Implementation of the "Clean Smokestacks Act"

A Report to the Environmental Review Commission and the Joint Legislative Utility Review Committee

Submitted by the North Carolina Department of Environment and Natural Resources and the North Carolina Utilities Commission

June 1, 2006

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This report is submitted pursuant to the requirement of Section 14 of Session Law 2002-4, Senate Bill 1078 enacted June 20, 2002. The actions taken to date by Progress Energy Carolinas, Inc. and Duke Energy Carolinas, LLC appear to be in accordance with the provisions and requirements of the Clean Smokestacks Act.

Signed: _____

William G. Ross, Jr., Secretary
Department of Environment and Natural Resources

Signed: _____

Jo Anne Sanford, Chair
North Carolina Utilities Commission

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The General Assembly of North Carolina, Session 2001, passed Session Law 2002-4 also known as Senate Bill 1078. This legislation is titled "*An Act to Improve Air Quality in the State by Imposing Limits on the Emission of Certain Pollutants from Certain Facilities that Burn Coal to Generate Electricity and to Provide for Recovery by Electric Utilities of the Costs of Achieving Compliance with Those Limits*" ("the Clean Smokestacks Act" or "the Act"). The Clean Smokestacks Act, in Section 14, requires the Department of Environment and Natural Resources ("DENR") and the Utilities Commission ("Commission") to report annually, i.e., by June 1 of each year, on the implementation of the Act to the Environmental Review Commission and the Joint Legislative Utility Review Committee.

The Act, in Section 9, requires Duke Energy Carolinas, LLC ("Duke Energy"), and Progress Energy Carolinas, Inc. ("Progress Energy") to submit annual reports to DENR and the Commission containing certain specified information. Duke Energy and Progress Energy filed reports, with DENR and the Commission, by cover letters dated March 30, 2006. Specifically, such reports were submitted in compliance with the requirements of G.S. 62-133.6(i). Duke Energy's and Progress Energy's reports are attached, and made part of this report, as Attachments A and B, respectively.

Additionally, by letter dated May 10, 2006, the Secretary of DENR wrote to the Commission stating that, pursuant to G.S. 62-133.6 (j), DENR has reviewed the information provided, and the submittals comply with the Act. The Secretary further stated that the plans and schedules of the Companies appear adequate to achieve the emission limitations set out in G.S. 143-215.107D.

This report is presented to meet the reporting requirement of the Act pertaining to DENR and the Commission, as discussed above, and is submitted jointly by DENR and the Commission. The report is structured to address the various actions that have occurred pursuant to the provisions of Sections 9, 10, 11, 12, and 13 of the Act. Reports of actions under these Sections describe the extent of implementation of the Act to this date.

I. Section 9(c) of the Act, Codified as Section 62-133.6(c) of the North Carolina General Statutes

G.S. 62-133.6(c) provides: *The investor-owned public utilities shall file their compliance plans, including initial cost estimates, with the Commission and the Department of Environment and Natural Resources not later than 10 days after the date on which this section becomes effective. The Commission shall consult with the Secretary of Environment and Natural Resources and shall consider the advice of the Secretary as to whether an investor-owned public utility's proposed compliance plan is adequate to achieve the emissions limitations set out in G.S. 143-215.107D.*

Status: North Carolina's investor-owned electric utilities, Progress Energy and Duke Energy, filed their initial compliance plans as required in June and July of 2002, respectively, in accordance with G.S. 62-133.6(c), Section 9(c) of Session Laws 2002-4, the Clean Smokestacks Act. DENR reviewed this information and determined that the submittals comply with the Act and, as proposed, appear adequate to achieve the emission limitations set out in G.S. 143-215.107D.

II. Section 9(i) of the Act, Codified as Section 62-133.6(i) of the North Carolina General Statutes

G.S. 62-133.6(i) provides: *An investor-owned public utility that is subject to the emissions limitations set out in G.S. 143-215.107D shall submit to the Commission and to the Department of Environment and Natural Resources on or before 1 April of each year a verified statement that contains all of the following [specified information]:*

The following are the eleven subsections of G.S. 62-133.6(i) and the related responses from Progress Energy and Duke Energy for each subsection:

1. **G.S. 62-133.6(i)(1) requires:** *A detailed report on the investor-owned public utility's plans for meeting the emissions limitations set out in G.S. 143-215.107D.*

Progress Energy Response: "The initial plan for Progress Energy Carolinas, Inc. was submitted on July 29, 2002. Appendix A [of the attached Progress Energy submittal dated March 30, 2006, i.e., Attachment B] contains an updated version of this plan, effective April 1, 2006."

Duke Energy Response: "Exhibits A and B [of the attached Duke submittal dated March 30, 2006, i.e., Attachment A, outline the updated plan as of April 1, 2006,] . . . for technology selections by facility and unit, projected operational dates, expected emission rates, and the corresponding tons of emissions that demonstrate compliance with the provisions of G.S. 143-215.107D."

2. **G.S. 62-133.6(i)(2) requires:** *The actual environmental compliance costs incurred by the investor-owned public utility in the previous calendar year, including a description of the construction undertaken and completed during that year.*

Summary of Progress Energy Report: The actual environmental compliance costs (capital costs) incurred by Progress Energy in calendar year 2005 were $181.27 million. Progress Energy performed a significant amount of work at the Asheville and Roxboro plants. Progress Energy successfully placed the first wet scrubber in service on Asheville Unit 1 in November of 2005. At the Roxboro plant, engineering, procurement, and construction began or continued for each of the four units. At the Mayo, Lee, and Sutton plants, preliminary engineering, design, and procurement activities were initiated, however no construction activities commenced in 2005.

Summary of Duke Energy Report: The actual environmental compliance costs incurred by Duke Energy in calendar year 2005 were $346.42 million. Significant construction occurred in 2005 at the Marshall Steam Station. Construction activities included, but were not limited to: fabrication and installation of absorber outlet ducts and flue liners; site earthwork for the gypsum landfill; and completion of all remaining major building and equipment foundations, structural steel erection for duct supports, assembly of ball mills, recycle pumps, hydroclones, underground and aboveground piping, electrical work, installation of material handling equipment, and wastewater buildings. At the Belews Creek Steam Station, the construction team was mobilized and initiated construction activities that resulted in completion of approximately 10 percent of the project. Approximately 20 percent of this project's total costs was incurred during 2005.

For the remaining Steam Stations (Allen, Cliffside, Buck, Dan River, and Riverbend), the Company reported that costs were incurred for a variety of things such as project studies and investigations, engineering, equipment specifications development, equipment layout, contracting related costs, logistics, etc.

3. **G.S. 62-133.6(i)(3) requires:** *The amount of the investor-owned public utility's environmental compliance cost amortized in the previous calendar year.*

Summary of Progress Energy and Duke Energy Reports: Progress Energy amortized $147 million in 2005. Duke Energy amortized $311.2 million in 2005. As indicated in the June 1, 2005 report to the Environmental Review Commission and the Joint Legislative Utility Review Committee ("the June 1, 2005 report"), Progress Energy, in response to a data request submitted by the Commission, had projected that it would amortize $107 million of environmental compliance costs in 2005. Also, as indicated in the June 1, 2005 report, Duke Energy, in response to a Commission data request, had projected that it would amortize $281 million of environmental compliance costs in 2005.

4. **G.S. 62-133.6(i)(4) requires:** *An estimate of the investor-owned public utility's environmental compliance costs and the basis for any revisions of those estimates when compared to the estimates submitted during the previous year.*

Summary of Progress Energy Report: Progress Energy reported that its total estimated net capital costs (that is, excluding the portion for which the Power Agency is

responsible) are currently projected to be between $1.1 billion and $1.4 billion, with the current point estimate being $1.36 billion. In its 2005 report, Progress Energy, at that time, estimated its cost of compliance to be $895 million. Therefore, its current estimate of $1.36 billion is $465 million, or 52 percent, higher than the cost estimate reported in 2005.

The cost increases are due to several factors according to Progress Energy, including design changes such as the conversion of the Asheville scrubber from dry to wet and higher construction material prices (detailed in the attached Progress Energy report). Additionally, Progress Energy indicated that it did not initially account for major costs associated with the wastewater treatment system in the initial plan, but is now including cost associated with wastewater processing.

Progress Energy's current cost estimate of $1.36 billion is $547 million, or 67 percent, higher than the original 2002 cost estimate of $813 million.

Summary of Duke Energy Report: Duke Energy reported that its currently expected costs are less than the estimates provided in 2005. More specifically, in its 2006 report, the Company estimated its compliance costs to be $1.732 billion, as compared to the $1.742 billion reflected in its 2005 report, a decrease of $10 million, or 0.6 percent (detailed in Exhibit C of Attachment A of the Duke Energy report). As stated by Duke Energy, the reasons for this decrease were: "SNCR [Selective Non-Catalytic Reduction] Projects – In addition to the deletion of the Dan River Unit 3 SNCR project, refinement of the SNCR work scope at each location has resulted in a lower overall estimated cost. The most significant change to this scope over the last year has been to remove the Riverbend central reagent (urea) distribution center scope of work and replace with individual station storage and dilution water equipment."

Duke Energy's current cost estimate of $1.732 billion is $232 million, or 15 percent, higher than the original 2002 cost estimate of $1.5 billion.

5. **G.S. 62-133.6(i)(5) requires:** *A description of all permits required in order to comply with the provisions of G.S. 143-215.107D for which the investor-owned public utility has applied and the status of those permits or permit applications.*

Progress Energy Response:

Asheville Plant

- Numerous soil erosion and sedimentation control plans have been approved
- Authorization to Construct (ATC) the wastewater treatment system for the pretreatment of flue gas desulfurization wastewater was approved
- ATC engineer's certifications for pretreatment and constructed wetlands were submitted

Roxboro Plant

- An air permit for coal handling and limestone handling was issued

- Several soil erosion and sedimentation control plans have been approved
- An Army Corps of Engineers' permit and water quality certification to fill wetlands for gypsum storage area was received
- A non-discharge permit for the wastewater treatment system was received
- Authorization to Construct (ATC) the wastewater treatment system was approved
- Letter to the Commission identifying work in the ash pond was approved

Lee Plant
- A Prevention of Significant Deterioration (PSD) air permit application for the installation of low NOx burners was submitted

Sutton Plant
- An air permit for the installation of low NOx burners was received

Duke Energy Response:
Belews Creek
- NPDES Permit modification received
- Initial erosion control permit received
- Landfill site suitability application submitted
- Air permit for flue gas desulfurization (FGD) project received
- Non-discharge permit revision to include FGD wastewater received
- Authorization to Construct (ATC) application for the wastewater treatment system was approved
- Revised landfill construction plan application submitted
- Air Permit – Notice of Intent to Construct received
- Several soil erosion and sedimentation control plans have been approved

Cliffside
- Air permit application submitted
- A complimentary Prevention of Significant Deterioration permit application was submitted for proposed new generating units

Marshall
- Several soil erosion and sedimentation control plans have been approved
- Landfill construction plan application received
- Authorization to Construct (ATC) application for solids removal system was approved
- ATC application for constructed wetlands was approved
- Selective Non-Catalytic Reduction permits received for Units 1, 2, and 3

Allen
- Air permits approved for Unit 3 and Unit 4

Riverbend

- Selective Non-Catalytic Reduction permits received for Units 4, 5, 6 and 7
- Burner application permits received for Unit 5 and Unit 6

6. **G.S. 62-133.6(i)(6) requires:** *A description of the construction related to compliance with the provisions of G.S. 143-215.107D that is anticipated during the following year.*

Progress Energy Response: See Appendix C of the attached letter from Progress Energy dated March 30, 2006 (Attachment B), for details of construction and installation of equipment. Significant construction activities at the Asheville Plant in 2006 include the completion of systems for the Unit 2 scrubber so that it can be placed into service by the end of May 2006. Construction activities will also begin for the Asheville Unit 1 selective catalytic reduction project. At the Roxboro Plant, significant construction activities for the Unit 2 scrubber will occur in 2006. Construction of the gypsum conveying equipment will also begin. Construction activities for the Unit 3 and Unit 4 scrubbers will include the erection of an absorber tower for each unit and installation of the flue gas liners in the Unit 3 and Unit 4 chimneys.

Duke Energy Response: See attached letter from Duke Energy dated March 30, 2006 (Attachment A), for details of construction anticipated for the next year for:

Allen Steam Station

- Relocation of existing rail spurs and switches and relocation of existing plant services including ash sluice lines, diesel oil tank, electrical and potable water lines
- Begin earthwork and grading for new entrance road and foundations
- Complete detailed engineering for selective non-catalytic reduction (SNCR) equipment on Unit 2
- Complete installation of SNCR equipment on Unit 4

Belews Creek Steam Station

- Construct major foundations for the flue gas desulfurization (FGD) system
- Complete all construction on approximately 5% of the sub-systems that make up the total FGD system
- Complete construction of the concrete shell for the two new chimneys
- Achieve a completion status of 75% on the overall project

Cliffside Steam Station

- Continue engineering study to finalize the project scope

Marshall Steam Station

- Complete ductwork installation using large crane

- Complete construction, turnover, and commissioning of Unit 4
- Begin testing and tuning of Unit 4 and common systems
- Complete construction, turnover, and commissioning of Unit 3 systems
- Begin testing and tuning of Unit 3 and common systems
- Complete detailed engineering for selective non-catalytic reduction (SNCR) equipment on Unit 2 and Unit 4
- Complete installation of SNCR equipment on Unit 1

Buck Steam Station

- Complete detailed engineering for selective non-catalytic reduction (SNCR) equipment on Unit 5 and Unit 6
- Complete detailed engineering for burners on Unit 3 and Unit 4

Dan River Steam Station

- Substantially complete installation of burners on Units 2 and 3

Riverbend Steam Station

- Complete detailed engineering for selective non-catalytic reduction equipment on Units 4, 5, 6, and 7

7. **G.S. 62-133.6(i)(7) requires:** *A description of the applications for permits required in order to comply with the provisions of G.S. 143-215.107D that are anticipated during the following year.*

Progress Energy Response:

Asheville Plant

- Revisions to the air permit to test and install technology to reduce SO_3 may be necessary
- Erosion and sedimentation control plan
- Revision J for the construction of the demineralizer pipe, pump, and ductbank was approved in January 2006

Roxboro Plant

- Revisions to the air permit will be necessary to address fugitive emissions of hydrogen sulfide from the wastewater treatment system
- Authorization to Construct (ATC) for the gypsum settling pond was received in March 2006
- Receipt of the ATC for the bioreactor is anticipated in the second quarter of 2006
- Erosion and sedimentation control plan

Mayo Plant

- A construction permit will be required for the flue gas

desulfurization system
- A non-discharge permit application to be submitted for the wastewater treatment system
- A request for authorization to construct for the wastewater treatment system
- Erosion and sedimentation control plan

Cape Fear Plant
- A construction permit may be required to conduct a trial of an air pollution control technology

Lee Plant
- A construction permit will be required for the installation of the Rotamix system for NOx control

Duke Energy Response:

Allen Steam Station
- A request for authorization to construct for the wastewater treatment system - Plan to submit August 2006
- Air Permit Application – Plan to submit April 2006
- Request to revise non-discharge permit to include flue gas desulfurization (FGD) wastewater submitted January 2006
- Submittal to DENR/Army Corps of Engineers (ACOE) regarding stream crossing of entrance road – Plan to submit March 2006
- Erosion control plans for the Allen FGD project
- Plan to submit air permit application for selective non-catalytic reduction equipment on Unit 2
- Authorization to Construct (ATC) application for the dilution water piping on Unit 4 - Plan to submit to City of Belmont in March 2006

Belews Creek Steam Station FGD
- Authorization to Construct (ATC) application for the sanitary waste lagoon – Plan to submit in March 2006

Buck Steam Station
- Air permit burner application for Units 3 and 4 – Plan to submit March 2006
- Air permit application for selective non-catalytic reduction equipment for Units 5 and 6 – Plan to submit March 2006

Cliffside Steam Station Unit 5 FGD
- It may be necessary to submit a revised air permit application for a standalone Unit 5 FGD – Possible submission in 3rd or 4th quarter 2006

Dan River Steam Station

- Air permit burner applications for Units 1, 2, and 3 – Submitted February 2006

Marshall Steam Station

- Air permit application for selective non-catalytic reduction equipment for Unit 4 – Plan to submit September 2006

8. **G.S. 62-133.6(i)(8) requires:** *The results of equipment testing related to compliance with G.S. 143-215.107D.*

Progress Energy Response: "No equipment testing related to compliance with G.S. 143-215.107D occurred in 2005."

