its generated energy have provided the Company's customers with electric rates lower than the national average, giving the region a competitive advantage in attracting new jobs and businesses. He testified that even if carbon legislation does not occur in the short term, it would be entirely unreasonable to ignore the fact that stringent regulation of carbon and other emissions will occur at some point. Therefore, he stated, the Company must retain and enhance the diversity of its generation resource portfolio, including new nuclear, natural gas, advanced coal, renewable, and demand-side management and energy efficiency resources. (T. Vol. 1, pp. 110-111)

With specific regard to the evolving market for natural gas, Mr. Rogers testified that Duke is taking a measured approach. He stated that although prices for natural gas are forecasted to remain low over the near term, they have been historically subject to significant volatility, and questions remain as to access to newly discovered reserves of shale natural gas. Mr. Rogers stated that he believes that additional time is needed to assess the true achievable potential and market impact of these reserves. However, he testified, natural gas will certainly play a role in Duke's diverse future resource mix. (T. Vol. 1, pp. 111-112)

With regard to joint ownership opportunities for the Lee Nuclear Station, Mr. Rogers stated in his initial direct testimony that while Duke is currently developing the station on an independent basis, it is continuing to assess opportunities for joint ownership or financial arrangements that could benefit its customers. He testified that Duke "strongly believes" in a regional generation concept for new nuclear generation, which would share risk and smooth out the rate impact on customers of placing new plants into service by enabling the addition of capacity in smaller increments. However, Mr. Rogers stated, Duke is "well-positioned" to and can support the need for the project on an independent basis. (T. Vol. 1, pp. 112-113) In supplemental testimony, Mr. Rogers stated that on February 1, 2011, Duke entered into an agreement with JEA, a municipally-owned electric utility serving the city of Jacksonville, Florida, whereby JEA is granted an option to purchase an undivided ownership interest in the Lee Nuclear Station of between 5% and 20% of the station. In return for the option, JEA has agreed to pay Duke \$7.5 million. Mr. Rogers stated that Duke views the sale of this option as a very positive development in the process of developing both the Lee Nuclear Station and the concept of regional generation. (T. Vol. 1, pp. 116-117)

In response to cross-examination, Mr. Rogers testified that the percentage of the Company's produced energy generated by nuclear power is approximately 50%. Mr. Rogers also agreed that if the two new natural gas combined cycle plants currently being built by Duke are placed into service, the percentage of Duke's energy produced by natural gas will still be less than or perhaps close to 10%. (T. Vol. 1, p. 167) He further testified that he had asked certain Duke personnel to review Duke's history of building nuclear power plants in North Carolina and South Carolina and determine if there were lessons to be learned from the past that would make Duke "smarter" in the future. As a result of this review, Jim Turner, at that time a group vice-president with the Company, provided Mr. Rogers with an e-mail (identified in this proceeding as Public Advocacy Groups' Rogers Cross-Examination Exhibit No. 2) that stated that it would not be unreasonable to assume and plan for costs of building a plant using the AP1000 design to be as high as 40%-50% above the then current estimates. (T. Vol. 1, pp. 153-156) However, Mr. Rogers testified that he did not agree with this assertion, because by the time Duke constructs the Lee Nuclear Station, there will already be reference plants built by SCANA, Southern, and the Chinese. (T. Vol. 1, pp. 169-171)

He further testified in response to cross-examination that there are several key factors under consideration by Duke to determine if the Company will proceed with construction of the Lee Nuclear Station. One of these is the Company's need for legislation in North Carolina that will allow the Company's rates to "track" construction work in progress, similar to legislation that has already been passed in South Carolina. A second key factor is the extent and timing of the growth in customer demand as the economy improves. Mr. Rogers testified that he believes the economy will recover and that growth in demand will be significant, resulting in the plant being needed. (T. Vol. 1, p. 162) He further stated that the Company will not proceed with construction absent a CWIP

financing statute being enacted in North Carolina. However, he stated that he believes that it is prudent for the Company to proceed with development at this time because he believes that North Carolina will ultimately approve such legislation. (T. Vol. 1, pp. 171-172) Furthermore, Mr. Rogers testified that if the North Carolina legislature ultimately does not enact such legislation, it is "saying no to nuclear in the future in this state." (T. Vol. 1, p. 189)

Duke witness Jamil's testimony recommended that the Commission grant the application for approval of the decision to incur up to \$459 million in nuclear generation project development costs through the end of 2013. He also stated that the Lee project development work included site selection, selection of the Westinghouse AP-1000 NRC certified design, and work on design changes to this design to close out a number of follow-up items identified in the initial design certification. This design certification amendment is on schedule for approval by October 2011. He further testified that the Company has also responded to over 800 Requests for Additional Information (RAI) in ongoing communication with the NRC to support the review of the COL.

Mr. Jamil described planned project development work as including pre-construction and site preparation, continued communication with the NRC to prepare a draft Environmental Impact Statement, and a draft Safety Evaluation Report. The NRC is also scheduled to hold public hearings in South Carolina in mid-2011, and to hold mandatory evidentiary hearings in 2012. The Company also plans to submit the application for a Certificate of Public Convenience and Necessity, and a Base Load Review Order to the PSCSC, in addition to the application for cost recovery for an out-of-state baseload facility to the North Carolina Commission. In addition, he testified that the purchase of some transmission rights-of-way, a training simulator, and other long lead time equipment reservations were planned, but delayed due to the postponement of the planned operation dates of the proposed facility as described by witness Hager. Other planned project development work includes operational planning, supply chain, construction planning and detailed engineering work.

Mr. Jamil testified that it is important to continue development efforts without delay through the 2013 time frame in order to preserve the option to have the Lee Nuclear Station available to serve customers in the 2021 time frame.

