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

Report No. VIII

June 1, 2010

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

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: Dee A. Freeman
Dee A. Freeman, Secretary
Department of Environment and Natural Resources

Signed: Edward S. Finley, Jr.
Edward S. Finley, Jr., Chairman
North Carolina Utilities Commission

June 1, 2010

Implementation of the "Clean Smokestacks Act"

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

June 1, 2010

Executive Summary

The Clean Smokestacks Act or Act was enacted to improve air quality in North Carolina by imposing limits on the emission of certain pollutants from certain coal burning electric generating facilities and to provide for the recovery of costs associated with achieving compliance with those limits. In addition to imposing certain emissions limitations on the investor-owned electric utilities (IOUs) subject to its provisions, Duke Energy Carolinas, LLC (Duke Energy) and Progress Energy Carolinas, Inc. (Progress Energy), the Act also imposed certain specific requirements on the Department of Environment and Natural Resources (DENR); the Division of Air Quality (DAQ) of DENR; the Environmental Management Commission; the Department of Justice, effectively; and the Utilities Commission (Commission). The Act, among other things, requires DENR and the Commission to report annually on the implementation of the Act to the Environmental Review Commission and the Joint Legislative Utility Review Committee. The Act also requires the IOUs to submit annual reports to DENR and the Commission containing certain specified, pertinent information.

This report includes summaries of the IOUs' annual reports and certain actions and/or activities undertaken by the aforementioned state agencies in compliance with the Act. In summary, DENR and the Commission have concluded that the actions taken to date by Duke Energy and Progress Energy are in accordance with the provisions and requirements of the Clean Smokestacks Act. Further, the compliance plans and schedules proposed by Duke Energy and Progress Energy appear adequate to achieve the emissions limitations set out in G.S. 143-215.107D.

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 (ERC) and the Joint Legislative Utility Review Committee (JLURC).

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 29 and April 1, 2010, respectively. By letter dated May 6, 2010, Duke Energy filed a revised version of its report to correct certain emissions values. Specifically, such reports were submitted in compliance with the requirements of G.S. 62-133.6(i). Duke Energy's revised report and Progress Energy's report are attached, and made part of this report, as Attachments A and B, respectively.

Additionally, by letter dated May 14, 2010, 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 has determined that 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.

Significantly, 2007 marked the first step in meeting the emission reductions required by the Clean Smokestacks Act. Specifically, Duke Energy is limited to 35,000 tons of oxides of nitrogen (NOx) in any calendar year beginning 1 January 2007, and Progress Energy is limited to 25,000 tons of NOx. Both utilities reported to have met their respective limits as recorded through continuous emission monitoring (CEM) data. Additionally, the raw CEM data are verified by the utilities and reported to the United States Environmental Protection Agency (EPA). The end of 2009 marked the second milestone in emission reductions, when Duke Energy had to further reduce its calendar year NOx emissions to 31,000 tons, and both utilities were required to reduce their calendar year sulfur dioxide (SO_2) emissions, Duke Energy to 150,000 tons and Progress Energy to 100,000 tons. Both utilities reported that they have met their respective limits for 2009, which has been confirmed by DENR staff. The next milestone in emission reductions occurs in 2013, when Duke Energy and Progress Energy must reduce their annual SO_2 emissions to 80,000 tons and 50,000 tons, respectively. Duke Energy's SO_2 emissions were below the 2013 cap in 2009. Progress Energy is expected to meet this target with the recently planned retirement of the Lee coal-fired plant and its replacement with a combined-cycle natural gas-fired plant.