Duke Energy Response: "No additional equipment related testing occurred in 2005."

9. **G.S. 62-133.6(i)(9) requires:** *The number of tons of oxides of nitrogen (NOx) and sulfur dioxide (SO2) emitted during the previous calendar year from the coal-fired generating units that are subject to the emissions limitations set out in G.S. 143-215.107D.*

Progress Energy Response: "The total calendar year 2005 emissions from the affected coal-fired Progress Energy Carolinas units are:

- NOx 49,621 [tons]
- SO_2 202,041 [tons]"

Duke Energy Response: In the 2005 calendar year, the following were emitted from the North Carolina based Duke Energy coal-fired units:

- NOx 56,073.3 tons
- SO2 298,780.5 tons

10. **G.S. 62-133.6(i)(10) requires:** *The emissions allowances described in G.S. 143-215.107D(i) that are acquired by the investor-owned public utility that result from compliance with the emissions limitations set out in G.S. 143-215.107D.*

Progress Energy Response: "During 2005, PEC did not acquire any allowances as a result of compliance with the emission limitations set out in N.C. General Statute 143-215.107D."

Duke Energy Response: "No emissions allowances have been acquired by Duke Power Company resulting from compliance with the emissions limitations set out in G.S. 143-215.107D."

11. **G.S. 62-133.6(i)(11) requires:** *Any other information requested by the Commission or the Department of Environment and Natural Resources.*

Summary of Commission Request: The Commission submitted informational requests to Progress Energy and Duke Energy on April 19, 2006. The information requested, among other things, concerned current projected amortization schedules over the remaining years of the seven-year accelerated cost-recovery period.

Progress Energy Response: Progress Energy noted that the Act requires it to amortize $569 million, which represents 70 percent of the original cost estimate of $813 million, by the end of 2007. The Company indicated that $395 million had been amortized as of December 31, 2005, leaving a total of $174 million to be amortized during 2006 and 2007. Progress Energy stated that, assuming ratable amortization of such remainder, the annual amount of amortization would be $87 million in both 2006 and 2007. However, the Company also observed that the Act grants Progress Energy the flexibility to vary the amortization schedule from $0 to $174 million per year.

With regard to the amounts to be amortized in 2008 and 2009, Progress Energy noted that such amounts remain to be determined. Nevertheless, the Company indicated that, assuming the 30 percent residual amount of the total original cost estimate of $813 million, i.e., $244 million, is amortized ratably in 2008 and 2009, the amount of the annual amortization in each of those two years would be $122 million.

Progress Energy stated that it currently has no plans to write off or amortize any amounts above $813 million. **[DENR/COMMISSION NOTE:** As previously indicated, the Company currently estimates its total net environmental compliance costs to be approximately $1.36 billion.**]**

Progress Energy also stated that it believed that G.S. 62-133.6(d) and (f) address the present issue(s) by requiring the Commission to hold a hearing to determine the Company's just and reasonable environmental compliance costs, including the amounts that should be amortized in 2008 and 2009, and preserve Progress Energy's right to seek recovery of its actual environmental compliance costs above $813 million in its next rate case.

Duke Energy Response: In regard to calendar years 2006 and 2007, Duke Energy responded that it now expects to amortize environmental compliance costs in the amounts of $250 million and $281 million, respectively. With regard to the amounts to be amortized in 2008 and 2009, Duke Energy indicated that such amounts had not yet been determined and that they were subject to Commission approval. The Company further responded as follows:

> While Duke Power recognizes that amortization in 2008 and 2009 of any amounts in excess of the original 2002 estimated environmental compliance cost of $1.5 billion is an option, it has not yet determined what recovery it will seek for any such amounts. Notably, the cost figures

stated in Duke's Compliance Plan Annual Update filed on April 3, 2006 are estimates, based on Duke's current best judgment. As required by N.C.G.S. 62-133.6(i), Duke will continue to update its cost estimates annually.

Duke notes that the Clean Smokestacks Statute provides some direction on the methodology and extent of recovery for environmental compliance costs. Specifically, Section 62-133.6(b) of the NC General Statutes allows Duke to accelerate the recovery of its 'estimated environmental compliance costs over a seven-year period, beginning January 1, 2003 and ending December 31, 2009.' It also expressly recognizes that '[t]he amounts to be amortized pursuant to this subsection are estimates of the environmental compliance costs that may be adjusted as provided in this section.' Id.

Further, Section 62-133.6(d) requires that, subject to the provisions of Section 62-133.6(f), the Commission shall hold a hearing to review an investor-owned utility's environmental compliance costs. It expressly authorizes the Commission to 'modify and revise these costs as necessary to ensure that they are just, reasonable, and prudent based on the most recent cost information available and determine the annual cost recovery amounts that each investor-owned public utility shall be required to record and recover during calendar years 2008 and 2009.' Additionally, it requires the Commission to issue an order by December 31, 2007. Section 62-133.6(f) in turn provides that '[i]n any general rate case initiated to adjust base rates effective on or after January 1, 2008, the investor-owned utility shall be allowed to recover its actual environmental compliance costs . . . less the cumulative amount of accelerated cost recovery recorded pursuant to subsection (b) . . . .'

The Clean Smokestacks Statute, therefore, contemplates that an investor-owned utility such as Duke would fully recover its prudently incurred actual environmental compliance costs, with the determination of the annual amounts of cost recovery for 2008 and 2009 being subject to Commission approval.

[DENR/COMMISSION NOTE: As previously noted, Duke Energy currently estimates its environmental compliance costs to total $1.732 billion.**]**

III. Section 10 of the Act provides: *It is the intent of the General Assembly that the State use all available resources and means, including negotiation, participation in interstate compacts and multistate and interagency agreements, petitions pursuant to 42 U.S.C. § 7426, and litigation to induce other states and entities, including the Tennessee Valley Authority, to achieve reductions in emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO2) comparable to those required by G.S. 143-215.107D, as enacted by Section 1 of this act, on a comparable schedule. The State shall give*

particular attention to those states and other entities whose emissions negatively impact air quality in North Carolina or whose failure to achieve comparable reductions would place the economy of North Carolina at a competitive disadvantage.

DENR/Division of Air Quality (DAQ) and Department of Justice Activities to Implement this Section:

The State continues to pursue opportunities to carry forward the legislature's objectives in section 10. The State reports the following recent activities and developments:

1) On January 30, 2006, the State, through the Attorney General, sued the Tennessee Valley Authority (TVA) in federal district court in Asheville. The suit alleges that emissions of SO_2 and NOx from TVA's fleet of coal-fired power plants are inadequately controlled and therefore create a public nuisance. The Attorney General has asked the Court to require TVA to install NOx and SO_2 controls to abate the public nuisance.

2) On July 8, 2005, the Attorney General filed in federal appeals court in the District of Columbia a petition for review of the United States Environmental Protection Agency's (EPA) Clean Air Interstate Rule. Among other things, the State is alleging that the Rule fails to take into account significant air quality problems in North Carolina, fails to guarantee a remedy to North Carolina because the Rule relies too heavily on the trading of pollution credits, and fails to require controls to be installed expeditiously. The matter is still pending. In addition, also on July 8, 2005, the Attorney General filed a petition with the EPA requesting that the EPA reconsider certain aspects of the rule, but this petition was denied. Further action regarding this denial is under consideration.

3) On May 9, 2005, the Attorney General secured a consent decree from the United States District Court for the Eastern District of North Carolina mandating a schedule for the EPA to respond to North Carolina's Section 126 Petition. By the Section 126 Petition, the State requested that the EPA impose NOx and/or SO_2 controls on large coal-fired utility boilers in thirteen upwind states that impact North Carolina's air quality. On August 1, 2005, the EPA proposed to deny the Section 126 Petition, and the Attorney General filed a detailed response alleging that a denial of the Petition would be arbitrary, irrational, and unlawful. On March 15, 2006, the EPA denied the State's petition. Further action regarding this denial is under consideration.

4) Since the enactment of the Clean Smokestacks Act, the Attorney General and the Department of Environment and Natural Resources have on several occasions presented the Clean Smokestacks Act in other jurisdictions to demonstrate leadership and prompt similar actions in surrounding areas that impact North Carolina. On April 6, 2006, Governor Ehrlich of Maryland signed into law the Healthy Air Act (2006 Md. Laws 301) -- a Clean Smokestacks-type law that significantly limits emissions of SO_2 and NOx from large coal-fired utility boilers in Maryland. A bill to enact the Virginia Clean Smokestacks Act (H.B. 1055) was introduced in the Virginia House of Delegates on January 11, 2006, after a similar bill was defeated in the 2005 session.

IV. Section 11 of the Act provides: *The environmental Management Commission shall study the desirability of requiring and the feasibility of obtaining reductions in emissions of oxides of Nitrogen (NOx) and Sulfur Dioxide (SO_2) beyond those required by G.S. 143-215.107D, as enacted by Section 1 of this act. The Environmental Management Commission shall consider the availability of emission reduction technologies, increased cost to consumers of electric power, reliability of electric power supply, actions to reduce emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO_2) taken by states and other entities whose emissions negatively impact air quality in North Carolina or whose failure to achieve comparable reductions would place the economy of North Carolina at a competitive disadvantage, and the environment, and the natural resources, including visibility. In its conduct of this study, the Environmental Management Commission may consult with the Utilities Commission and the Public Staff. The Environmental Management Commission shall report its findings and recommendations to the General Assembly and the Environmental Review Commission annually beginning 1 September 2005.*

Environmental Management Commission and DENR Response: A letter was submitted to the Environmental Review Commission from Dr. David Moreau, Environmental Management Commission Chairman dated April 3, 2006, stating the following:

> Since the Clean Smokestacks Act was passed in June 2002, significant Federal regulatory changes have occurred. Specifically, the Clean Air Interstate Rule (CAIR) requires North Carolina's neighboring states to achieve major reductions in NO_x and SO_2 -- reductions that require installation of state-of-the-art control equipment. Although there may be questions about the timing and emissions reductions of CAIR, the Division of Air Quality (DAQ) believes CAIR will ultimately provide major benefits to North Carolina's air quality.
>
> The Clean Smokestacks Act already requires that state of the art control equipment be installed on many units in North Carolina. CAIR annual NO_x and SO_2 emissions budgets are even lower than those set by the Clean Smokestacks Act and this could result in even more units in North Carolina having state of the art control equipment applied.
>
> Given the recent action by the Federal government regarding power plant emissions, it is recommended that the study as to whether or not further State action is required be deferred until an evaluation is made of the progress of North Carolina and her neighbors in complying with CAIR. The EMC would propose that the reporting begin on December 1, 2013. This will give the specified electric generation facilities in North Carolina time to implement their control strategies and will also give the DAQ time to quantify the air quality impacts. Requiring reporting prior to the complete implementation of these control technologies will provide little

new or beneficial information. Furthermore, the evolution of new control technologies is fairly long term and it is recommended that the frequency of the reporting thereafter be on a three-year basis.

V. Section 12 of the Act provides: *The General Assembly anticipates that measures implemented to achieve the reductions in emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO2) required by G.S. 143-215.107D, as enacted by Section 1 of this act, will also result in significant reductions in the emissions of mercury from coal-fired generating units. The Division of Air Quality of the Department of Environment and Natural Resources shall study issues related to monitoring emissions of mercury and the development and implementation of standards and plans to implement programs to control emissions of mercury from coal-fired generating units. The Division shall evaluate available control technologies and shall estimate the benefits and costs of alternative strategies to reduce emissions of mercury. The Division shall annually report its interim findings and recommendations to the Environmental Management Commission and the Environmental Review Commission beginning 1 September 2003. The Division shall report its final findings and recommendations to the Environmental Management Commission and the Environmental Review Commission no later than 1 September 2005. The costs of implementing any air quality standards and plans to reduce the emission of mercury from coal-fired generating units below the standards in effect on the date this act becomes effective, except to the extent that the emission of mercury is reduced as a result of the reductions in the emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO2) required to achieve the emissions limitations set out in G.S. 143-215.107D, as enacted by Section 1 of this act, shall not be recoverable pursuant to G.S. 62-133.6, as enacted by Section 9 of this act.*

DAQ Actions to Implement this Section: The DAQ submitted reports in September of 2003, 2004, and 2005, as required by this Section. The first report primarily focused on the "state of knowledge" of the co-benefit of mercury control that will result from the control of NOx and SO_2 from coal-fired utility boilers. Also, preliminary estimates were made for this co-benefit for the North Carolina utility boilers based on the initial plans submitted by Progress Energy and Duke Energy. The second report primarily focused on "definition of options". The Division has also submitted the third and final report titled Mercury Emissions and Mercury Controls for Coal-Fired Electrical Utility Boilers. The Clean Air Mercury Rule (CAMR) has been drafted and public hearings have been scheduled to solicit input from the public. A hearing was held on May 25, 2006, in Charlotte and two other hearings are scheduled for June 1, 2006, in Raleigh and June 8, 2006 in Winterville. Comments from these hearings will be taken into consideration and the CAMR will then be presented to the Environmental Management Commission in September of 2006.

VI. Section 13 of the Act provides: *The Division of Air Quality of the Department of Environment and Natural Resources shall study issues related to the development and implementation of standards and plans to implement programs to control emissions of carbon dioxide (CO2) from coal-fired generating units and other*

stationary sources of air pollution. The Division shall evaluate available control technologies and shall estimate the benefits and costs of alternative strategies to reduce emissions of carbon dioxide (CO2). The Division shall annually report its interim findings and recommendations to the Environmental Management Commission and the Environmental Review Commission beginning 1 September 2003. The Division shall report its final findings and recommendations to the Environmental Management Commission and the Environmental Review Commission no later than 1 September 2005. The costs of implementing any air quality standards and plans to reduce the emission of carbon dioxide (CO2) from coal-fired generating units below the standards in effect on the date this act becomes effective, except to the extent that the emission of carbon dioxide (CO2) is reduced as a result of the reductions in the emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO2) required to achieve the emissions limitations set out in G.S. 143-215.107D, as enacted by Section 1 of this act, shall not be recoverable pursuant to G.S. 62-133.6, as enacted by Section 9 of this act.