Duke witness Janice Hager presented direct testimony regarding how the Duke 2010 Integrated Resource Plan (IRP) supports the Company's decision to continue development of the Lee Nuclear Station. Ms. Hager testified that Duke's IRP process begins with a 20-year forecast of summer and winter peak demands, as well as energy use. Additionally, data is gathered regarding Duke's existing supply-side and demand-side capacity and energy resources, as well as the costs of possible additional resource options. The Company conducts quantitative analyses to identify options that will meet customer needs (including a reserve margin of 17% in the 2010 IRP) while minimizing

costs, selecting potential portfolios that can be tested under baseline assumptions and with certain sensitive assumptions altered (sensitivities). Ms. Hager stated that in addition to quantitative analysis, Duke also takes into consideration qualitative factors, such as fuel diversity, Duke's environmental profile, the stage of technology deployment, and regional economic development. Ms. Hager stated that the objective of the IRP is to inform the Company's decision-making over the short and long term to ensure that there is a safe, reliable, and reasonably priced supply of electricity to meet customer needs, even in the face of uncertainty. Duke believes that prudent planning requires a plan that is robust under many possible future scenarios, and that it is also important to maintain flexibility to respond to different potential outcomes. (T. Vol. 2, pp. 62-64)

Ms. Hager testified that Duke's existing generation portfolio totals over 21,000 MW of generation capacity. This capacity is split into approximately equal components of (1) nuclear, (2) coal, and (3) hydroelectric and natural gas, with nuclear and coal generation providing approximately 50% and 40% of the generated energy, respectively. She indicated that the 2010 IRP assumes retirement by 2015 of 370 MW of 1960's vintage combustion turbines and, pursuant to the Commission's Order in Docket No. E-7, Sub 790, as well as proposed federal requirements, the retirement of 1,667 MW of non-scrubbed coal generation. (T. Vol. 2, pp. 68-69)

Ms. Hager further testified that Duke's current load forecast reflects a 1.8% average annual growth rate in both summer and winter peak demand, and a 2.0% average annual growth rate in total energy usage, over a twenty-year planning horizon. Additionally, the Company must take into account that some currently existing resources will no longer be available over the planning horizon. Taking these factors, as well as certain others, into consideration, Ms. Hager testified that Duke's need for additional capacity reached 2,200 MW by the year 2020, and 6,000 MW by 2030. She stated that Duke plans to meet this projected need with a diverse portfolio of resources, including traditional and renewable generation, as well as demand response and energy efficiency resources. (T. Vol. 2, pp. 64-65) She testified that there are essentially two types of supply-side resources available at this time to meet the growth in load that will not be provided by DSM and EE resources: natural gas and nuclear. She stated that the Company views natural gas as a component of the long-term supply-side solution, but not the sole answer. In addition, the Company views a diverse portfolio of resources, including natural gas and nuclear, to be best, in that it will allow Duke to balance the risk of fuel volatility and minimize costs to customers over the long term. She testified that even with the Lee Nuclear Station, the percentage of nuclear and capacity expected in 2030 would remain the same as it is in 2011. (T. Vol. 2, pp. 70-72)

With respect to the projected costs of natural gas, Ms. Hager testified that they are a key input into the Company's IRP analysis. She stated that these costs have dropped significantly over approximately the last year, mainly due to expectations regarding the availability of domestic shale natural gas. However, she stated that "questions" remain

regarding access to shale gas, and thus uncertainty exists regarding the long-term availability and pricing of natural gas. However, she indicated, natural gas resources are a part of Duke's planned-for diversified energy mix. (T. Vol. 2, p. 65)

Ms. Hager testified that in the 2010 IRP, Duke considered a range of possible carbon allowance prices, consistent with Duke's expectation for a carbon-constrained future. To determine the range of prices to be considered in the IRP, Duke utilized various federal cap and trade proposals, as well as a possible non-cap and trade approach involving a federal clean energy standard. (T. Vol. 2, p. 66)

With respect to the Company's baseline projected load impacts for energy efficiency (EE) and demand-side management (DSM) resources, Ms. Hager testified that these were based on the settlement regarding Duke's Energy Efficiency Plan reached in Docket No. E-7, Sub 831, which incorporates impacts measured at 85% of the targets set forth in the settlement. For purposes of the 2010 IRP, Duke assumed that total efficiency savings will continue to grow through 2021. Additionally, she testified that Duke developed a high impact scenario using 100% of the settlement targets for five years and then an annual increase of 1% of retail sales until the impacts reach the economic potential set forth in the 2007 market potential study. (T. Vol. 2, p. 67)

Ms. Hager testified that in the 2010 IRP, Duke modified its consideration of renewable energy resources due to North Carolina's enactment of the Renewable Energy and Energy Efficiency Portfolio Standard (REPS). In addition to explicitly incorporating the impact of the REPS on North Carolina retail sales, Duke included the same requirements for all sales, retail and wholesale, to take into account the possibility of a Federal Renewable Standard. (T. Vol. 2, pp. 67-68)

In conclusion, Ms. Hager testified that the results of the 2010 IRP suggest that a combination of additional baseload, intermediate, and peaking generation, as well as renewable, EE, and DSM resources, are needed to meet customers' needs over the next 20 years. She stated that the 2010 IRP supports new nuclear generation, either owned solely by Duke or jointly owned, as the best option for meeting Duke's long term baseload generation needs. She stated that the need for new baseload generation is demonstrated by the fact that in the IRP, the cost to customers of portfolios including nuclear capacity and energy is lower than the cost of those portfolios that do not. Ms Hager stated that this result was consistent with results obtained in IRP analyses performed in the 2007-2009 time frame. Therefore, Ms. Hager testified, it is prudent for Duke to continue to develop new nuclear generation as a resource option for the 2020 time frame. (T. Vol. 2, pp. 72-74)