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 (IOUs), 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(d) of the Act, Codified as Section 62-133.6(d) of the North Carolina General Statutes

G.S. 62-133.6(d) provides: *Subject to the provisions of subsection (f) of this section, the Commission shall hold a hearing to review the environmental compliance costs set out in subsection (b) of this section. The Commission may modify and revise those 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. In making its decisions pursuant to this subsection, the Commission shall consult with the Secretary of Environment and Natural Resources to receive advice as to whether the investor-owned public utility's actual and proposed modifications and permitting and construction schedule are adequate to achieve the emissions limitations set out in G.S. 143-215.107D. The Commission shall issue an order pursuant to this subsection no later than 31 December 2007.*

Commission proceedings conducted in compliance with this provision of the Act and related Commission rulings were comprehensively discussed in DENR and the Commission's 2009 Clean Smokestacks Act joint report to the ERC and the JLURC. For a complete detailed explanation of such matters, please refer to Part II of the 2009 report, beginning on Page 2.

III. 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: "PEC originally submitted its compliance plan on July 29, 2002. Appendix A [of the attached Progress Energy submittal dated April 1, 2010, i.e., Attachment B of this report] contains an updated version of this plan, effective April 1, 2010."

Duke Energy Response: "Exhibits A and B [of the attached Duke Energy submittal dated May 6, 2010, i.e., Attachment A of this report] outline the plan for technology selections by facility and unit, actual and projected operational dates, actual and 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 2009 were $41.9 million. The Mayo scrubber was completed and placed in service in April 2009. At the Roxboro plant, construction related to remediation work on the wastewater treatment settling and flush ponds continued during 2009. The flush pond remediation was completed in 2009.

Summary of Duke Energy Report: The actual environmental compliance costs [see Attachment A, Exhibit C] incurred by Duke Energy in calendar year 2009 were $149.2 million. Such costs were incurred for flue gas desulfurization (FGD) with respect to the following plant facilities: Allen Steam Station – $51.8 million, Belews Creek Steam Station – $1.3 million, and Cliffside Steam Station Unit 5 – $96.1 million. At Allen, absorber Units 1 and 3 began operation, construction of the gypsum handling system was completed, NC 273 Highway was modified, and generating unit tie-ins for Units 1-5 were achieved. Work at Cliffside included erection of the Unit 5 absorber vessel, completion of initial tie-in to the Unit 5 stack, construction of wastewater treatment facility, erection of limestone and gypsum handling equipment, and steel erection for dewatering building, absorber building, and reagent prep building. At Cliffside, Unit 5 auxiliary transformer was received and set, and ball mill equipment was received and its assembly was initiated in 2009.

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 Report: Progress Energy amortized $0 million environmental compliance cost in 2009. As reflected in earlier reports, Progress Energy has previously amortized a total of $584.1 million. No additional amortization is anticipated.

Summary of Duke Energy Report: Duke Energy amortized $0 environmental compliance cost in 2009. As reflected in earlier reports, Duke Energy has previously amortized a total of $1.05 billion. No additional amortization is anticipated.

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 $1.06 billion. This represents a decrease of $342 million or 24% from the April 2009 cost estimate of $1.402 billion. Progress Energy stated that "[t]he primary basis for the $342 million reduction is the cancellation of the Sutton 3 FGD project which reduced our projection by $316 million. Progress Energy will retire the Lee Coal units at the beginning of 2013 and construct a new combined cycle facility at the H.F. Lee Energy Complex in Wayne County to achieve compliance. In addition, costs savings were recognized for the Roxboro and Mayo emissions control projects totaling $26 million, or $13 million each."

Progress Energy's current cost estimate of $1.06 billion, which excludes allowance for funds used during construction (AFUDC), is $247 million or 30% greater than the original 2002 cost estimate of $813 million.

Summary of Duke Energy Report: Duke Energy reported that there has been no significant change to the scope or timing associated with any of its projects but that forecasts for active projects have been updated as compared to those contained in Duke Energy's 2009 report. According to Duke Energy, there is a net overall reduction of approximately $17.036 million or approximately 1% from the previously forecasted costs, which is attributed mostly to unused contingency or risk items included in the previous forecast. Duke Energy's current cost estimate of its compliance costs is $1.809 billion, excluding AFUDC.