DENR Actions to Implement this Section: The DAQ submitted reports in September of 2003, 2004, and 2005, as required by this Section. The first report primarily focused on the "state of knowledge" and actions being taken or planned elsewhere regarding CO_2 control from coal-fired utility boilers. The second report primarily focused on "definition of options". The DAQ submitted the third and final report titled, "Carbon Dioxide (CO2) Emission Reduction Strategies for North Carolina", to the Environmental Management Commission and the Environmental Review Commission as required. Numerous recommendations were set forth in this report including a recommendation for a North Carolina Climate Action Plan.

The North Carolina Global Warming/Climate Change Bill (HB 1191/SB 1134) was enacted during the 2005 Session of the General Assembly. Along with the passage of the bill, the North Carolina 2005 Session of the General Assembly passed the Global Climate Change Act. This act established a Legislative Commission on Global Climate Change (LCGCC). Additionally, a formalized stakeholder group, the Climate Action Plan Advisory Group (CAPAG) was formed by DENR. The CAPAG's purpose is to research, educate, discuss, and formalize consensus-based recommendations to the DENR for their process and potential implementation by the General Assembly through a formal stakeholder process including determination of economic benefits. The CAPAG will work in conjunction with the LCGCC providing periodic updates. The inaugural meeting of the CAPAG was held on February 16, 2006. The CAPAG is now in the early stages of utilizing technical workgroups. These technical workgroups contain experts in the following five sectors: 1) Agriculture, Forestry, and Waste; 2) Energy Supply; 3) Transportation and Land Use; 4) Residential, Commercial, and Industrial; and 5) Cross Cutting (for issues that cut across different sectors, such as establishing a greenhouse gas registry). The CAPAG is working diligently towards a comprehensive North Carolina Climate Action Plan, with a current target to complete it by the spring of 2007.

VII. Supplementary Information: As noted in earlier reports, the Public Staff - North Carolina Utilities Commission (Public Staff) will audit the books and records of Progress

Energy and Duke Energy on an ongoing basis in regard to the costs incurred and amortized in compliance with the provisions of the Act. The Public Staff has undertaken such a review, focusing on the verification of costs related to complying with the Act, the amortization of those costs, and the operating results of emission reduction equipment installed by Progress Energy and Duke Energy.

The Public Staff filed its most recent reports in the present regard with the Commission on May 22, 2006. Such reports, which are a continuation of the Public Staff's ongoing review, present an overview of certain work performed by the Public Staff and its findings for the 12-month period ending December 31, 2005. Attached, and made part of this report, are the Public Staff's reports for Duke Energy and Progress Energy, Attachments C and D, respectively.

CONCLUSION

Actions taken to date by Progress Energy and Duke Energy appear to be in accordance with the provisions and requirements of the Clean Smokestacks Act.

ATTACHMENTS

Attachment A: Duke Energy Carolinas, LLC, Clean Smokestacks Compliance Plan Annual Update for 2006, Submitted by Cover Letter Dated March 30, 2006

Attachment B: Progress Energy Carolinas, Inc. Annual North Carolina Clean Smokestacks Act Compliance Report, Submitted by Cover Letter Dated March 30, 2006

Attachment C: Report of the Public Staff on Costs Incurred and Amortized by Duke Energy Carolinas, LLC in Compliance with Session Law 2002-4, Filed on May 22, 2006

Attachment D: Report of the Public Staff on Costs Incurred and Amortized by Progress Energy Carolinas, Inc. in Compliance With Session Law 2002-4, Filed on May 22, 2006

Duke Power
A Duke Energy Company

George T. Everett, Ph.D.
Director, Environmental/Legislative Affairs

919-235-0955
gteverett@duke-energy.com

March 30, 2006

Ms. Geneva S. Thigpen, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

Subject: Docket No. E-7, Sub 718
Duke Power Compliance Plan Annual Update NO_x Control

Record No. NC CAP 005

Dear Ms. Thigpen:

Duke Power is required by Senate Bill 1078 to file information on or before 1 April of each year to update the Commission on progress to date, upcoming activities and expected strategies to achieve the emissions limitations set out in G.S. 143-215.107D. Enclosed for filing are the original and thirty (30) copies of Duke Power's Compliance Plan Annual Update for 2006 that fully describe the company's efforts to comply with this clean air legislation.

The current plan to meet the emission requirements for NO_x and SO_2 includes:

NO_x Control – The installation of Selective Catalytic Reduction (SCR) on Cliffside Steam Station Unit 5 and Belews Creek Steam Station Units 1&2 has been completed. Our NOx plans include installation of Selective Non-Catalytic Reduction (SNCR) at 15 units, and burner work at our remaining sites with the exception of Cliffside Units 1-4. With these installations, Duke can demonstrate compliance with our 2007 and 2009 NOx caps under Senate Bill 1078.

SO_2 Control – The installation of wet scrubbers on our twelve largest generating units continues to be our plan. We have worked with the Department of Environment and Natural Resources on a plan to accelerate the scrubber installation schedule at Plant Allen. Acceleration of the Allen scrubbers maintains our design and construction continuity and helps assure Duke Power can meet the recently finalized Clean Air Interstate Rule. Costs for our scrubber projects have gone up at Plant Allen due to increases in material (steel and petroleum-based products) and labor costs. Explanations for these increases have been shared with the Public Staff.

Exhibits A and B outline current unit specific technology selections, projected operational dates, expected emission rates, and the corresponding tons of emissions that demonstrate compliance with the legislative requirements to the best of Duke Power's knowledge at this time. The projected estimates of 'environmental compliance costs' for these pollution control projects are included in Exhibit C.

Duke Power will continue to examine the technology selection, implementation schedule and associated costs. Annual updates will be provided to the NC Utilities Commission as required. If you have questions regarding any aspect of our plan, please do not hesitate to contact my office at 919-235-0955.

Sincerely,

George T. Everett

George T. Everett, Ph.D.
Director, Environmental/Legislative Affairs
Duke Power

Enclosures

cc: Robert P. Gruber
Executive Director – Public Staff
4326 Mail Service Center
Raleigh, NC 27699-4326

Duke Power Company

General Assembly of North Carolina Session 2001
Senate Bill 1078 – Improve Air Quality/Electric Utilities (NC Clean Air Legislation)
2006 Annual Data Submittal

1. A detailed report on the investor-owned public utility's plans for meeting the emissions limitations set out in G.S. 143-215.107D.

Exhibits A and B outline the plan as of this date for technology selections by facility and unit, projected operational dates, expected emission rates, and the corresponding tons of emissions that demonstrate compliance with the provisions of G.S. 143-215.107D. Changes to the expected plan for meeting these emissions limitations as compared to past compliance plans are highlighted in these exhibits and described below:

NO_x Compliance

- Technology Change – The Dan River Unit 3 SNCR project has been deleted from the plan because of the expected high cost to install and operate a single unit SNCR system.
- Schedule Changes – Numerous project schedule changes are included in this 2006 update:
  - The Buck Units 3&4 Burner projects were accelerated from 2008 to the spring of 2007 to better support compliance with the Phase I cap of 35,000 tons per year.
  - The Buck Unit 5 SNCR project was accelerated to the fall of 2006 to better align with the Buck Unit 6 SNCR schedule and allow for the most effective outage and work sequencing.
  - The Dan River Units 2&3 Burner projects were delayed until the fall of 2006 because of the elimination of the pollution control project (PCP) exemption in July 2005 and its effect on the permitting process.
  - The Riverbend Unit 4 SNCR project was accelerated to the spring of 2007 for outage optimization and to better support compliance with the Phase I cap of 35,000 tons per year.
  - The Riverbend Units 6&7 SNCR projects were accelerated to the fall of 2006 for outage optimization.
- Rate Changes – Expected rates have been adjusted in this 2006 update based on 2005 operational performance, project schedule changes and other factors:
  - Allen Units 1-5 expected rates were adjusted based on 2005 ozone season performance; Allen Units 1&3 SNCR operation demonstrated that 0.16 could be achieved with system optimization.
  - The Belews Creek Units 1&2 expected rates were also lowered based on 2005 ozone season results.
  - The Buck Units 3&4 rates were adjusted as a result of the Burner project accelerations.

- Buck Units 5&6 expected rates were lowered based on 2005 ozone season performance along with SNCR equipment guarantees.
- Cliffside Units 1&2 expected rates increased based on 2005 ozone season performance.
- The Cliffside 5 expected rate decreased slightly based on 2005 ozone season performance of the SCR equipment.
- The Dan River Unit 2 expected rate was adjusted slightly based on expected performance.
- The Dan River Unit 3 expected rate was changed based on expected performance of the burner equipment, the burner outage schedule and the deletion of the SNCR equipment.
- The Marshall Unit 2 expected rate changed due to the timing of the SNCR installation outage and 2005 ozone season performance.
- The Marshall Units 3&4 expected rates changed based on the 2005 ozone season performance and the current SNCR installation outage schedule; the 2009 expected rates for these units reflect expected further optimization of the SNCR equipment.
- The Riverbend expected rates were adjusted based on the SNCR installation schedule changes and lower SNCR equipment guarantees.

Because the expected 2009 NO_x emissions are so close to the 31,000 ton limit, Duke will continue to evaluate options to improve performance, including the addition of SCR on Marshall Unit 3 and reconsideration of a Dan River Unit 3 SNCR system.

SO_2 Compliance

- New Pulverized Coal (PC) Units – This 2006 update includes the proposed addition of two new 800 MW coal units in 2011 and 2012 at the Cliffside Steam Station. The 2013 expected compliance plan includes these units along with the associated retirement of Cliffside Units 1-4 if the new units are put in service.
- Schedule Changes – Both the Belews Creek Unit 2 and Cliffside Unit 5 FGD (Scrubber) operational dates were adjusted in this plan. The Belews Creek Unit 2 operational date has shifted slightly from the fall of 2007 until early 2008; the Cliffside 5 operational date has shifted out to 2010 to better align with the proposed operational dates for the new units.
- Rate Changes – Expected rate changes have been adjusted in this 2006 update based on changes to operational dates and other considerations:
  - The Allen expected rates were adjusted based on the new sequencing of FGD operational dates in 2009; Allen Units 1, 2 & 5 are now expected to be operational in the spring of 2009 and supported by one FGD absorber while Units 4&5 are expected to be operational in the fall of 2009 and supported by the second FGD absorber.
  - The Buck rates were adjusted based on the expected use of a lower sulfur coal
  - The Cliffside rates were adjusted based on the expected use of a higher sulfur coal and the FGD operational date change for Unit 5.

2. **The actual environmental compliance costs incurred by the investor-owned public utility in the previous calendar year, including a description of the construction undertaken and completed during that year.**

In the 2005 calendar year, Duke Power Company spent $346,420,000 on activities in support of compliance with the provisions of G.S. 143-215.107D. Exact amounts associated with each project are provided in Exhibit C, and a description of the associated activities is provided below:

Allen Steam Station FGD

- Initiated Phase II portion of project including preliminary engineering, project scope development, plant interface studies, contract exhibits and project estimates

Belews Creek Steam Station FGD

- Executed the Engineering, Procurement and Construction (EPC) agreement with the Consortium of ALSTOM Power Inc. and Shaw/Stone & Webster (Alstom/Shaw)
- Mobilized the project's construction management team to the Belews Creek site and initiated construction activities
- Completed the installation of a new fuel oil tank and the removal of the existing fuel oil and elevated water storage tanks from the area planned for the main portions of the FGD system
- Removed the existing hill from the area planned for the main portions of the FGD system (approximately 300,000 cubic yards of soil and rock)
- Initiated construction of the major foundations for the FGD system
- Completed approximately 20% of the overall project (approximately 10% of the construction activities)

Cliffside Steam Station Unit 5 FGD

- Continued preliminary construction planning and development of conceptual site layout

Marshall Steam Station FGD

- Completed fabrication and installation of absorber outlet ducts and flue liners
- Completed site earthwork for gypsum landfill, wetlands (including plantings)
- Completed all remaining major building and equipment foundations including wetlands equalization basin, transformers, switchgear and major tanks
- Completed structural steel erection for absorber, reagent prep, dewatering buildings, transfer towers 1&2, limestone unloading & stackout, and duct support sections 1 through 11
- Completed assembly of ball mills, absorber recycle pumps, hydrocyclones, dewatering belt filters, limestone unloading and major field-erected tanks
- Completed installation of underground piping, above group piping systems and makeup water station tie-ins

- Completed majority of transformers setting, switchgear and underground ductbank work
- Completed majority of material handing equipment installation
- Completed erection of all wastewater treatment tanks and sludge press building

Allen Steam Station SNCR, Unit 2

- Completed preliminary engineering

Allen Steam Station SNCR, Unit 3

- Completed installation of Unit 3 SNCR equipment and supporting plant air equipment

Allen Steam Station SNCR, Unit 4

- Completed detailed engineering and received mechanical, electrical and installation drawings
- Procured material in preparation for 2006 installation

Allen Steam Station SNCR, Unit 5

- Completed preliminary engineering

Buck Steam Station SNCR, Unit 5

- Completed preliminary engineering

Buck Steam Station SNCR, Unit 6

- Completed preliminary engineering

Dan River Steam Station Burners, Unit 2

- Completed detailed engineering and material procurement in preparation for 2006 installation

Dan River Steam Station Classifiers, Unit 2

- Completed installation of advanced static classifier technology in fall of 2005

Dan River Steam Station Burners, Unit 3

- Completed detailed engineering and material procurement in preparation for 2006 installation

Dan River Steam Station Classifiers, Unit 3

- Completed installation of advanced static classifier technology in fall of 2005

Marshall Steam Station SNCR, Unit 1

- Completed detailed engineering and received mechanical, electrical and installation drawings
- Procured material in preparation for 2006 installation

Marshall Steam Station SNCR, Unit 2

- Completed preliminary engineering

Marshall Steam Station SNCR, Unit 3

- Completed installation of SNCR equipment

Marshall Steam Station SNCR, Unit 4

- Continued preliminary engineering and planning for project

Riverbend Steam Station SNCR, Unit 4

- Completed preliminary engineering

Riverbend Steam Station Burners, Unit 5

- Incurred final costs associated with project to install burners on unit in early 2005

Riverbend Steam Station SNCR, Unit 5

- Completed preliminary engineering

Riverbend Steam Station Burners, Unit 6

- Completed installation of SOFA technology on unit in spring of 2005

Riverbend Steam Station Classifiers, Unit 6

- Completed installation of advanced static classifier technology in spring of 2005

Riverbend Steam Station SNCR, Unit 6

- Completed preliminary engineering

Riverbend Steam Station SNCR, Unit 7

- Completed preliminary engineering

3. **The amount of the investor-owned public utility's environmental compliance costs amortized in the previous calendar year.**

In the 2005 calendar year, **$311,236,000** was amortized related to construction work activity in support of compliance with the provisions of G.S. 143-215.107D. **$637,429,142** in total has now been amortized for the program through year-end 2005.