In response to cross-examination, Ms. Hager agreed that the longer the period for which the Commission is asked to approve the decision to incur development costs, the more difficult it is for the Commission to decide whether that decision is reasonable and prudent. However, Ms. Hager also testified that even with Commission approval of the

decision to incur development costs over a future period of time, the Company still has the responsibility during that period to monitor whether continuing with the development of the plant is in the customers' best interests. (T. Vol. 2, pp. 113-114) She also agreed that, in Duke's IRP analysis, after selecting portfolios to test against sensitive input assumptions, in two out of four cases the portfolio that delayed nuclear until the 2026-2028 time frame proved more cost-effective than the portfolio that installed nuclear capacity for the 2021 time frame and that two were lower with them being so close that she would call them a wash because they are so close in results. (T. Vol. 2, pp. 120-122) She also testified in response to questions from the Commission that there was "really no difference" in the present value of revenue requirements impact between completing the nuclear plant in the 2021-2023 time frame or in the 2026 time frame (T. Vol. 2, pl 128); however, she stated that one of the factors that persuaded the Company that the earlier date was preferable was the risk of high inflation if the plant was delayed. (T. Vol. 2, pp. 128-130)

Public Advocacy Groups witness Bradford's testimony recommended that the Commission not grant the application for approval of the decision to incur an additional \$287 million in nuclear generation project development costs between the date of the filing and the end of 2013. Mr. Bradford stated that the fundamental reasons Duke had put forth as justification for the Lee project had been substantially undermined by events of the last three years. Mr. Bradford claimed that the need for new capacity had decreased from 7000 MW by 2018 in the 2008 proceeding to 2200 MW by 2020 and 6000 MW by 2030 in the currently filed proceeding. Mr. Bradford pointed out that the projected in-service date for the project had slipped by three years from 2018 as projected in the 2008 proceeding to 2021 in the current proceeding. Mr. Bradford also pointed out that projected natural gas prices are significantly lower than was the case in 2008 with the current Energy Information Administration's (EIA) projections of natural gas wellhead prices remaining under \$5 through 2022. Mr. Bradford argued that this forecast made fuel diversity justifications unpersuasive when used to justify nuclear construction. Mr. Bradford stated that with Duke's current energy mix at less than 10% natural gas, diversity concerns point toward increasing the gas share.

Mr. Bradford also stated that the nuclear renaissance reported in the 2008 proceeding has collapsed due to declining demand, rising cost estimates, reduced cost estimates for alternatives, the absence of federal policies for reduced greenhouse gas emission, and lack of federal subsidy for new reactors. Mr. Bradford also provided some instances of cancellations of proposed facilities and solicitations of utilities seeking partners for building of units. He further opined that any additional expenditures exposed ratepayers to further risk of loss and that, at this point, there is little chance that the Lee project could produce competitively priced electricity, even with a federal loan guarantee, which it has no immediate prospect of receiving.

Mr. Bradford also reiterated some recommendations to the Commission from his 2008 testimony to include: cap any prudence determination that it makes at a figure that

does no more than maintain the current state and value of the Lee project; determine a maximum acceptable cost for the Lee project as factor to mitigate cost overruns; revisit the determination that payments to secure long lead time items are "project development costs"; require competitive power procurement to screen supply resources; reiterate the 2008 statement that a showing will be required that all cost effective energy efficiency programs are in place; and that shifting risk from the investors to the ratepayers should result in a corresponding reduction in the allowed rate of return allowed to the investors.

The Public Staff presented its panel of witnesses Maness and Ellis, who testified that through December 31, 2009, Duke had incurred project development costs of approximately \$172 million. The Public Staff witnesses testified that Duke is now asking for Commission approval of its decision to incur the project development costs necessary to continue development work from January 1, 2010, through December 31, 2013, of up to \$287 million, for a total of \$459 million through December 31, 2013, to ensure that the Lee Nuclear Station remains an option to serve customer needs in the 2021 timeframe. (T. Vol. 2, pp. 139-140)

With regard to Duke's previous applications for approval to incur nuclear development costs, witnesses Maness and Ellis testified that by Order issued March 20, 2007, prior to the enactment of G.S. 62-110.7, the Commission ruled, in response to a request filed by Duke, that it was appropriate in general for Duke to pursue preliminary siting, design and licensing of the proposed Lee Nuclear Station through December 31, 2007, and incur costs not to exceed the North Carolina allocable portion of Duke's total system share of \$125 million, and that it was in the public interest for all potential resource options, including nuclear generation, to be adequately considered to ensure that the most economical resources are available to meet customers' needs on a timely basis. On clarification, the Commission stated, by Order issued August 6, 2007, that it did not intend to approve or endorse any specific nuclear technology or design, and that it had not pre-approved or denied any particular ratemaking treatment for development costs regardless of whether the plant was completed, abandoned, or never begun. (T. Vol. 2, 140-141)

According to witnesses Maness and Ellis, on December 7, 2007, Duke filed an application pursuant to the newly enacted G.S. 62-110.7 requesting approval to incur up to \$160 million in project development costs, for the January 1, 2008, through December 31, 2009, time period, to ensure that the Lee Nuclear Station remained an option to serve customer needs in the 2018 timeframe. On June 11, 2008, the Commission issued an Order approving Duke's decision, subject to a limit on such costs to the North Carolina allocable portion of a total system amount of \$160 million and a limit on the time that such costs could be incurred to the period from January 1, 2008, to December 31, 2009. Witnesses Maness and Ellis testified that in its Order, the Commission stated that its approval did not constitute approval of any particular activities or costs, all of which would be subject to later determinations as to their prudence and reasonableness, placed Duke on notice that the approval in the Order could not be interpreted as making it probable that

the recovery of any specific actual costs would be allowed, and required Duke to file for approval for the use of a regulatory asset account with respect to any abandoned project development costs. (T. Vol. 2, pp. 141-142)

Witnesses Maness and Ellis further explained that the utility's initial decision to incur some level of project development costs is typically made prior to these costs actually being incurred. The decisions to undertake individual specific activities or to make specific expenditures are made after the initial decision or decisions and are based upon a number of factors. Furthermore, changes in facts and circumstances occurring after the initial decision to proceed, and subsequent decisions to continue, with project development may affect not only the appropriate timing of a specific activity or expenditure, but also may very well raise questions as to the reasonableness and prudence of going forward with certain specific activities and expenditures at all. It is these types of factors and changes in circumstances, which arise during the course of project development, that the utility must consider before it takes further action and that the Commission must consider in determining whether an actual activity or expenditure was reasonable and prudent. (T. Vol. 2, pp. 143-144)