4. **An estimate of the investor-owned public utility's environmental compliance costs and the basis for any revisions of those estimates when compared to the estimates submitted during the previous year.**

The estimated 'environmental compliance costs' as defined in G.S. 143-215.107D are provided in Exhibit C. Changes to the expected costs as compared to past compliance plans are highlighted in this exhibit and described below:

- Allen FGD Project – The Allen FGD estimate has increased since 2005 and is attributable to ramp up in the power generation and/or environmental retrofit construction market, and continued escalation of labor costs. The Cliffside 5 FGD estimate is also affected by these issues, but is expected to be offset by savings if this project is executed in conjunction with the proposed construction of new generating units at the Cliffside station.
- SNCR Projects – In addition to the deletion of the Dan River Unit 3 SNCR project, refinement of the SNCR work scope at each location has resulted in a lower overall estimated cost. The most significant change to this scope over the last year has been to remove the Riverbend central reagent (urea) distribution center scope of work and replace with individual station storage and dilution water equipment.
- Dan River Unit 3 Burner Project – The Dan River Unit 3 Burner project experienced some costs increases estimated at $470,000 due to the delay in installation discussed above.

5. **A description of all permits required in order to comply with the provisions of G.S. 143-215.107D for which the investor-owned public utility has applied and the status of those permits or permit applications.**

Belews Creek Steam Station FGD

- NPDES Permit Modification – Submitted 6/30/04; received 5/16/05
- Initial Erosion Control Permit – Submitted 2/4/05; received 3/7/05
- Landfill Site Suitability Application – Submitted 3/30/05; expect Site Suitability by April 2006
- Air Permit Application for Belews Creek FGD project – Submitted 4/18/05; received 2/6/06
- Request to revise NPDES Permit to include FGD wastewater – Submitted 6/30/04; received permit revision 5/16/05
- Authorization to Construct (ATC) application for Wastewater Treatment System – Submitted 7/21/05; received 12/27/05
- Authorization to Construct (ATC) application for Constructed Wetlands – Submitted 7/21/05; expect final permit April 2006
- Revised Landfill Construction Plan Application – Submitted 9/30/05; expect permit July 2006
- Air Permit – Notice of Intent to Construct – Submitted 10/11/05; received 10/24/05
- NOTE: Revisions to Erosion Control Permit submitted on various dates; most recent revised permit received 12/20/05

Cliffside Steam Station Unit 5 FGD

- Air Permit Application – Submitted 12/16/05
- NOTE: A complimentary PSD permit application was submitted on this same 12/16/05 date for the proposed new generating units at the Cliffside site. If this associated PSD air permit is not approved or withdrawn, it will be necessary to submit a revised Air Permit Application for a standalone Unit 5 FGD.

Marshall Steam Station FGD

- Landfill Construction Plan Application – Submitted 4/1/04; received 2/4/05
- Sedimentation and Erosion Control Plan Permits
  - Limestone/Gypsum Conveyor – Submitted 6/17/04; received 7/9/04
  - Limestone/Gypsum Conveyor Expansion – Submitted 12/15/04; received 12/30/04
  - Constructed Wetland Treatment System – Submitted 7/26/04; received 8/18/04
  - Gypsum Landfill – Submitted 3/31/04; received 4/21/04
- Authorization to Construct (ATC) application for Solids Removal System – Submitted 11/19/04; received 12/22/04
- Authorization to Construct (ATC) application for Constructed Wetlands – Submitted 5/21/04; received 8/10/04

Allen Steam Station SNCR, Unit 3

- Air Permit Application – Submitted 7/15/04; Received 2/5/05

Allen Steam Station SNCR, Unit 4

- Air Permit Application – Submitted 7/15/05; Received 1/15/06

Marshall Steam Station SNCR, Unit 1

- Air Permit Application – Submitted 9/18/05; Received 12/20/05

Marshall Steam Station SNCR, Unit 2

- Air Permit Application – Submitted 9/18/05; Received 12/20/05

Marshall Steam Station SNCR, Unit 3

- Air Permit Application – Submitted 5/14/04; Received 10/13/04

Riverbend Steam Station SNCR, Unit 4

- Air Permit Application – Submitted 3/20/05; Received 8/1/05

Riverbend Steam Station Burners, Unit 5

- Air Permit Application – Submitted 4/2/04; Received 4/30/04

Riverbend Steam Station SNCR, Unit 5

- Air Permit Application – Submitted 3/20/05; Received 8/1/05

Riverbend Steam Station Burners, Unit 6

- Air Permit Application – Submitted 5/14/03; Received September 2003

Riverbend Steam Station SNCR, Unit 6

- Air Permit Application – Submitted 11/5/05; Received 1/1/06

Riverbend Steam Station SNCR, Unit 7

- Air Permit Application – Submitted 11/5/05; Received 1/1/06

6. A description of the construction related to compliance with the provisions of G.S. 143-215.107D that is anticipated during the following year.

Allen Steam Station FGD

- Finalize EPC agreement with the Alstom/Shaw consortium
- Relocate existing plant services including ash sluice lines, diesel oil tank, electrical and potable water lines
- Relocate existing rail spurs and switches
- Construct new FGD entrance road from state highway
- Begin earthwork and grading for project, including initial site clearing
- Begin installation of piles and foundations
- Install new ductwork tie-ins to Unit 2

Belews Creek Steam Station FGD

- Complete the construction of the major foundations for the FGD system
- Complete the construction of the concrete shell for the two new chimneys
- Complete all construction on approximately 5% of the sub-systems that make up the total FGD system
- Complete construction of the Constructed Wetlands (part of the wastewater treatment system)
- Initiate commissioning activities on the completed sub-systems of the total FGD system
- Achieve a completion status of 75% on the overall project (65% of construction activities)

Cliffside Steam Station Unit 5 FGD

- Continue engineering study to finalize the project scope, funding and implementation schedule

Marshall Steam Station FGD

- Mobilize large crane for ductwork installation
- Complete initial tie-in of the Unit 4 ductwork and install blanking plate
- Complete ductwork installation using large crane
- Complete construction, turnover and commissioning of Unit 4 and common systems

- Complete final tie-in of the Unit 4 ductwork and removal of blanking plate
- Begin testing and tuning of Unit 4 and common systems
- Achieve Substantial Completion for Unit 4 and common systems
- Complete initial tie-in of the Unit 3 ductwork and install blanking plate
- Complete construction, turnover and commissioning of Unit 3 systems
- Complete final tie-in of the Unit 3 ductwork and removal of blanking plate
- Begin testing and tuning of Unit 3 and common systems
- Achieve Substantial Completion for Unit 3 systems

Allen Steam Station SNCR, Unit 2

- Complete detailed engineering for SNCR equipment and reagent storage
- Begin material procurement activities in support of installation in early 2007
- Complete procurement and construction of reagent storage equipment

Allen Steam Station SNCR, Unit 4

- Complete installation of SNCR equipment, including incremental compressed air and dilution water systems, in time to support 2006 ozone season operation

Allen Steam Station SNCR, Unit 5

- No significant activity expected in 2006

Buck Steam Station Burners, Unit 3

- Complete detailed engineering and material procurement activities in support of installation in early 2007

Buck Steam Station Classifiers, Unit 3

- No significant activity expected in 2006

Buck Steam Station Burners, Unit 4

- Complete detailed engineering and material procurement activities in support of installation in early 2007

Buck Steam Station Classifiers, Unit 4

- No significant activity expected in 2006

Buck Steam Station SNCR, Unit 5

- Complete detailed engineering and material procurement activities in support of installation in late 2006
- Substantially complete installation of SNCR equipment including incremental air, dilution water and storage needs in time to support 2007 operation

Buck Steam Station SNCR, Unit 6

- Complete detailed engineering and material procurement activities in support of installation in late 2006
- Substantially complete installation of SNCR equipment including incremental air, dilution water and storage needs in time to support 2007 operation

Dan River Steam Station Burners, Unit 1

- No significant activity expected in 2006

Dan River Steam Station Burners, Unit 2

- Substantially complete installation of burners

Dan River Steam Station Burners, Unit 3

- Substantially complete installation of burners

Marshall Steam Station SNCR, Unit 1

- Complete installation of SNCR equipment in time to support 2006 ozone season operation

Marshall Steam Station SNCR, Unit 2

- Complete detailed engineering for SNCR equipment and reagent storage
- Begin material procurement activities in support of installation in early 2007
- Complete procurement and construction of reagent storage equipment

Marshall Steam Station SNCR, Unit 4

- Complete detailed engineering for SNCR equipment
- Begin material procurement activities in support of installation in early 2007

Riverbend Steam Station SNCR, Unit 4

- Complete detailed engineering for SNCR equipment
- Begin material procurement activities in support of installation in early 2007

Riverbend Steam Station SNCR, Unit 5

- Complete detailed engineering for SNCR equipment
- Begin material procurement activities in support of installation in late 2007

Riverbend Steam Station SNCR, Unit 6

- Complete detailed engineering and material procurement activities in support of installation in late 2006
- Substantially complete installation of SNCR equipment including reagent storage needs in time to support 2007 operation

Riverbend Steam Station SNCR, Unit 7

- Complete detailed engineering and material procurement activities in support of installation in late 2006
- Substantially complete installation of SNCR equipment including incremental air and dilution water needs in time to support 2007 operation

7. A description of the applications for permits required in order to comply with the provisions of G.S. 143-215.107D that are anticipated during the following year.

Allen Steam Station FGD

- Authorization to Construct (ATC) application for Wastewater Treatment System – Plan to submit August 2006; expect to receive February 2007
- Air Permit Application – Plan to submit April 2006; expect to receive approval July 2006
- Request to revise NPDES Permit to include FGD wastewater – Submitted 1/24/2006; expect to receive revision May 2006
- Submittal to DENR/ACOE regarding stream crossing of entrance road – Plan to submit March 2006
- NOTE: all erosion control permits are in EPC contractor's scope for the Allen FGD Project

Belews Creek Steam Station FGD

- Authorization to Construct (ATC) application for Sanitary Waste Lagoon – Plan to submit March 2006; expect to receive September 2006

Cliffside Steam Station Unit 5 FGD

- NOTE: A complimentary PSD permit application was submitted on 12/16/05 for the proposed new generating units at the Cliffside site. If this associated PSD air permit is not approved or withdrawn, it will be necessary to submit a revised Air Permit Application for a standalone Unit 5 FGD. This application would be made in the 3rd or 4th Quarter of 2006.

Allen Steam Station SNCR, Unit 2

- Air Permit Application – Plan to submit July 2006; expect to receive approval January 2007

Allen Steam Station SNCR, Unit 4

- Authorization to Construct (ATC) application for the dilution water piping – Plan to submit to the City of Belmont March 2006

Buck Steam Station Burners, Unit 3

- Air Permit Application – Plan to submit March 2006; expect to receive approval February 2007

Buck Steam Station Burners, Unit 4

- Air Permit Application – Plan to submit March 2006; expect to receive approval February 2007

Buck Steam Station SNCR, Unit 5

- Air Permit Application – Plan to submit March 2006; expect to receive approval July 2006

Buck Steam Station SNCR, Unit 6

- Air Permit Application – Plan to submit March 2006; expect to receive approval July 2006

Dan River Steam Station Burners, Unit 1

- Air Permit Application – Submitted 2/23/06; expect to receive approval August 2006

Dan River Steam Station Burners, Unit 2

- Air Permit Application – Submitted 2/23/06; expect to receive approval September 2006

Dan River Steam Station Burner Project, Unit 3

- Air Permit Application – Submitted 2/23/06; expect to receive approval September 2006

Marshall Steam Station SNCR, Unit 4

- Air Permit Application – Plan to submit September 2006; expect to receive approval January 2007

8. The results of equipment testing related to compliance with G.S. 143-215.107D.

No additional equipment related testing occurred in 2005. The SNCR and SCR tests that occurred in prior years that were used in evaluating technology selections are repeated in this 2006 report for reference.

Allen Steam Station SNCR, Unit 1

- SNCR Equipment installation was completed in May 2003 followed by equipment acceptance testing in late 2003. During this test run, it was determined that the SNCR system met all commercial performance guarantees with approximately a 25% reduction in NOx with ammonia slip of less than 5 ppm at full load
- During the 2004 ozone season, Allen Unit 1 achieved a 0.162# NO_x/MMBTU outlet rate, 5% better than the 0.17#/MMBTU target established for the unit.

Belews Creek Steam Station SCR

- SCR Equipment installation was completed in 2003 in support of the EPA/SIP Call requirements for NO_x reduction. While Belews Creek had operational problems in the first half of the 2004 ozone season, many of these issues were addressed on Belews Creek Unit 1 by August, 2004. Subsequently, tests performed during the months of August and September showed that when the SCR Equipment was in service during this time, emissions averaged 0.07# NO_x/MMBTU

9. The number of tons of oxides of nitrogen (NO_x) and sulfur dioxide (SO_2) emitted during the previous calendar year from the coal-fired generating units that are subject to the emissions limitations set out in G.S. 143-215.107D.

In the 2005 calendar year, 56,073.3 tons of NO_x and 298,780.5 tons of SO_2 were emitted from the North Carolina based Duke Power Company coal-fired units located in North Carolina and subject to the emissions limitations set out in G.S 143-215.107D.

10. The emissions allowances described in G.S. 143-215.107D(i) that are acquired by the investor-owned public utility that result from compliance with the emissions limitations set out in G.S. 143-215.107D.

No emissions allowances have been acquired by Duke Power Company resulting from compliance with the emissions limitations set out in G.S. 143-215.107D.

11. Any other information requested by the Commission or Department of Environment and Natural Resources.

No additional information has been requested to be included in this annual data submittal.

Expected Duke Power Company Compliance for NC Clean Air Plan as of 4/1/2006
(Exhibit A)

NO_x								
				2007 Compliance		2009 Compliance		
Facility	Unit	Technology	Operational Date	Expected Rate #/MMBTUs	Tons	Expected Rate #/MMBTUs	Tons	
Allen	1	SNCR	2003	0.160	901	0.160	851	
Allen	2	SNCR	2007	0.180	799	0.160	798	
Allen	3	SNCR	2005	0.160	1,409	0.160	1,297	
Allen	4	SNCR	2006	0.160	1,537	0.160	1,451	
Allen	5	SNCR	2008	0.220	2,078	0.160	1,377	
Belews Creek	1	SCR	2003	0.065	1,942	0.060	2,425	
Belews Creek	2	SCR&Burners	2004	0.060	2,260	0.060	1,871	
Buck	3	Burners	2007	0.280	489	0.220	308	
Buck	4	Burners	2007	0.280	295	0.220	196	
Buck	5	SNCR	2006	0.150	582	0.150	605	
Buck	6	SNCR	2006	0.150	581	0.150	604	
Cliffside	1	Tuning Only	2004	0.360	302	0.360	255	
Cliffside	2	Tuning Only	2004	0.360	300	0.360	262	
Cliffside	3	Tuning Only	2004	0.400	587	0.400	544	
Cliffside	4	Tuning Only	2004	0.400	593	0.400	538	
Cliffside	5	SCR	2002	0.060	1,099	0.060	1,141	
Dan River	1	Burners	2008	0.370	614	0.220	345	
Dan River	2	Burners	2006	0.220	388	0.220	369	
Dan River	3	Burners	2006	0.220	828	0.220	825	
Marshall	1	SNCR	2006	0.170	2,212	0.170	2,256	
Marshall	2	SNCR	2007	0.190	2,008	0.170	2,241	
Marshall	3	SNCR	2005	0.190	4,322	0.180	4,328	
Marshall	4	SNCR	2007	0.190	4,305	0.180	4,078	
Riverbend	4	SNCR	2007	0.200	466	0.170	400	
Riverbend	5	SNCR&Burners	2008	0.240	516	0.170	401	
Riverbend	6	SNCR&Burners	2006	0.150	570	0.150	565	
Riverbend	7	SNCR	2006	0.150	549	0.150	578	
			Expected Total:		32,533		30,909	*** NOTE 1 ***
			Compliance Limit:		35,000		31,000	

*** NOTE 1 *** Because the expected 2009 NO_x emissions are so close to the 31,000 ton limit, Duke will continue to evaluate options to improve performance, including SCR on Marshall Unit 3 and/or SNCR on Dan River Unit 3.

Technology:
Burners -- Overfired Air or Separated Overfired Air with associated Mill Classifier installations
SCR -- Selective Catalytic Reduction
SNCR -- Selective Non-Catalytic Reduction
Changes from 4/1/2005 Plan Highlighted

Expected Duke Power Company Compliance for NC Clean Air Plan as of 4/1/2006
(Exhibit B)

SO_2							
				2009 Compliance		2013 Compliance	
Facility	Unit	Technology	Operational Date	Expected Rate #/MMBTUs	Tons	Expected Rate #/MMBTUs	Tons
Allen	1	Scrubber	2009	0.500	2,659	0.150	747
Allen	2	Scrubber	2009	0.500	2,488	0.150	727
Allen	3	Scrubber	2009	1.200	9,864	0.150	1,183
Allen	4	Scrubber	2009	1.200	10,746	0.150	1,031
Allen	5	Scrubber	2009	0.500	4,215	0.150	1,217
Belews Creek	1	Scrubber	2008	0.150	5,927	0.150	5,512
Belews Creek	2	Scrubber	2008	0.150	4,579	0.150	4,639
Buck	3			1.100	1,543	1.100	1,748
Buck	4			1.100	983	1.100	1,087
Buck	5			1.100	4,412	1.100	3,671
Buck	6			1.100	4,410	1.100	4,297
Cliffside	1			1.650	1,170	0.000	0
Cliffside	2			1.650	1,198	0.000	0
Cliffside	3			1.650	2,243	0.000	0
Cliffside	4			1.650	2,213	0.000	0
Cliffside	5	Scrubber	2010	1.650	31,193	0.150	2,755
Cliffside	6	Scrubber	2011	0.000	0	0.080	2,240
Cliffside	7	Scrubber	2012	0.000	0	0.080	2,237
Dan River	1			1.400	2,184	1.400	2,233
Dan River	2			1.400	2,336	1.400	2,368
Dan River	3			1.400	5,202	1.400	5,229
Marshall	1	Scrubber	2007	0.150	1,952	0.150	1,971
Marshall	2	Scrubber	2007	0.150	1,940	0.150	1,592
Marshall	3	Scrubber	2007	0.150	3,539	0.150	3,520
Marshall	4	Scrubber	2006	0.150	3,333	0.150	3,387
Riverbend	4			1.550	3,635	1.550	3,620
Riverbend	5			1.550	3,641	1.550	3,454
Riverbend	6			1.550	5,799	1.550	5,736
Riverbend	7			1.550	5,942	1.550	5,891
			Expected Total:		129,346		72,090
			Compliance Limit:		150,000		80,000

Changes from 4/1/2005 Plan Highlighted

Expected Duke Power Company Compliance Plan for NC Clean Air Plan as of 4/1/2006
(Exhibit C)

				Spent to Date					Remaining	
Facility	Unit(s)	Technology	Operational Date	2001 ($000)	2002 ($000)	2003 ($000)	2004 ($000)	2005 ($000)	2006-2010 ($000)	Project Total ($000)
Allen	1-5	Scrubber	2009	$0.9	($0.9)	$1,099.8	($11.8)	$5,348.3	$420,820.3	$427,256.6
Belews Creek	1-2	Scrubber	2008	$0.0	$0.0	$1,121.3	$5,999.1	$106,433.5	$422,757.4	$536,311.3
Cliffside	5	Scrubber	2010	$0.0	$0.0	$978.5	$287.5	$112.0	$250,798.4	$252,176.3
Marshall	1-4	Scrubber	2007	$0.0	$0.0	$10,213.7	$92,096.3	$218,129.8	$102,994.6	$423,434.4
Allen	1	SNCR	2003	$177.3	$162.4	$2,884.1	$364.9	$0.0	$0.0	$3,588.7
Allen	2	SNCR	2007	$0.0	$0.0	$0.0	$0.0	$239.3	$4,821.6	$5,061.0
Allen	3	SNCR	2005	$0.0	$0.0	$215.7	$2,584.1	$4,091.5	$0.0	$6,891.4
Allen	4	SNCR	2006	$0.0	$0.0	$0.0	$217.9	$1,122.2	$4,410.1	$5,750.2
Allen	5	SNCR	2008	$0.0	$0.0	$98.9	$164.6	$122.3	$4,224.0	$4,609.8
Buck	3	Burner	2007	$0.0	$0.0	$0.0	$0.0	$0.0	$3,775.0	$3,775.0
Buck	3	Classifier	2007	$0.0	$0.0	$0.0	$0.0	$0.0	$292.0	$292.0
Buck	4	Burner	2007	$0.0	$0.0	$0.0	$0.0	$0.0	$2,077.0	$2,077.0
Buck	4	Classifier	2007	$0.0	$0.0	$0.0	$0.0	$0.0	$172.0	$172.0
Buck	5	SNCR	2006	$0.0	$0.0	$0.0	$268.2	$345.9	$4,828.0	$5,442.1
Buck	6	SNCR	2006	$0.0	$0.0	$0.0	$265.8	$335.3	$3,150.0	$3,751.1
Dan River	1	Burner	2008	$0.0	$0.0	$0.0	$0.0	$0.0	$2,112.0	$2,112.0
Dan River	1	Classifier	2008	$0.0	$0.0	$0.0	$0.0	$0.0	$171.0	$171.0
Dan River	2	Burner	2006	$0.0	$0.0	$0.0	$0.0	$775.4	$1,231.1	$2,006.5
Dan River	2	Classifier	2005	$0.0	$0.0	$0.0	$0.0	$130.8	$0.0	$130.8
Dan River	3	Burner	2006	$7.5	$162.3	$22.2	$512.8	$679.0	$1,832.5	$3,216.3
Dan River	3	Classifier	2005	$0.0	$0.0	$0.0	$0.0	$184.3	$0.0	$184.3
Marshall	1	SNCR	2006	$0.0	$0.0	$0.8	$167.2	$1,418.4	$2,620.0	$4,206.4
Marshall	2	SNCR	2007	$0.0	$0.0	$197.6	$185.4	$778.3	$5,292.0	$6,453.2
Marshall	3	SNCR	2005	$0.0	$0.0	$1,577.4	$652.1	$2,042.4	$0.0	$4,271.8
Marshall	4	SNCR	2007	$0.0	$0.0	$0.0	$0.0	$43.3	$3,925.0	$3,968.3
Riverbend	4	SNCR	2007	$0.0	$0.0	$0.0	$45.6	$474.3	$3,323.2	$3,843.1
Riverbend	5	Burner	2005	$362.8	$284.3	$2.8	$2,313.4	$180.0	$0.0	$3,143.3
Riverbend	5	Classifier	2005	$0.0	$0.0	$0.0	$159.6	$0.0	$0.0	$159.6
Riverbend	5	SNCR	2008	$0.0	$0.0	$0.0	$1.5	$321.7	$3,758.3	$4,081.5
Riverbend	6	Burner	2005	$144.0	$416.1	$12.2	$510.4	$2,096.4	$0.0	$3,179.1
Riverbend	6	Classifier	2005	$0.0	$0.0	$0.0	$0.0	$189.4	$0.0	$189.4
Riverbend	6	SNCR	2006	$0.0	$0.0	$0.0	$1.5	$340.3	$4,326.1	$4,667.9
Riverbend	7	SNCR	2006	$0.0	$0.0	$0.0	$48.5	$485.8	$4,402.8	$4,937.0
			Subtotals:	$692.4	$1,024.2	$18,424.9	$106,834.5	$346,420.0	$1,258,114.4	
								NC-CAP Total:	$1,731,510.4	

SO_2

NO_x

Significant changes from 4/1/2005 Plan Highlighted

Progress Energy

March 30, 2006

Mrs. Geneva S. Thigpen
Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

Re: Annual NC Clean Smokestacks Act Compliance Report
Docket No. E-2, Sub 815

Dear Mrs. Thigpen:

Progress Energy Carolinas, Inc. submits the attached report for calendar year 2005 regarding the status of compliance with the provisions of the North Carolina Clean Smokestacks Act. Section 9(i) of the Act requires that an annual report of compliance progress be submitted to the Commission by April 1 of each year for the previous calendar year.

Very truly yours,

Len S. Anthony /mhm

Len S. Anthony
Deputy General Counsel-Regulatory Affairs

LSA:mhm

Attachment

232822

Progress Energy Service Company, LLC
P.O. Box 1551
Raleigh, NC 27602

Progress Energy

2006

March 30, 2006

Mr. William G. Ross, Jr.
Secretary
North Carolina Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

Dear Secretary Ross:

Progress Energy Carolinas, Inc. (PEC) submits the attached report for calendar year 2005 regarding the status of compliance with the provisions of the North Carolina Clean Smokestacks Act. Section 9(i) of the Act requires that an annual compliance progress report be submitted by April 1 of each year for the previous calendar year. PEC appreciates the efforts of your staff to work with us and looks forward to continuing our positive working relationship to facilitate fulfillment of PEC's obligations with this important law.

Please don't hesitate to contact me at (919) 546-3775 if you have any questions.

Sincerely,

Caroline Choi
Director, Environmental Services

c: North Carolina Utilities Commission
Keith Overcash, DAQ

Progress Energy Service Company, LLC
PO Box 1551
Raleigh, NC 27602

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Progress Energy Carolinas, Inc.
North Carolina Clean Smokestacks Act
Calendar Year 2005 Progress Report

On June 20, 2002, North Carolina Senate Bill 1078, also known as the "Clean Smokestacks Act," was signed into effect. This law requires significant reductions in the emissions of nitrogen oxides (NOx) and sulfur dioxide (SO_2) from utility owned coal-fired power plants located in North Carolina. Section 9(i) of the bill, which is now incorporated as Section 62-133.6(i) of the North Carolina General Statutes, requires that an annual progress report regarding compliance with the Clean Smokestacks Law be submitted on or before April 1 of each year. The report must contain the following elements, taken verbatim from the statute:

1. A detailed report on the investor-owned public utility's plans for meeting the emissions limitations set out in G.S. 143-215.107D.
2. The actual environmental compliance costs incurred by the investor-owned public utility in the previous calendar year, including a description of the construction undertaken and completed that year.
3. The amount of the investor-owned public utility's environmental compliance costs amortized in the previous calendar year.
4. An estimate of the investor-owned public utility's environmental compliance costs and the basis for any revisions of those estimates when compared to the estimates submitted during the previous year.
5. A description of all permits required in order to comply with the provisions of G.S. 143-215.107D for which the investor-owned public utility has applied and the status of those permits or permit applications.
6. A description of the construction related to compliance with the provisions of G.S. 143-215.107D that is anticipated during the following year.
7. A description of the applications for permits required in order to comply with the provisions of G.S. 143-215.107D that are anticipated during the following year.
8. The results of equipment testing related to compliance with G.S. 143-215.107D.
9. The number of tons of oxides of nitrogen (NOx) and sulfur dioxide (SO_2) emitted during the previous calendar year from the coal-fired generating units that are subject to the emissions limitations set out in G.S. 143-215.107D.
10. The emissions allowances described in G.S. 143-215.107D(i) that are acquired by the investor-owned public utility that result from compliance with the emissions limitations set out in G.S. 143-215.107D.
11. Any other information requested by the Commission or the Department of Environment and Natural Resources.

Information responsive to each of these report elements follows. The responses are given by item number in the order in which they are presented above.

1. **A detailed report on the investor-owned public utility's plans for meeting the emissions limitations set out in G.S. 143-215.107D.**

The plan for Progress Energy Carolinas, Inc. was originally submitted on July 29, 2002. Appendix A contains an updated version of this plan, effective April 1, 2006. We continue to evaluate various design, technology and generation options that could affect our future compliance plans.

2. **The actual environmental compliance costs incurred by the investor-owned public utility in the previous calendar year, including a description of the construction undertaken and completed that year.**

The actual capital costs incurred by Progress Energy in 2005 were $181,274,000.

We successfully placed in service our first wet scrubber on Asheville Unit 1 in November 2005. A significant amount of work was performed at the Asheville plant in 2005 in order to place the Unit 1 scrubber in service. This work included the installation of electrical power and control cables and circuits, piping, pumps, valves, oxidation air compressors, instruments and controls (including the scrubber distributed control system), agitators, absorber tower outlet hood, spray headers, trays and other tower internals, limestone and gypsum handling equipment, and gypsum dewatering equipment. Work efforts also included constructing the wetlands and industrial wastewater treatment system for treating scrubber blowdown wastewater, completing ductwork from the precipitator to the scrubber tower and from the scrubber tower to the stack, and installing new induced draft fans and various other process equipment. Much of the equipment noted above was also installed for the Asheville Unit 2 scrubber, which will be placed in service in 2006.

In addition to the scrubber projects at Asheville, detailed design, engineering and procurement activities began for the Asheville Unit 1 SCR, which will be installed and operational in late 2007. Based on the changes in forecasted energy demand, the in-service date for these NOx controls was accelerated from 2008 to ensure compliance with the Act's annual tonnage cap. Detailed design and engineering activities included preparation of various specifications and bill of materials, civil engineering of foundation systems, structural engineering of flue gas path components and associated structural steel, and mechanical engineering for various piping systems. Work on the Asheville Unit 1 SCR also included issuing purchase orders for the SCR catalyst, ammonia injection grids, static mixers, urea to ammonia system equipment, ash handling system changes, and sonic horns.