Based on their review of the Company's application and its current IRP, witnesses Maness and Ellis testified that the Public Staff believes that Duke's general decision to incur additional project development costs is reasonable and prudent so that the proposed Lee Station can be maintained as a potential resource option to satisfy future projected load and energy requirements. However, they further stated that the Public Staff has a number of concerns about Duke's application, particularly the amount that has been requested and the time period included in the request. (T. Vol. 2, p. 144)

The Public Staff witnesses stated that the Public Staff's first concern relates to the uncertainty that has been evident in recent years regarding Duke's need for a nuclear unit to be on line by any certain date in the future. When the Company filed its first request related to nuclear development costs in 2006, it stated that it needed 1,734 MW of nuclear baseload generation to serve its expected 2016 load. When the Company filed its next project development cost application in late 2007, it had reduced the initial need to one 1,117 MW unit and delayed it until 2018. At that time, the Company anticipated filing for a certificate with the South Carolina Public Service Commission (SCPSC) in late 2008. The current filing states that the first nuclear unit will be needed in 2021 and indicates that Duke anticipates filing its application for a certificate with the SCPSC closer in time to the receipt of the COL, which is expected in 2013. (T. Vol. 2, pp. 144-145)

The Public Staff witnesses also testified that an interrelated concern is the fact that it has been a number of years since Duke conducted a comprehensive study to justify its 17% target planning reserve margin. As a result, the Public Staff recommended that the Company be required to conduct a comprehensive reserve margin study to determine the

optimal level of reserves to provide generation reliability while minimizing the cost to ratepayers, and file it next year with its IRP filing. (T. Vol. 2, p. 145)

With respect to the Public Staff's third concern, witnesses Maness and Ellis testified that the Public Staff is concerned, as discussed in its IRP Comments, about the lack of a no- or low-carbon regulation scenario in Duke's IRP evaluations. In its application in the 2008 proceeding in this docket, the Company stated that its 2007 IRP analysis showed that the optimal resource mix varies under different scenarios, with an assumption of no carbon regulation making portfolios that do not contain new nuclear look best, and an assumption of high CO₂ allowance prices making a portfolio with two nuclear units look most cost-beneficial. In its reference case in the current IRP proceeding, Duke assumed a cap and trade program with CO₂ prices based on the Waxman/Markey legislation delayed until 2015. Under that scenario, two nuclear units in 2021 and 2023 were \$1.8 billion more cost effective than the natural gas-fired combustion turbine/combined cycle (CT/CC) portfolio. Through discovery, however, the Public Staff learned that under a no-carbon regulation scenario, the CT/CC portfolio was more advantageous, relative to the two nuclear unit portfolio, than it was in the reference case.

Witnesses Maness and Ellis further testified that the Public Staff's fourth concern is the seemingly slow pace of the development of sharing the risks, rate impacts, and lumpiness associated with new nuclear plants. In discovery, the Public Staff asked Duke for the details of the efforts it has made to join South Carolina Electric & Gas Company (SC&E) and Santee Cooper in the new nuclear units planned for their existing Summer Station, particularly with regard to Santee Cooper's stated intent to sell off a significant part of its current ownership interests in the new units. Duke responded that it had been in communication with Santee and that it continues to explore approaches that could lead to sharing a portion of Santee Cooper's ownership. witnesses Maness and Ellis testified that Duke recently has entered into an option agreement with Jacksonville Electric Authority (JEA) pursuant to which JEA has the option to purchase an undivided ownership of not less than five percent and not more than 20 percent of the proposed Lee Station. The Public Staff witnesses stated that given the very high capital costs associated with the construction of a nuclear plant, the fact that the addition of the Lee Station as proposed by Duke will create lumpiness and projected higher than optimal reserve margins early in the plant's operational life, and the uncertainty as to the timing of Duke's actual need for baseload capacity, among other things, the Public Staff believes that every effort should be made to explore sharing these risks and costs with other entities. (T. Vol. 2, pp. 146-147)

Witnesses Maness and Ellis pointed out that Duke incurred approximately \$36 million in project development costs related to the Lee Station between January 1, 2010, and December 31, 2010, including AFUDC, that the Company proposes to incur approximately \$250 million from January 1, 2011, through December 31, 2013 (also including AFUDC), and it seeks approval of its decision to incur the total amount of project development costs incurred or to be incurred for the four-year period from January 1, 2010,

through December 31, 2013, for a total of \$459 million since its initial decision. Duke's testimony, however, focuses on the IRP it filed in September of 2010 as justification for its decision to continue to incur nuclear project development costs, with only a general mention that the earlier IRPs support such a decision. The witnesses testified that the Public Staff has focused its recommendation on the prospective period, but, based upon its review of the 2008 and 2009 IRP proceedings (Docket No. E-100, Subs 118 and 124, respectively), the Public Staff believes that Duke's decision to continue to incur project development costs as of January 1, 2010, was not unreasonable. However, the Public Staff believes that it would be highly beneficial to the Commission for a utility to make its filings pursuant to G.S. 62-110.7 prior to the time period for which it plans to begin or continue incurring costs pursuant to that decision. They testified that the Public Staff would strongly encourage Duke to file its requests prospectively in the future, as it did the first two times it filed in this docket. In any event, because the utility filing an application pursuant to G.S. 62-110.7 has the burden of demonstrating by a preponderance of the evidence that its decision to incur project development costs is reasonable and prudent, all of the justification for the entire time period in question should be included in the application and supporting pre-filed testimony. (T. Vol. 2, pp. 148-149)

Based upon all of the foregoing concerns, the Public Staff witnesses testified that the Public Staff believes that the Commission should limit its approval of Duke's decision to incur additional project development costs to a lower dollar amount and a shorter time period than requested in Duke's application. Specifically, the Public Staff recommended that the time period be limited to January 1, 2011, through June 30, 2012, and correspondingly the dollar amount be limited to a maximum of the North Carolina allocable share of \$120 million, including any AFUDC accrued during the approved 2011/2012 time frame on the costs incurred both before, and on or after, January 1, 2011. The witnesses pointed out that this recommended amount is slightly greater than the amount the Company estimates it will spend during the 18-month period in question. (T. Vol. 2, pp. 149-150)