At the Roxboro plant, environmental projects work increased significantly in 2005. Engineering, procurement and construction began or continued for each of the four units. The new electrical switchgear building that will provide power for much of the common

scrubber equipment was completed. Various power distribution panels and load centers located in the electrical switchgear building were placed into service. Purchase orders were issued for most of the major equipment. Structural steel was erected, along with various floor elevations for the new limestone preparation/gypsum dewatering building. Erection began on the limestone ball mills and the limestone storage silos. Two new concrete chimney shells (one for Units 1 and 2 and one for Units 3 and 4) were constructed. Many of the fiberglass reinforced plastic sections that make up the flue gas liners were fabricated off site to be ready for installation beginning in early 2006. Foundations were completed for all four absorber towers and their adjacent pump buildings. The ceramic tile-lined concrete absorber tower for the Unit 2 scrubber was built. Excavation began for the limestone storage pile and conveying equipment. Erection also started on the pipe bridge between the absorber towers and the limestone preparation/gypsum dewatering building.

At the Mayo plant, initial general arrangement drawings for the wet scrubber were developed. Engineering studies were completed for the scrubber distributed controls system, electrical power distribution, and induced draft fans options. Work began on the water supply, scrubber blowdown wastewater treatment, and boiler/ductwork transient analysis studies. Engineering was also performed to support the modeling required to determine the height of the new chimney. A purchase order was issued for the absorber recycle pumps. The procurement of these pumps requires a long lead time; they were purchased in 2005 to ensure availability and minimize cost increases. A milestone project schedule was developed. There were no construction activities in 2005.

At the Lee plant, preliminary engineering, design, and procurement activities were initiated for the installation of low-NOx burners in 2006. The PSD permit application was prepared and submitted to the Division of Air Quality for review and approval. There were no construction activities in 2005.

At the Sutton Plant, preliminary engineering, design, and procurement activities were initiated for the installation of low-NOx burners in 2006. There were no construction activities in 2005.

3. The amount of the investor-owned public utility's environmental compliance costs amortized in the previous calendar year.

Progress Energy Carolinas, Inc. amortized $147 million in 2005.

4. An estimate of the investor-owned public utility's environmental compliance costs and the basis for any revisions of those estimates when compared to the estimates submitted during the previous year.

Appendix B contains the capital costs incurred toward compliance with G.S. 143-215.107D in 2005 and the projected costs for future years through 2013, which show the net cost to PEC excluding the portion for which the Power Agency is responsible. The

estimated total capital costs, including escalation, are currently projected to be between $1.1B and $1.4B, with the current point estimate being $1.36B. This represents an increase of 52% from the 2005 cost estimate of $895 million. Prior reports have discussed the cost impact of project scope changes such as the use of a wet scrubber at Asheville in lieu of a dry scrubber, the capability to burn higher sulfur coals, and increased sulfur removal efficiency; all of which provide increased fuel flexibility for the Asheville, Roxboro, and Mayo plants. These additional cost increases reflect 1) increased costs for materials of construction, such as steel, concrete, and electrical power and control cables; 2) the need for a greater volume of these materials than originally forecast; 3) increased costs for equipment, such as pumps, fans, and electrical transformers; 4) the addition of wastewater treatment facilities, which were not included in the original program estimate; and 5) adjusting future project costs based on the actual project costs for our first completed scrubber and the current detailed cost estimates for the scrubbers under construction. It should be noted that significant design work remains to be completed, especially for the SO_2 controls at Mayo, Cape Fear, and Sutton. Our current estimates are subject to further adjustment as the engineering for these projects is completed.

The cost increases that we are experiencing are not unique to PEC. Other utilities with major construction projects for environmental controls are experiencing similar increases. Significant cost increases are also being experienced on other, non-utility, large construction projects in North Carolina, especially in the Raleigh area. For example, the project costs for the expansion of Terminal C at the Raleigh Durham International Airport were recently reported to have increased by 23% over the last 3 years due to inflation and rising building costs; projected costs for new Wake County schools were recently reported to have increased by 18-20% a year compared with an overall inflation rate of 2.7 to 3.4% due to higher prices for construction materials; the project costs for the planned commuter rail service from Raleigh to Durham were recently reported to have increased by 9% since 2004 (not adjusted for inflation); and the costs for the new Raleigh convention center currently under construction were recently reported to have increased by 12% due to the volatility of equipment and material prices in the construction market.

Independent cost indices, such as the Chemical Engineering Plant Cost Index, also show that the costs for construction labor and materials have increased sharply. The net overall plant escalation from December 2002 through November 2005 was 19%, which is substantially higher than the 2.0 to 2.5% per year (7.7% over the same December 2002-November 2005 period) escalation rates used for the original program cost estimates.

5. A description of all permits required in order to comply with the provisions of G.S. 143-215.107D for which the investor-owned public utility has applied and the status of those permits or permit applications.

Progress Energy applied for the following permits in 2005:

Asheville Plant

Erosion and Sedimentation Control Plan

Several updates were submitted for the erosion and sedimentation control plan:

- Rev H for the wastewater treatment discharge pipeline, truck scale, truck wash station was approved April 6, 2005.
- Rev 1 for the river pumps conduit was approved June 2, 2005.
- Rev I for the Unit 1 SCR was approved November 14, 2005.

NPDES Permit

An Authorization to Construct (ATC) the wastewater treatment system for the pretreatment of flue gas desulfurization wastewater was approved March 29, 2005 –ATC No. 0000396A03.

The ATC engineer's certifications for pretreatment and constructed wetlands were submitted November 8, 2005.

Roxboro Plant

Air Permit

An update to the air permit for coal handling and limestone handling was submitted on August 25, 2005. This permit was issued on February 9, 2006.

Erosion and Sedimentation Control Plan

Several updates were submitted for the erosion and sedimentation control plan:

- Rev G for the gypsum storage area was approved January 21, 2005
- Rev H was rolled in with Rev G (revision H was a response to questions on revision G) and so was also approved January 21, 2005.
- Rev I for the emergency access road, fire protection piping, conduit, temporary haul road was approved May 17, 2005.
- Rev J for the makeup water pipeline, gypsum conveyor foundations, settling pond and bioreactor site was approved September 13, 2005

Wetlands Permitting

An Army Corps of Engineers permit and water quality certification to fill wetlands for gypsum storage area was received September 6, 2005.

NPDES permit

An NPDES permit for the wastewater treatment system was received August 10, 2005.

Submissions were made for the Authorization to Construct (ATC) the wastewater treatment system on October 3, November 1 and December 2, 2005. Approval for construction of the settling basin is expected in March 2006. Approval for the construction of the bioreactor is expected in the second quarter of 2006.

Dam/Impoundment Safety

Progress Energy's letter to the NCUC identifying work in the ash pond was approved December 5, 2005.

Lee Plant

Air Permit

A prevention of significant deterioration (PSD) permit application for the installation of low NOx burners was submitted on December 7, 2005. A draft permit was received February 13, 2006 and is expected to be final in March 2006.

Sutton Plant

Air Permit

Air permit 01318T18 for the installation of Low NOx Burners was received February 21, 2005.

6. A description of the construction related to compliance with the provisions of G.S. 143-215.107D that is anticipated during the following year.

Appendix C presents the planned construction schedule for compliance with G.S. 143-215.107D. Please note that this is a projected schedule of construction activity through 2013 that is subject to modification. The schedule will be updated as part of this report each year.

The planned construction activities at Asheville in 2006 include the completion of the mechanical, electrical and controls systems for the Unit 2 scrubber. This includes completion of the flue gas ductwork from the precipitator to the absorber tower, and installation, checkout and commissioning of the major equipment including the distributed controls system and absorber recycle pumps. Systems common to both Units 1 and 2 were commissioned during the checkout and startup activities for the Unit 1 scrubber. The unit 2 scrubber is expected to be placed into service at the end of May

Construction activities will also begin for the Asheville Unit 1 SCR project. These activities include installation of foundations for the new SCR structural steel; fabrication,

delivery and erection of the SCR support steel; fabrication and delivery of the inlet and outlet ducts for the SCR and the SCR reactor modules; and various mechanical and electrical activities to support placing this SCR in service in 2007.

At Roxboro, the significant construction activities for the Unit 2 scrubber include installation of the absorber recycle pumps, hydroclones, oxidation air compressors, absorber tower outlet hood, flue gas ductwork from the precipitator to the absorber tower and from the absorber tower to the chimney, spray headers, trays and other tower internals, agitators, and various process piping and tanks. Flue liners for each boiler will be installed in the chimney. The structural steel for the absorber recycle pump building will be erected. Systems common to the scrubbers for all units such as the gypsum handling conveyors, limestone handling and preparation equipment (conveyors, feeders, silos, and ball mills), dewatering equipment (belt filters), wastewater treatment settling ponds and bio-reactor will be installed. Various mechanical, electrical and controls equipment that support the scrubber process will also be installed. Installation of the gypsum conveyor from the dewatering building to the storage pile will begin. Construction activities for the Unit 3 and Unit 4 scrubbers will include the erection of the absorber tower for each unit and installation of the flue gas liners in the Units 3 and 4 chimneys. Installation will begin for various electrical power and control cables and circuits along with the installation of various process equipment and piping. Minimal construction activities for Unit 1 will be performed. Construction of these systems and the scrubber blowdown wastewater treatment system will continue through 2008.

7. A description of the applications for permits required in order to comply with the provisions of G.S. 143-215.107D that are anticipated during the following year.

Several recent changes to permitting processes in the state have dramatically increased the lead time to prepare and review environmental permits necessary for Clean Smokestacks projects. A recent court decision [D.C. Circuit Court of Appeals Decision in *New York v. EPA*, No. 02-1387 (June 24, 2005)] eliminated the provision exempting pollution control equipment from new source review. For Progress Energy Carolinas, this results in increased costs for consultants and modeling. For the NC Division of Air Quality (DAQ), this results in longer permit application processing times. For example, the application for the installation of a low-NOx burner, which formerly took 3-4 months, now requires review under the PSD program, a process typically lasting a year or more. The staff at the DAQ has expedited this process for the recent permit submission for the Lee plant. We appreciate the collaborative efforts the DAQ staff has made to assure our construction and installation schedules remain on track. However, the longer permit processing times continue to be a serious concern for future projects as not every permit can reasonably be expedited. PEC wishes to work collaboratively with the DAQ to prevent such delays from occurring.

The following permit applications and permit approvals are anticipated for 2006:

Asheville Plant

Air Permit

Revisions to the air permit may be necessary to test and, if necessary, install technology to reduce emissions of SO_3.

Erosion and Sedimentation Control Plan

Revision J for the construction of the demineralizer pipe, pump and ductbank was approved in January 2006.

Roxboro Plant

Air Permit

Revisions to the air permit will be necessary to address fugitive emissions of hydrogen sulfide from the wastewater treatment system.

NPDES Permit

The ATC for the gypsum settling pond was received March 3, 2006.
Receipt of the ATC for the bioreactor is anticipated in the second quarter 2006.

Erosion and Sedimentation Control Plan

- Rev K for the haul road, transformers, main plant area wastewater pipe trench and gypsum conveyor foundations was approved in February 2006
- Rev L for burying the wastewater pipeline - approval is anticipated second quarter 2006

Additional revisions to the plan may be necessary.

Mayo Plant

Air Permit

A construction permit will be required for the flue gas desulfurization system - anticipated submission Spring 2005.

NPDES Permit

NPDES permit modification application for wastewater treatment system submitted February 23, 2006.

A request for authorization to construct the wastewater treatment system is expected to be submitted in the fourth quarter 2006.

Erosion and Sedimentation Control Plan

The first of the erosion and sedimentation plans for the main construction area and laydown yards will be submitted during the second quarter, 2006. Additional plan revisions will be necessary as construction plans are developed.

Cape Fear Plant

Air Permit

A construction permit may be required to conduct a trial of an air pollution control technology. If required, this permit application will be submitted during the second quarter of 2006.

Lee Plant

Air Permit

A construction permit will be required for the installation of the Rotamix system for NOx control. This permit application will be submitted during the second quarter 2006.

8. The results of equipment testing related to compliance with G.S. 143-215.107D.

No equipment testing related to compliance with G.S. 143-215.107D occurred in 2005.

9. The number of tons of oxides of nitrogen (NOx) and sulfur dioxide (SO_2) emitted during the previous calendar year from the coal-fired generating units that are subject to the emissions limitations set out in G.S. 143-215.107D.

The total calendar year 2005 emissions from the affected coal-fired Progress Energy Carolinas units are:

NOx 49,621 tons
SO_2 202,041 tons

10. The emissions allowances described in G.S. 143-215.107D(i) that are acquired by the investor-owned public utility that result from compliance with the emissions limitations set out in G.S. 143-215.107D.

During 2005, PEC did not acquire any allowances as a result of compliance with the emission limitations set out in N.C. General Statute 143-215.107D.

11. Any other information requested by the Commission or the Department of Environment and Natural Resources.

NC Clean Smokestacks Audit Public Staff Data Request No. 5 was issued to Progress Energy Carolinas in February of 2005, and a response was provided on March 4, 2005. NC Clean Smokestacks Commission staff request was issued to Progress Energy Carolinas in April of 2005, and a response was provided on May 2, 2005 with revisions filed on May 6, 2005. NC Clean Smokestacks Audit Public Staff Data Request No. 6 was issued to Progress Energy Carolinas in February of 2006, and a response was provided on March 24, 2006.

Appendix A

Progress Energy Carolinas, Inc's (PEC) Air Quality Improvement Plan Supplement

April 1, 2006

On June 20, 2002, Governor Easley signed into law SB1078, which caps emissions of nitrogen oxides (NOx) and sulfur dioxide (SO_2) from utility owned coal-fired power plants located in North Carolina. PEC's annual NOx emissions must be less than 25,000 tons beginning in 2007 and annual SO_2 emissions must be less than 100,000 tons beginning in 2009 and less than 50,000 tons beginning in 2013. These caps represent a 56% reduction in NOx emissions from 2001 levels and a 74% reduction in SO_2 from 2001 levels for PEC.

PEC owns and operates 18 coal-fired units at seven plants in North Carolina. The locations of these plants are shown on Attachment 1.

Nitrogen Oxides Emissions Control Plan

PEC has been evaluating and installing NOx emissions controls on its coal-fired power plants since 1995 in order to comply with Title IV of the Clean Air Act and the NOx SIP Call rule adopted by the Environmental Management Commission (EMC). Substantial NOx emissions reductions have already been achieved (50,000 tons of NOx in 2004 compared with 112,000 tons in 1997) and further reductions will ensure compliance with the Clean Smokestacks Act 25,000 ton cap in calendar year 2007. This target will be achieved with a mix of combustion controls (which minimize the formation of NOx) such as low-NOx burners and over-fire air technologies, and post-combustion controls (which reduce NOx produced during the combustion of fossil fuel to molecular nitrogen) such as selective catalytic reduction (SCR) and selective non-catalytic reduction (SNCR) technologies.

Attachment 2 details PEC's North Carolina coal-fired electric generating units, their name plate generation capacity, the control technologies already installed, and those planned for installation. As technologies evolve or other circumstances change, a different mix of controls may be selected. Attachment 2 also projects the NOx emissions on a unit-by-unit basis based on the energy demand forecast and expected efficiencies of the NOx emissions controls employed. This information is provided only to show how compliance may be achieved and is not intended in any way to suggest unit-specific emission limits. Actual emissions for each unit may be substantially different in 2007.

Sulfur Dioxide Emissions Control Plan

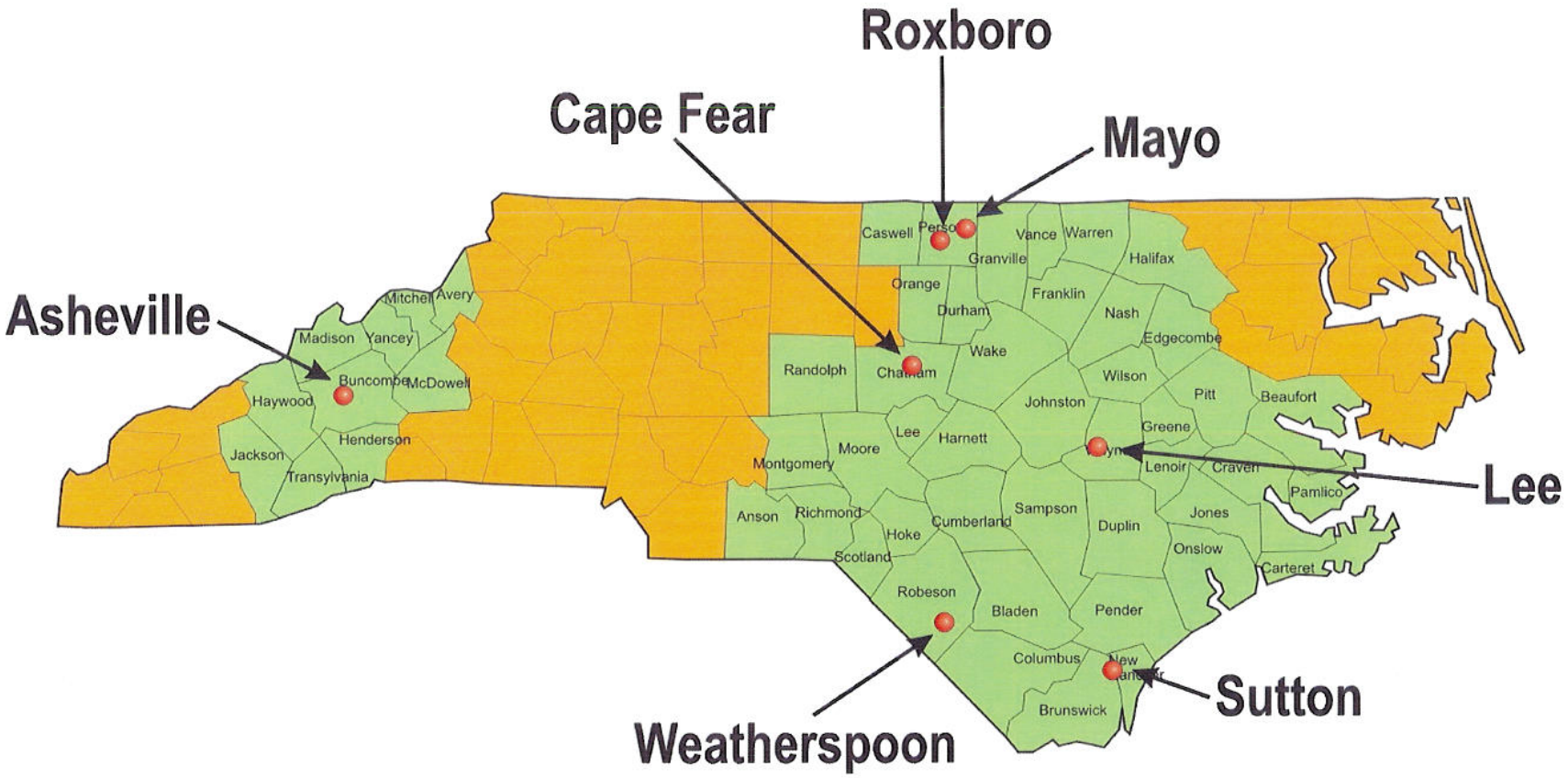
PEC will be installing wet flue gas desulfurization systems (FGD or "scrubbers") to remove 97% of the SO_2 from the flue gas of its Asheville, Roxboro and Mayo boilers. Screening studies will be conducted for the Cape Fear 5 and 6 and Sutton 3 units to select the most appropriate technology for these plants. Wet scrubbers produce unique waste

and by-product streams. Issues related to wastewater permitting and solid waste disposal are being addressed for each site. PEC plans to treat the scrubber wastewater stream at the Asheville Plant using an innovative constructed wetlands treatment system to ensure compliance with discharge limits. A bioreactor technology is being evaluated for the Roxboro Plant. A contract has been executed with a gypsum product end-user that will construct a wallboard facility near the Roxboro plant to use the synthetic gypsum produced by the Roxboro and Mayo plants for the manufacture of drywall products. PEC is also negotiating with another gypsum company for the use of the synthetic gypsum that will be produced at the Asheville plant

Specific units are listed in Attachment 3 with data on projected schedules and projected annual emissions in 2009 and 2013. These projections assume a 97% SO_2 removal efficiency, forecasted energy demand, 3.3 lbs SO_2/Mbtu coal on scrubbed units, and 1.2 lbs SO_2/Mbtu coal on the other units. Please note that these are projected schedules and are subject to revision.

Particular units controlled and control technologies utilized are subject to change depending on future developments in SO_2 removal technologies, energy demand, sulfur content of coal, and other circumstances which may produce a more optimal plan for meeting the SO_2 emissions limits in 2009 and 2013. DENR will be advised as changing circumstances dictate.

Attachment 1: Location of PEC's Coal-Fired Power Plants in North Carolina



Attachment 2: PEC NOx Control Plan for North Carolina Coal-fired Units

Unit	MW Rating	Control Technology	Operation Date[1]	Projected NOx Tons, 2007[2]
Asheville 1	198	LNB/AEFLGR/**SCR**	2009	2,625
Asheville 2	194	LNB/OFA/SCR		432
Cape Fear 5	143	ROFA/ROTAMIX		580
Cape Fear 6	173	ROFA/ROTAMIX		770
Lee 1	79	WIR		928
Lee 2	76	**LNB**	2006	493
Lee 3	252	LNB/OFA/**ROTAMIX**	2010	1,689
Mayo 1	745	LNB/OFA/SCR		1,741
Roxboro 1	385	LNB/OFA/SCR		1,084
Roxboro 2	670	TFS2000/SCR		1,292
Roxboro 3	707	LNB/OFA/SCR		2,036
Roxboro 4	700	LNB/OFA/SCR		1,938
Sutton 1	97	SAS		1,008
Sutton 2	106	**LNB**	2006	1,116
Sutton 3	410	LNB/ROFA/ROTAMIX		3,716
Wspn 1	49			879
Wspn 2	49			915
Wspn 3	78	WIR		1,028
Total	5,111			24,271

AEFLGR = Amine-Enhanced Flue Lean Gas Reburn
LNB = Low NOx Burner
SNCR = Selective Non-Catalytic Reduction
OFA = Overfire Air
ROFA = Rotating Opposed-fired Air
ROTAMIX = Injection of Ammonia to further reduce NOx (used in combination with ROFA)
WIR = Underfire Air
TFS2000 = Combination Low-NOx Burner/Overfire Air
SAS = Separated Air Staging

[1] Note: This is the operation date for the control technology installed to comply with the North Carolina Improve Air Quality/Electric Utilities Act only (shown in bold).
[2] Unit by unit emissions are illustrative only and specific emissions limits should not be inferred. Actual emissions in 2007 may be different from unit to unit

Attachment 3: PEC SO_2 Control Plan for North Carolina Coal-Fired Units

Unit	MW Rating	Technology	Operation Date	Projected SO_2 Tons, 2009[1]	Projected SO_2 Tons, 2013[1]
Asheville 1	198	Scrubber	2005	864	818
Asheville 2	194	Scrubber	2006	886	960
Cape Fear 5	143	Scrubber	2012	6,249	656
Cape Fear 6	173	Scrubber	2011	7,725	787
Lee 1	79			2,940	2,660
Lee 2	76			2,637	2,756
Lee 3	252			10,078	7,493
Mayo 1	745	Scrubber	2009	14,361	3,203
Roxboro 1	385	Scrubber	2008	1,741	1,700
Roxboro 2	670	Scrubber	2007	2,853	2,577
Roxboro 3	707	Scrubber	2008	2,928	3,005
Roxboro 4	700	Scrubber	2007	2,363	2,902
Sutton 1	97			4,402	3,217
Sutton 2	106			4,052	2,768
Sutton 3	410	Scrubber	2012	16,269	1,823
Wspn 1	49			1,458	1,208
Wspn 2	49			1,587	1,286
Wspn 3	78			3,301	3,480
Total	5,111			86,692	44,485

[1] Unit by unit emissions are illustrative only and specific emissions limits should not be inferred. Actual emissions in 2009 and 2013 may be different from unit to unit

[2] Projections are based on 97% SO2 removal efficiency, forecasted energy demand, 3.3 lbs SO2/Mbtu coal on scrubbed units, and 1.2 lbs SO2/Mbtu coal on others

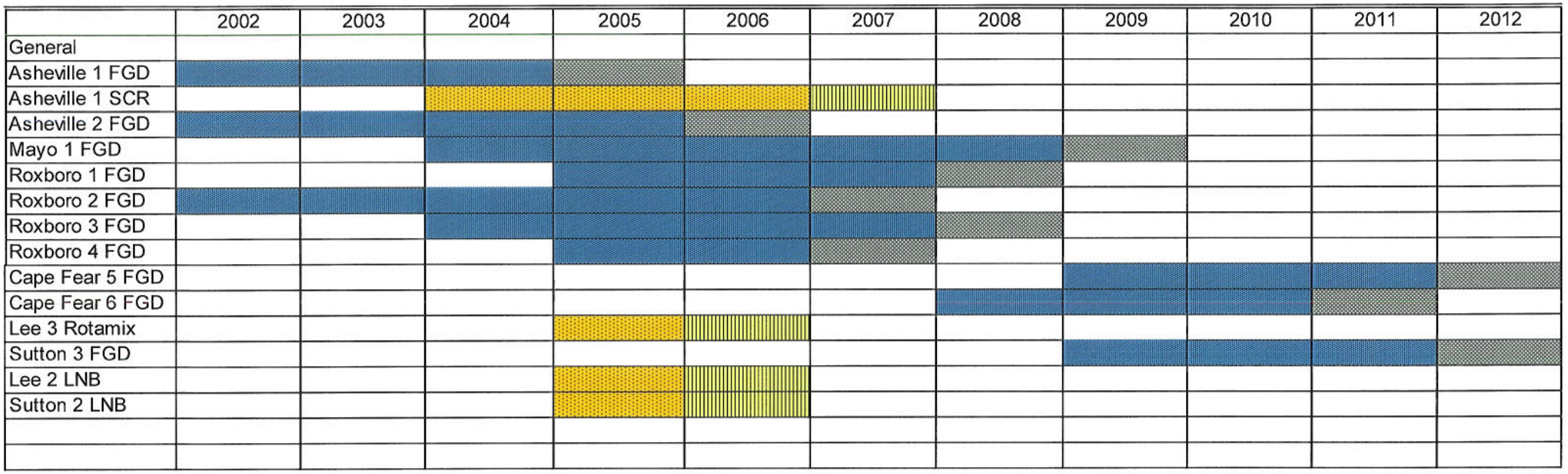
Appendix B
PEC's Actual Costs Through 2005 and Projected Costs Through 2013 for Clean Smokestacks Compliance (thousands)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Asheville 1 FGD	$100	$9,652	$33,574	$35,769	$3,141	$0	$0	$0	$0	$0	$0	$0	**$82,235**
Asheville 1 SCR	$0	$0	$688	$1,423	$17,278	$16,363	$0	$0	0	0	0	$0	**$35,752**
Asheville 2 FGD	$100	$7,742	$28,390	$24,238	$10,806	$0	$0	$0	$0	$0	$0	$0	**$71,277**
Asheville FGD Common	$467	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$467**
Mayo 1 FGD	$187	$0	$276	$644	$16,024	$63,680	$78,655	$38,649	$4,462	$0	$0	$0	**$202,578**
Roxboro FGD Common	$403	$5,561	$10,033	$51,717	$56,598	$10,483	$10,365	$1,670	$0	$0	$0	$0	**$146,830**
Roxboro 1 FGD	$0	$0	$0	$3,135	$14,805	$23,978	$35,070	$3,670	$0	$0	$0	$0	**$80,657**
Roxboro 2 FGD	$120	$3,574	$6,848	$30,782	$45,196	$10,783	$1,117	$0	$0	$0	$0	$0	**$98,420**
Roxboro 3 FGD	$0	$0	$244	$10,628	$42,069	$30,823	$11,522	$0	$0	$0	$0	$0	**$95,285**
Roxboro 4 FGD	$0	$0	$0	$9,075	$33,745	$35,090	$6,384	$0	$0	$0	$0	$0	**$84,294**
Cape Fear 5 FGD	$0	$0	$0	$0	$0	$0	$0	$528	$24,065	$33,006	$25,283	$0	**$82,881**
Cape Fear 6 FGD	$0	$0	$0	$0	$0	$0	$528	$20,751	$32,695	$24,666	$0	$0	**$78,640**
Lee 3 ROFA	$0	$0	$0	$198	$14,603	$0	$0	$0	$0	$0	$0	$0	**$14,800**
Sutton 3 FGD	$0	$0	$0	$0	$536	$0	$0	$9,988	$57,407	$58,805	$42,200	$6,309	**$175,244**
Lee 2 LNB	$0	$0	$133	$273	$2,723	$57	$0	$0	$0	$0	$0	$0	**$3,187**
Sutton 2 LNB	$0	$0	$0	$236	$1,822	$59	$0	$0	$0	$0	$0	$0	**$2,117**
Asheville WWT	$0	$0	$0	$12,365	$0	$0	$0	$0	$0	$0	$0	$0	**$12,365**
Mayo WWT	$0	$0	$0	$0	$0	$1,415	$14,415	$3,461	$0	$0	$0	$0	**$19,291**
Cape Fear WWT	$0	$0	$0	$0	$0	$0	$0	$3,271	$12,344	$739	$0	$0	**$16,353**
Roxboro WWT	$0	$0	$0	$791	$26,791	$12,602	$1,710	$0	$0	$0	$0	$0	**$41,895**
Sutton WWT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,849	$13,821	$1,055	**$17,724**
Total	**$1,377**	**$26,529**	**$80,186**	**$181,274**	**$286,137**	**$205,334**	**$159,765**	**$81,987**	**$130,972**	**$120,064**	**$81,303**	**$7,364**	**$1,362,293**
Estimated AFUDC							$4,000	$10,000	$9,000	$20,000	$21,000	$800	$64,800

Note: Excludes Power Agency ownership: 16.17% of Mayo, 3.77% of Roxboro Common, and 12.94% of Roxboro 4

ATTACHMENT B
PAGE 19 OF 20

Appendix C
PEC Clean Smokestacks Compliance Plan



Schedule as of 4/1/2006

Scrubber Design and Construction
Scrubber in service
NOx Controls Design and Construction
NOx Controls in service

ATTACHMENT B
PAGE 20 OF 20

NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION

May 22, 2006

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

Re: Docket No. E-7, Sub 718
Duke Power Company, LLC, d/b/a Duke Energy Carolinas, LLC

Dear Ms. Vance:

Enclosed herewith for filing in the above-referenced docket are twenty-one (21) copies of the Report of the Public Staff on Costs Incurred and Amortized by Duke Energy Carolinas, LLC ("Duke") in Compliance with Session Law 2002-4 ("the Clean Smokestacks Act" or "the Act"). This report presents the results of the Public Staff's review of environmental compliance costs incurred and amortized by Duke through the end of calendar year 2005.