Witnesses Maness and Ellis indicated that the Public Staff believes these limitations are reasonable, given the current uncertainty with respect to potential carbon legislation, the need for Duke to conduct a comprehensive reserve margin study, the potential for further delay in the need for nuclear generation, the high costs associated with nuclear construction, and the need for in-depth exploration of sharing the costs and risks of nuclear construction, whether with respect to the SC&E/Santee Cooper Summer plant or otherwise. These limitations also will provide the Commission the opportunity to receive additional information as a result of the 2011 IRP proceeding, and another opportunity to consider these issues before approving the decision to incur additional project development costs. (T. Vol. 2, p. 150)

With respect to the \$36 million Duke incurred during 2010, witnesses Maness and Ellis stated that the Public Staff did not contest Duke's general decision to continue to incur

additional project development costs, but believed that the Commission should not include in its approval a specific amount of dollars that have already been spent. It is more appropriate for the Commission to impose a not-to-exceed cap for prospective expenditures, as it did in the previous orders in this docket. (T. Vol. 2, pp. 150-151)

In addition to the foregoing, witnesses Maness and Ellis stated that the Public Staff believes that any Commission Order approving Duke's decision to incur additional project development costs related to the Lee Station should again state that the Order does not constitute approval to spend any specific amount, nor to engage in any specific activities. It also should state that it does not constitute a finding that additional base load capacity is needed within the relevant time frame nor a finding that the Lee Station should be built. (T. Vol. 2, p. 151) They further testified that any Commission Order approving Duke's decision to incur additional project development costs related to the Lee Station should again state that, although it is appropriate for Duke to continue to accrue AFUDC on the Lee Station project development costs, such AFUDC accrual is provisional, subject to future determinations by the Commission as to the reasonableness and prudence of all project development costs associated with the Lee Station, including AFUDC. Also, they recommended that the appropriateness of the accounting treatment employed by the Company relative to such AFUDC be subject to future Commission determination. (T. Vol. 2, p. 151)

The Public Staff witnesses further recommended that Duke should be required to file and serve reports similar to the reports required by the Commission in prior orders in this docket. Specifically, Duke should be required to file the following: (1) on August 1, 2011, a report detailing its activities and expenditures in pursuit of project development for the Lee Station from January 1, 2011, through June 30, 2011; (2) on February 1, 2012, a report detailing its activities and expenditures in pursuit of project development for the Lee Station from July 1, 2011, through December 31, 2011; and (3) on August 1, 2012, a report detailing its activities and expenditures in pursuit of project development for the Lee Nuclear Station from January 1, 2012, through June 30, 2012. Any Commission order approving Duke's decision to incur project development costs should provide that these reports are for informational purposes only and that they cannot be used as support for an argument that the Commission has made any determination with respect to the reasonableness or prudence of the activities and expenditures reported therein. (T. Vol. 2, p. 152)

Finally, they recommended that any approval granted by the Commission in this proceeding should again state that such approval is not to be considered approval to record any abandoned project development costs in a regulatory asset account. The requirement of Commission Rule R8-27 for the Company to apply to the Commission for use of regulatory asset accounts should continue to apply in this case, because (1) any approval granted in this proceeding should not be understood as making it probable at this time that the recovery of any specific actual costs will be allowed, and (2) it would be

appropriate and beneficial for the Commission to begin to examine the circumstances of any abandonment as close as possible in time to that abandonment, and continuing the requirement that a request for regulatory asset approval be filed would facilitate the beginning of any such examination. (T. Vol. 2, pp. 152-153)

In response to questions on cross-examination, Public Staff witness Maness testified that, if after Duke incurs the development costs for the Lee Station, Jacksonville Electric Authority exercises its option to purchase capacity in the Station, it would be reasonable to expect that any costs related to the Station that have already been recovered from North Carolina retail customers at that point in time (e.g., amounts resulting from construction work in progress having been previously included in rate base or amounts already recovered due to the legislation being considered) would be ultimately treated so that to the extent a joint owner gets a benefit from the plant, the costs that are proportionately associated with that benefit should not be expected to be borne by the North Carolina retail ratepayers. (T. Vol. 2, pp. 162-163) Mr. Maness also testified on cross-examination that Commission approval of Duke's request would not ensure that Duke will recover the costs that it incurs from now until 2013. For example, if it became evident six months into the future that the Station clearly was no longer in the interest of the ratepayers, Duke would be under an obligation to make the prudent decision that the plant should be cancelled. In effect, Duke is obligated to continue to examine, on a continuous basis, the decisions to proceed with development. (T. Vol. 2, pp. 165-166)

In response to questions by the Commission regarding the advisability of continuing to incur costs for the Lee Station in light of the nuclear plant failures in Japan resulting from the earthquake and tsunami, Public Staff witness Ellis testified that he did not have reservations at that time about continuing to proceed. He stated that, while it might introduce additional costs, the ultimate goal of the NRC would be to implement any necessary changes in design to ensure public safety. (T. Vol. 2, pp. 170-172)

In its proposed order, the Public Staff amended its position and stated that, in light of Duke's position that it will not proceed with construction absent legislation allowing recovery of CWIP financing costs outside a general rate case, and the fact that no such legislation is now pending before the General Assembly, it is not appropriate to approve Duke's application at this time. Instead, the approval granted by this order should be limited to Duke's decision to incur only those nuclear project development costs that must be incurred to maintain the status quo with respect to the Lee Station, including Duke's COL application at the NRC. Accordingly, while the Commission cannot find that such costs should be incurred during a certain period of time, it will order that the costs be subject to a not-to-exceed cap of the North Carolina allocable portion of \$120 million.