Sincerely,

Antoinette R. Wike
Chief Counsel

ARW/bll

Enclosure

cc: Robert W. Kaylor
Lara Nichols

Executive Director 733-2435	Communications 733-2810	Economic Research 733-2902	Legal 733-6110	Transportation 733-7766
Accounting 733-4279	Consumer Services 733-9277	Electric 733-2267	Natural Gas 733-4326	Water 733-5610

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REPORT OF THE PUBLIC STAFF ON COSTS INCURRED AND AMORTIZED BY DUKE ENERGY CAROLINAS, LLC IN COMPLIANCE WITH SESSION LAW 2002-4

Docket No. E-7, Sub 718

May 22, 2006

Section 14 of Session Law 2002-4 ("the Clean Smokestacks Act" or "the Act") requires the Department of Environment and Natural Resources ("DENR") and the Utilities Commission ("Commission") to report, by June 1 of each year, on the implementation of the Act to the Environmental Review Commission and the Joint Legislative Utility Review Committee. The May 30, 2003, report of DENR and the Commission states that the Public Staff will audit the books and records of the investor owned utilities on an ongoing basis in regard to the costs incurred and amortized in compliance with the Act. The Public Staff has undertaken such a review, focusing on the verification of costs related to complying with the Act, the amortization of those costs, and the operating results of emission reduction equipment installed by Duke Power Company, LLC, d/b/a Duke Energy Carolinas, LLC ("Duke"). This report is a continuation of the Public Staff's ongoing review and presents the Public Staff's findings for the twelve months ended December 31, 2005.

I. Work To Be Performed

Duke's original plan to install Selective Non-catalytic Reduction ("SNCR") technology to remove NO_x and flue-gas desulfurization technology ("scrubbers") to remove SO_2 to comply with the Act remains practically the same with only minor changes to the compliance schedule and plan. Duke continues to evaluate SNCR technology and has indicated that it will continue to deploy this technology at least through the initial compliance dates approved in the plan. If additional NO_x removal is required, Duke will likely deploy Selective Catalytic Reduction ("SCR") technology on specific units that have yet to be determined.

II. Environmental Compliance Costs

Duke is required by the Act to submit a report to the Commission and to DENR on or before April 1 of each year containing its actual environmental compliance costs incurred during the previous calendar year. As defined by G.S. 62-133.6(a)(2), "environmental compliance costs" include only capital costs.

In its Compliance Plan Annual Update for 2006 ("2006 Compliance Update"), Duke reported that its actual environmental compliance costs in calendar year 2005 were $346,420,000. The cumulative environmental compliance costs incurred by Duke through 2005 were $473,396,146, as follows:

Year 2001	$ 692,433
Year 2002	1,024,223
Year 2003	18,424,921
Year 2004	106,834,479
Year 2005	346,420,000
Total	$473,396,155

Duke's expenditures to date involve emission reduction technologies at its Allen, Belews Creek, Buck, Cliffside, Dan River, Marshall, and Riverbend facilities. Environmental compliance costs were incurred for project studies and investigations, engineering, equipment procurement, and contracting.

As part of its review, the Public Staff requested information from Duke on the project costs, invoices documenting costs, and the purpose of the costs. Duke provided project cost sheets delineating actual project costs by year into the following categories: (1) direct labor costs; (2) labor loads; (3) contract costs; (4) material costs; (5) overhead costs; and, (6) other costs. These costs are as follows:

Direct Labor	$ 3,335,962
Labor Loads	1,440,489
Contracts	329,203,068
Materials	2,882,645
Overheads	491,855
Other	9,065,981
Total	$ 346,420,000

The project cost sheets were supported by project detail reports that incorporated all expenditures for a particular category or group. The Public Staff selected invoices in each category from the detailed spreadsheets and requested Duke to provide specific information on the selected costs. The Public Staff also had extensive discussions with Duke personnel to gain a better understanding of the cost items charged to each specific project. Duke provided documentation to support each selected cost.

Duke has estimated its environmental compliance costs at $1,731,510,400, as set forth on Exhibit C in its 2006 Compliance Update. This represents an increase of $231,510,400 or 15.4% over Duke's original estimate of $1,500,000,000, as set forth in G.S. 62-133.6(b). According to Duke personnel, several factors have contributed to the increase in the estimate, including industry-wide initiation of similar environmental compliance work nationwide and its effect on labor availability, and the increases in the prices for materials. These cost increases have been mitigated by refinement in the SNCR work scope and the proposal concerning the retirement of Cliffside Units 1-4. While no decisions have yet been made to retire Cliffside Units 1-4, Duke 's total project amount of $1,731,510,400 does not include the costs associated with NO_x removal for these units.

The Public Staff will continue to monitor the factors causing increases in the environmental compliance cost estimates.

III. Amortization of Costs

In Section 9 of the Act [G.S. 62-133.6(b)], the investor owned utilities are allowed to accelerate the recovery of their estimated environmental compliance costs over a seven-year period, beginning January 1, 2003, and ending December 31, 2009. The statute requires that a minimum of 70% of the environmental compliance costs be amortized before December 31, 2007, when the rate freeze period expires. In Duke's case, this amount is $1,050,000,000. The annual levelized amount is $214,285,714. The maximum amount that can be amortized in any given year is 150% of the annual levelized environmental compliance costs or $321,428,000.

Using the protocols established by the Act and subsequent Commission orders, Duke reported that its environmental compliance costs amortization for 2005 is $311,236,000. The Public Staff reviewed Duke's quarterly amortization filings and supporting journal entries and concluded that the amounts appear to be accurate. The cumulative amortization to date is $637,429,142.

IV. Contracts

No contracts were reviewed during this audit period. Contracts in 2003 and 2004 are still in effect, with changes relating only to cost increases and schedules.

V. Site Inspections

On March 8, 2006, the Public Staff conducted another inspection of Duke's Marshall Steam Station in Mooresville, North Carolina. Specifically, the Public Staff inspected the construction of the scrubbers and associated wastewater and gypsum handling facilities. The Public Staff confirmed that the installation of scrubbers, stack, conveyor systems ductwork, and wastewater treatment systems is progressing on schedule. No other facilities were inspected. It is the intent of the Public Staff to continue inspections of other coal-fired generating facilities as Duke continues to install emission reduction equipment in its boiler units.

NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION

May 22, 2006

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

Re: Docket No. E-2, Sub 815
Progress Energy Carolinas, Inc.

Dear Ms. Vance:

Enclosed herewith for filing in the above-referenced docket are twenty-one (21) copies of the Report of the Public Staff on Costs Incurred and Amortized by Progress Energy Carolinas, Inc. ("PEC") in Compliance with Session Law 2002-4 ("the Clean Smokestacks Act" or "the Act"). This report presents the results of the Public Staff's review of environmental compliance costs incurred and amortized by PEC through the end of calendar year 2005.

Sincerely,

Antoinette R. Wike
Chief Counsel

ARW/bll

Enclosure

cc: Len S. Anthony

Executive Director 733-2435	Communications 733-2810	Economic Research 733-2902	Legal 733-6110	Transportation 733-7766
Accounting 733-4279	Consumer Services 733-9277	Electric 733-2267	Natural Gas 733-4326	Water 733-5610

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REPORT OF THE PUBLIC STAFF ON COSTS INCURRED AND AMORTIZED BY PROGRESS ENERGY CAROLINAS, INC. IN COMPLIANCE WITH SESSION LAW 2002-4

Docket No. E-2, Sub 815

May 22, 2006

Section 14 of Session Law 2002-4 ("the Clean Smokestacks Act" or "the Act") requires the Department of Environment and Natural Resources ("DENR") and the Utilities Commission to report, by June 1 of each year, on the implementation of the Act to the Environmental Review Commission and the Joint Legislative Utility Review Committee. The May 30, 2003, report of DENR and the Commission states that the Public Staff will audit the books and records of the investor owned utilities on an ongoing basis in regard to the costs incurred and amortized in compliance with the Act. The Public Staff has undertaken such a review, focusing on the verification of costs related to complying with the Act, the amortization of those costs, and the operating results of emission reduction equipment installed by Progress Energy Carolinas, Inc. ("PEC"). This report is a continuation of the Public Staff's ongoing review and presents the Public Staff's findings for the twelve months ended December 31, 2005.

I. Work Being Performed

PEC's original plan to install Selective Catalytic Reduction ("SCR") technology to remove NO_x and flue-gas desulfurization technology ("scrubbers") to remove SO_2 to comply with the Act remains practically the same with only minor changes to the compliance schedule and plan.

Substantial work has been accomplished at the Asheville and Roxboro plants. The scrubber on Asheville Unit 1 was placed into operation in November 2005. Work is steadily progressing to complete the scrubber on Asheville Unit 2. It is scheduled to become operational in the spring of 2006. Substantial work is also being done at Asheville to construct an SCR, which is expected to be online in 2007.

The Roxboro plant construction is also well underway. New coal and limestone handling facilities have been completed. Scrubbers on all four units are in varying stages of completion.

II. Environmental Compliance Costs

PEC is required by the Act to submit a report to the Commission and to DENR on or before April 1 of each year containing the actual environmental compliance costs incurred during the previous calendar year. As defined by G.S. 62-133.6(a)2, "environmental compliance costs" include only capital costs.

In its calendar year 2005 Progress Report ("2005 Report"), PEC reported that its actual environmental compliance costs in calendar year 2005 were $181,274,000. The cumulative environmental compliance costs incurred by PEC through 2005 are $289,365,900, as follows:

Year 2002	$ 1,377,417 [1]
Year 2003	26,528,942
Year 2004	80,185,975
Year 2005	181,273,566
Total	$289,365,900 [2]

PEC's expenditures to date involve emission reduction technologies at its Asheville, Mayo, Roxboro, Lee, and Sutton facilities. Environmental compliance costs were incurred for project studies and investigations, engineering, contracting, and equipment acquisition.

As part of its review, the Public Staff requested information from PEC on the project costs, invoices documenting costs, and the purpose of the costs. PEC provided project cost sheets delineating actual project costs by year into the following categories: (1) company labor costs; (2) materials costs; (3) outside services costs; (4) burdens; and (5) other costs. These costs are as follows:

Company Labor	$ 2,721,834
Material	109,853,444
Outside Services	65,488,943
Labor Loads/Overheads	2,737,459
Other	471,886
Total	$181,273,566

The project cost sheet was supported by detailed spreadsheets for a particular category. The Public Staff selected invoices in each category from the detailed spreadsheets and requested PEC to provide specific information on the selected costs. The Public Staff had discussions with PEC personnel regarding the cost items charged to projects. PEC provided documentation to support the selected costs.

PEC has estimated its environmental compliance costs at $1,362,293,000, as set forth on Appendix B in its 2005 Report. This represents an increase of $549,293,000

[1] Per Appendix B, costs for 2002, 2003 and 2004 are slightly different than the costs reported for those years in previous reports. For 2004, a majority of the difference relates to a Company adjustment to include Asheville wastewater treatment (WWT) costs in the FGD line items for Asheville. In 2005, PEC began reporting WWT project costs separately.

[2] PEC's estimated and reported environmental compliance costs exclude certain costs attributable to the portions of its Mayo and Roxboro facilities that are owned by the NC Eastern Municipal Power Agency ("NCEMPA). According to PEC's FERC Form No. 1 for 2005, PEC entered into an agreement with NCEMPA in 2005 to limit its aggregate cost associated with PEC's environmental compliance costs to approximately $38 million.

or 67.6% over PEC's original estimate of $813,000,000, as set forth in G.S. 62-133.6(b). According to PEC personnel, several factors have contributed to the increase in the estimate, including its decision in 2003 to use wet scrubber technology instead of dry scrubbers, a significant increase in the price of materials, an increase in equipment costs due to the limited number of suppliers available, and adjustments of future costs based on actual costs of projects already completed or substantially completed.

Conversion to wet scrubber technology instead of the originally proposed dry scrubber technology has resulted in several modifications to the design and size of scrubber equipment, including the need for wastewater treatment. PEC has explained that the use of wet scrubber technology provides PEC greater flexibility in the types of coal it can burn. This will increase PEC's options with regard to minimizing the operational costs associated with Clean Smokestacks compliance. The Public Staff will continue to monitor this matter to determine the operational value of wet scrubbers as compared to their higher capital costs.

III. Amortization of Costs

In Section 9 of the Act [G.S. 62-133.6(b)], the investor owned utilities are allowed to accelerate the cost recovery of their estimated environmental compliance costs over a seven-year period, beginning January 1, 2003, and ending December 31, 2009. The statute requires that a minimum of 70% of the environmental compliance costs be amortized before December 31, 2007, when the rate freeze period expires. In PEC's case, this amount is $569,100,000. The annual levelized amount is $116,142,857. The maximum amount that can be amortized in any given year is 150% of the annual levelized environmental compliance costs or $174,214,285.

Using the protocols established by the Act and subsequent Commission orders, PEC reported that its environmental compliance costs amortization for 2005 is $147,000,000. The Public Staff reviewed PEC's quarterly amortization filings, as well as the journal entries recorded, and concluded that the reported amounts appear to be accurate. The cumulative amortization to date is $395,218,808.

IV. Contracts

No contracts were reviewed during this audit period. Contracts reviewed in 2004 are still in effect, with only changes relating to cost increases and schedules.

V. Site Inspections

On April 5, 2006, the Public Staff conducted a site inspection of PEC's Asheville Steam Station at Arden, North Carolina. The Public Staff confirmed the operation of the Unit 1 scrubber and related equipment. The Public Staff observed the significant work in progress associated with the unit 2 scrubber and the SCR. The Public Staff also toured the new plant control room, which was updated in conjunction with the installation of the scrubbers and SCR.

On April 7, 2006, the Public Staff conducted a site inspection of PEC's Roxboro Steam Station at Roxboro, North Carolina. The Public Staff was able to confirm that significant progress had been made on the scrubbers for all four units, as well as the relocation of coal and limestone handling facilities. Similar control room improvements and updates were made on the unit 2 console, with plans to update other unit consoles in the near future. The Public Staff also observed measures being taken by PEC to provide redundancy and reliability in the operation of the units. These measures are intended to allow the Roxboro Station to continue operations in the event a scrubber related piece of equipment become inoperable.

It is the intent of the Public Staff to continue inspections of other coal-fired generating facilities as PEC continues to install emission reduction equipment in its boiler units.

VI. Other Issues

At the filing of this report, the Public Staff is still reviewing data responses received from PEC. The Public Staff will address any significant issues that arise in its next report to the Commission.