In rebuttal of the testimony of Groups witness Peter Bradford, Duke witness Rogers testified that although the recent economic downturn has caused a short-term reduction in the demand for electricity and anticipation of abundant shale natural gas has depressed

forward prices for natural gas, thus causing several nuclear construction projects, including the Lee Station, to be delayed, these developments have not eliminated the need for new nuclear capacity. He asserted that nuclear generation remains the appropriate choice for Duke's customers, as demonstrated by Duke's 2010 IRP. The differences between Duke's changes in its development and construction timeline and those of certain other project developers can often be accounted for by factors relating to the different forms of market regulation (including deregulated markets) and technologies associated with each individual project. Duke, like other utilities in regulated markets, continues to be subject to an obligation to plan for and serve retail customers over the long term, and employs detailed IRP processes to evaluate resource options. With regard to technology, Mr. Rogers' opined that Duke's chosen reactor design (Shaw Nuclear and Westinghouse Electric Company's AP1000) would enable Duke to follow the progress of and learn lessons from AP1000 projects that are further along than the Lee Station in development and construction. (T. Vol. 1, pp. 120-122)

In rebuttal to Mr. Bradford's assertion that approval of Duke's request in this proceeding would expose the Company's customers to costs and harm, Duke witness Rogers testified that such is not the case; he stated that Duke has taken a "measured and deliberate" approach to the development of the project. Additionally, Mr. Rogers stated that the warnings of Mr. Bradford against shifting the risk of loss and charging large costs to captive customers, and his recommendation that caps be placed on the overall cost of the Lee Station, reflect a misunderstanding of this proceeding, which is limited to approval of a decision to continue to incur project development costs, and is not a proceeding to determine whether the Lee Station should receive a certificate of public convenience and necessity. (T. Vol. 1, pp. 122-123) Mr. Rogers also testified that the risks of successfully developing, designing, and constructing the Lee Station would not be mitigated by the Commission's approval of Duke's request in this proceeding, and thus would not make it appropriate for the Commission to reduce the Company's allowed return on common equity in a future general rate case. (T. Vol. 1, pp. 126-127)

In further rebuttal of the Groups' witness Bradford, Duke witness Hager testified that Mr. Bradford's claim that the need for power has dropped dramatically since the 2008 [development costs proceeding] is incorrect. She stated that Mr. Bradford did not account for the fact that the need for new capacity set forth in the 2008 proceeding included amounts of capacity that are not shown as needed in the current proceeding, due to the fact that they are assumed to be fulfilled by the Cliffside Unit 6 coal facility and the Buck and Dan River combined cycle plants. (T. Vol. 2, pp. 82-83) With respect to Mr. Bradford's testimony that current projections of natural gas and carbon allowance prices are lower than they were in the previous IRP proceeding, Ms. Hager stated that the current prices are "remarkably similar" to the prices used in the 2007 IRP. However, she testified that these older projections are not important; instead, she stated, what is important are the results of the most recent analyses, which show that even with the relatively low projections of natural gas prices, the portfolio with new nuclear generation is projected to be cost

effective. Additionally, with regard to natural gas volatility, she testified that doubling the cost of natural gas would increase the fuel cost disadvantage of the no-nuclear portfolio over the two nuclear unit portfolio by 17 percentage points (from 27% to 44%), while doubling the cost of nuclear fuel would only reduce that disadvantage by eight percentage points (to 19%). She stated that this does not mean that the Company is anti-natural gas, however, pointing out that the two nuclear unit portfolio still includes over 3,000 MW of new natural gas capacity. (T. Vol. 2, pp. 89-91)

With respect to Mr. Bradford's use of busbar costs to illustrate the cost disadvantage of nuclear power to natural gas-fired power, Duke witness Hager testified that leveled busbar costs are "meaningless" in resource planning. She stated that sophisticated models are needed to develop the most cost-effective portfolio of resources. (T. Vol. 2, p. 92) With respect to Mr. Bradford's criticism of the Company for not conducting a competitive solicitation, she testified that the Company's purchased power philosophy does not currently incorporate the bidding out of baseload capacity. According to Ms. Hager, the susceptibility of generation outside of the utility's control area to interruption and the risk of supplier default are the two key factors militating against the use of purchased power to provide baseload needs. (T. Vol. 2, pp. 92-93)

In rebuttal to Mr. Bradford's contention that nuclear power is not an effective strategy for fighting climate change, Duke witness Hager testified that without the addition of nuclear generation, carbon emissions in 2030 will be substantially higher than in 2010, even with aggressive EE efforts and compliance with the North Carolina REPS. (T. Vol. 2, p. 93) With respect to Mr. Bradford's assertion that new nuclear generation will cause a decrease in jobs due to higher electric prices, she testified that the goal of Duke's IRP is to minimize rate impacts on customers; the Company's analyses demonstrate that it is in the customers' best interests for Duke to continue to pursue the development of the Lee Nuclear Station. (T. Vol. 2, pp. 93-94)

With respect to the Public Staff's testimony concerning the asserted slow pace of the pursuit of nuclear development partners, Duke witness Rogers testified that the development of partnerships in projects do not follow a "predefined" schedule. He further stated that with approximately ten years remaining before the commercial operation date for the Lee Nuclear Station, there was ample time to include additional partners in the project. He testified that Duke was committed to finding partners, and also continues to explore the possibility of beneficial participation in other regional nuclear generation projects, including the new V.C. Sumner units currently owned by Santee Cooper, with which the Company is continuing discussions. (T. Vol. 1, pp. 124-126) In response to a question from the Commission, Mr. Rogers stated that Duke has a team that has been working on the issue of finding partners for regional construction for 18 months, but it has not historically been part of the culture of the electric industry to engage in joint partnerships. Mr. Rogers stated that partnerships could take the form of joint ownership arrangements or purchased power arrangements. (T. Vol. 1, pp. 182-183) Mr. Rogers

also testified that if the types of partnerships he describes do not take place, another way to spread the costs of nuclear over a larger customer base would be through the planned merger with Progress Energy. (T. Vol. 1, p. 197)

In rebuttal of the testimony of the Public Staff witnesses regarding the Public Staff's concerns about the Company's 17% reserve margin, Company witness Hager testified that the Company has used this reserve margin for over 10 years, and noted that it was approved by the Commission in Docket No. E-100, Subs 118 and 124. Ms. Hager noted that in the currently pending IRP proceeding, Docket No. E-100, Sub 128, the Public Staff has recommended that the Company be required to conduct a reserve margin study, a recommendation that the Company has noted it does not believe is appropriate at this time. The Company has also requested that if the Commission does require it to perform a reserve margin study, it be allowed to consider the impact of the proposed merger between itself and Progress Energy. Ms. Hager testified that at present, the Company "remains confident" that the 17% reserve margin is reasonable and appropriate. However, she testified, a change in the reserve margin would have little impact on the need for the Lee Nuclear Station, because a change in the reserve margin would likely affect the need for peaking capacity, not baseload capacity. (T. Vol. 2, pp. 84-85)

With respect to the Public Staff's concern that Duke has not provided a no- or low-carbon regulation scenario in its IRP, Company witness Hager testified that Duke provided three scenarios – a base carbon case, a high carbon sensitivity, and a Clean Energy Standard sensitivity. She stated that the Company did not perform a no-carbon sensitivity for the 2010 IRP because of its belief that "it is a matter of how and when, not if, carbon emissions will be regulated." Ms. Hager also testified that due to the Public Staff's expressed concern, the Company had recently performed a no-carbon sensitivity on its base case portfolio. Under this scenario, a portfolio made up of combustion turbine and combined cycle facilities was more cost-effective than a portfolio containing two nuclear units. However, Ms. Hager stated, it is important to note that "if we were truly in a 'no carbon future,' new coal generation may be cost effective and would likely replace the natural gas combined cycles...." (T. Vol. 2, pp. 85-87)

Further in rebuttal to the Public Staff, Ms. Hager testified that the Public Staff's conclusion that a mid-carbon, low fuel cost scenario would substantially delay the need for new nuclear capacity was incorrect. She stated that although a delayed nuclear scenario was among those selected as representing the reasonable range of potential portfolios that could be beneficial to customers under a wide variety of potential future outcomes, Duke's analysis did not lead to a conclusion that delay was in the best interests of the Company's customers. (T. Vol. 2, pp. 87-88)

Duke witness Jamil, in rebuttal to the Public Staff, testified that to limit the time period of project development activities to January 1, 2011, through June 30, 2012, or change the limit of the dollar amount spent on such activities to the North Carolina

allocable share of \$120 million is unwarranted and may unduly hamper the Company's efforts to preserve the nuclear option for its customers in the 2021 time frame. Mr. Jamil also disagreed with the Public Staff in regard to its position taken regarding expenditures for project development made during the 2010 time frame. The Public Staff stated that it does not consider the decision to continue to incur project development costs to be unreasonable, but the Commission should not include in its decision a specific amount of dollars already spent. Mr. Jamil stated that the project development work through 2013 is necessary to ensure the Company can obtain a COL in 2013 and continue to preserve the option to have Lee Nuclear Station available to serve customers in the 2021 time frame.

Mr. Jamil further stated that the Public Staff based its position on; the current uncertainty with respect to carbon legislation, the need for Duke to conduct a comprehensive Reserve Margin Study, the potential for further delay in the need for nuclear generation, the high costs associated with nuclear generation, and the need for in-depth exploration of sharing the costs and risks of nuclear construction, whether with respect to SCE&G/Santee Cooper Summer plant or otherwise. Mr. Jamil stated that Duke Witness Rogers, and Hager address aspects of the Public Staff's concern and noted that many of these uncertainties had existed for some time, and may continue to exist beyond June 30, 2012. Mr. Jamil stated that this date does not correspond to the COL or the project development schedule, appears arbitrary, and would result in Duke having to file another application this year in order to incur the additional costs to be incurred through the projected receipt of COL. Mr. Jamil stated that Duke has every incentive to cease its project development efforts if it determines that such development is no longer in the best interest of its customers.

Mr. Jamil also stated that the Commission approved the Company's plan in Docket Nos. E-100, Sub 118, and E-100, Sub 124 that selected new nuclear generation as the appropriate resource to meet Duke Energy Carolina's needs in the future. The company's decision to incur development costs during 2010 was consistent with the results of its planning analysis, which have been deemed to be reasonable by both the Public Staff and the Commission for planning purposes. Mr. Jamil stated that he believes the Commission should find that the Company's decision to continue to incur development costs in 2010 was reasonable and prudent under the circumstances, and such costs should be included in any order approving the Company's decision to incur project development costs.

Based upon the foregoing, the Commission concludes that, in light of Duke's position that it will not proceed with construction absent legislation allowing recovery of CWIP financing costs outside a general rate case, and the fact that no such legislation is now pending before the General Assembly, it is not appropriate to approve Duke's application at this time. Instead, the approval granted by this order should be limited to Duke's decision to incur only those nuclear project development costs that must be incurred to maintain the status quo with respect to the Lee Nuclear Station, including Duke's COL application at the NRC. Accordingly, while the Commission cannot find that

such costs should be incurred during a certain period of time, it will order that the costs be subject to a not-to-exceed cap of the North Carolina allocable portion of \$120 million.

While uncertainties are not new to the electric industry, very significant uncertainties have been added since the last proceeding. These include whether North Carolina will enact legislation that will allow Duke's rates to "track" construction work in progress in a manner similar to legislation that has already been passed in South Carolina; the amount of load lost due to the recession that will not return and the extent to which growth in customer demand will occur as the economy improves; and the effect of the nuclear plant failures in Japan resulting from the earthquake and tsunami on March 11, 2011, on the timing and the construction costs of future nuclear plants and the costs related to spent nuclear fuel storage.

Of particular importance is the uncertainty as to the date in the future when Duke would need a nuclear unit to be on line. Duke's projected need in its 2006 filing in this docket for nuclear baseload generation was 1,734 MW by 2016. In its late 2007 filing, Duke had reduced the initial need to one 1,117 MW unit and delayed it until 2018. At that time, the Company anticipated filing for a certificate with the South Carolina Public Service Commission (SCPSC) in late 2008. Duke's projected need for the first unit has now been moved out to 2021, and the certificate application filing with the SCPSC is not expected until 2013.

In addition to the foregoing, it is even less clear than in the last proceeding as to the likelihood that carbon regulation will occur in the not too distant future, much less when at and what costs. At the time Duke performed and filed its IRP, the expectation was that carbon legislation would be passed within the foreseeable future and there were several proposals and prices to use as assumptions. Since then, however, the make-up of the Congress has changed significantly and assumptions are much more speculative. Because carbon regulation has a significant effect on whether and when new nuclear units become part of the optimal resource mix under Duke's planning process, there is less support for Duke's assumptions as to when nuclear units will prove to be the most cost effective resource option. In this regard, Duke witness Hager's testimony on cross-examination that, in Duke's IRP analysis, after the selection of portfolios to test against sensitivities, the analysis showed that there is no difference in the present value of revenue requirements impact between completing the nuclear plant in the 2021-2023 time frame or in the 2026 time frame, buttresses this conclusion.

In addition, the Commission wishes to emphasize that it is not appropriate in this proceeding, as requested in Duke's application in this proceeding, to approve a total cumulative amount of nuclear project development costs. While Duke modified its request by the filing of a notice of acceptance on May 3, 2011, stating that its proposed order will adopt the Public Staff's pre-filed position that the Company's decision to incur additional project development costs of up to \$120 million from January 1, 2011, through June 30, 2012, for the proposed Lee Station is reasonable and prudent, Duke misstated the Public

Staff's position. The Public Staff's pre-filed position was that the \$120 million would be a not-to-exceed cap on expenditures. No specific costs or activities have ever been approved in these proceedings, and all activities and expenditures will be subject to later determinations as to their reasonableness and prudence.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 11

The evidence for this finding of fact is found in the testimony of Public Staff witnesses Maness and Ellis. The witnesses testified that Duke should be required to file and serve reports similar to the reports required by the Commission in the declaratory ruling order it issued in this docket on March 20, 2007. Specifically, they stated that Duke should be required to file the following: (1) on August 1, 2008, a report detailing its activities and expenditures in pursuit of project development for the Lee Nuclear Station from January 1, 2008, through June 30, 2008; (2) on February 1, 2009, a report detailing its activities and expenditures in pursuit of project development for the Lee Nuclear Station from July 1, 2008, through December 31, 2008; and (3) on May 1, 2009, a report detailing its activities and expenditures in pursuit of project development for the Lee Nuclear Station from January 1, 2009, through March 31, 2009. They further recommended that any Commission order approving Duke's decision to incur project development costs provide that these reports are for informational purposes only and that they cannot be used as support for an argument that the Commission has made any determination with respect to the reasonableness or prudence of the activities and expenditures reported therein.

No party opposed these requested reporting requirements. The Commission concludes that they should be imposed as recommended.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 12

The evidence for this finding of fact is found in the testimony of Public Staff witnesses Maness and Ellis. The witnesses testified that, if Duke decided to cancel the Lee Nuclear Station prior to the issuance of a certificate, any approval granted by the Commission in this proceeding should not be considered approval to record any abandoned project development costs in a regulatory asset account. They asserted that any such treatment requires an application to be filed by Duke with the Commission. The requirement of Commission Rule R8-27 for the Company to apply to the Commission for *use of regulatory asset accounts should continue to apply in this case, because (1) any approval granted in this proceeding should not be understood as making it probable at this time that the recovery of any specific actual costs will be allowed, and (2) it would be appropriate and beneficial for the Commission to begin to examine the circumstances of any abandonment as closely as possible in time to that abandonment, which would be facilitated by a requirement that a request for regulatory asset approval be filed.*

No party opposed the Public Staff's recommendation that any Commission order issued in this proceeding (1) include a statement that the Commission's approval of Duke's

application in this docket was not to be interpreted as making it probable at this time that the recovery of any specific actual costs would be allowed and (2) state that Duke is required to file an application with the Commission in order to use a regulatory asset account for any abandoned project development costs. The Commission concludes that this recommendation should be adopted. The approval herein of Duke's decision to incur project development costs is not to be interpreted as making it probable at this time that the recovery of any specific actual costs would be allowed, and, further, that Duke is required to file an application with the Commission in order to use a regulatory asset account for any abandoned project development costs.

IT IS, THEREFORE, ORDERED as follows:

1. That, in light of Duke's position that it will not proceed with construction absent legislation allowing recovery of CWIP financing costs outside a general rate case, and the fact that no such legislation is now pending before the General Assembly, it is not appropriate to approve Duke's application at this time. Instead, the approval granted by this Order should be limited to Duke's decision to incur only those nuclear project development costs that must be incurred to maintain the status quo with respect to the Lee Station, including Duke's COL application at the NRC.

2. That nuclear project developments costs shall be subject to a not-to-exceed cap of the North Carolina allocable portion of \$120 million.

3. That the approval of a not-to-exceed cap of \$120 million is not approval to spend up to the North Carolina allocable portion of that amount. No specific activities or costs are being approved, and all activities and expenditures will be subject to later determinations as to their prudence and reasonableness.

4. That Duke is required to file every six months, beginning August 1, 2011, until further order of the Commission, a report detailing its activities and expenditures in pursuit of project development for the Lee Station during the six-month period ending one month before the due date for the report (e.g., the report due August 1, 2011, would cover January 1, 2011, through June 30, 2011).

5. That these reports shall be used for informational purposes only and cannot be used as support for an argument that the Commission has made any determination with respect to the reasonableness or prudence of the activities and expenditures reported therein.

6. That Duke is on notice that the Commission's limited approval in this proceeding of Duke's decision to incur project development cost cannot be interpreted as making it probable at this time that the recovery of any specific actual costs will be allowed

and that Duke is required to file an application with the Commission prior to the use of a regulatory asset account with respect to any abandoned project development costs.

ISSUED BY ORDER OF THE COMMISSION.

This the ____ day of _____, 2011.

NORTH CAROLINA UTILITIES COMMISSION

Gail L. Mount, Deputy Clerk