Duke Energy's current cost estimate of $1.809 billion is $309 million or 21% greater than the original 2002 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.*

Summary of Progress Energy Response:

Roxboro Plant

Authorization to Construct
A request for addendum for the Authorization to Construct for repairs to the gypsum settling pond and flush pond for the wastewater treatment system was submitted on January 12, 2009. Agency approval was obtained on May 15, 2009.

A request for Authorization to Construct for an additional settling pond for the wastewater treatment system was submitted on March 11, 2009. Agency approval was obtained on June 15, 2009.

Mayo Plant

Air Permit
A renewal application for the Title V Air Permit was submitted on November 30, 2007. This application contained an update to include New Source Performance Standards (NSPS) requirements for the emergency quench water pump. Agency approval was obtained on May 27, 2009.

A permit application for changes to the air permit was submitted on January 15, 2009, which included revisions to the limestone silo control device arrangement and installation of a dry sorbent injection system for SO_2 control.

NPDES Permit
A revision to the NPDES permit to include limestone and gypsum truck traffic in support of scrubber operation was requested on February 11, 2009. Agency approval was obtained on October 14, 2009.

Summary of Duke Energy Response:

Allen
- No change in compliance permitting.

Belews Creek
- No change in compliance permitting.

Cliffside (Unit 5 FGD)
- Received building permits from Cleveland & Rutherford Counties for wet FGD Control Room
- Received Landfill Construction Plan Application
- Submitted and received Coal Combustion Products (CCP) Landfill Erosion and Sedimentation Control Plan

- Submitted and received Design Hydrogeologic Report and Water Quality Monitoring Plan
- Submitted and received Rutherford County Watershed Protection Plan
- Submitted and received Roadway Erosion and Sedimentation Control Plan
- Submitted and received Air Permit Application for FGD Project

<u>Marshall</u>
- No change in compliance permitting.

<u>Riverbend</u>
- No change in compliance permitting.

<u>Dan River</u>
- No change in compliance permitting.

<u>Buck</u>
- No change in compliance permitting.

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.*

Summary of Progress Energy Response: At the Roxboro plant, "work on the settling ponds will continue. With the Division of Land Resources assuming jurisdiction for certain impoundments and dam safety in 2009, these projects are being permitted in 2010."

Summary of Duke Energy Response: See attached letter from Duke Energy dated May 6, 2010 (Attachment A), for further details of construction anticipated for the next year. Duke will focus on the Allen Steam Station FGD and Cliffside Unit 5 FGD. At the Allen Steam Station, strainers will be replaced with automatic strainers due to algae issue and additional relays will be installed to eliminate reliability issue. Final drawings will be completed, turned over, and archived. At Cliffside Unit 5, major construction activity will encompass completion of backfeed power to auxiliary transformers, project mechanical systems, FGD system testing and tuning, and FGD system performance testing.

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: "Progress Energy has completed the air permitting required to comply with the provisions of G.S. 143-215.107D. The Division of Land Resources assumed jurisdiction for certain impoundments and dam safety in 2009. As a result, the settling pond projects at the Roxboro plant are being permitted in 2010."

Duke Energy Response: "Cliffside will request a permit to operate the CCP Landfill in 2010. No additional applications for permits are expected."

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: **"**Performance testing of the scrubbers on Roxboro Unit 1 and Mayo Unit 1 was completed in 2009. The testing confirmed that each scrubber achieved its performance guarantee of 97% SO_2 removal efficiency."

Duke Energy Response: "No additional equipment related testing occurred in 2009." Duke Energy included selective non-catalytic reduction (SNCR) and selective catalytic reduction (SCR) tests performed in prior years in the 2009 report for reference (Attachment A).

9. **G.S. 62-133.6(i)(9) requires:** *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.*

Both utilities determine their actual emissions through continuous emission monitoring (CEM) data. The raw CEM data are recorded and verified by the utilities, and then reported to the EPA.

Progress Energy Response: "The affected coal-fired Progress Energy units have achieved a 68% reduction in NOx and a 71% reduction in SO_2 since 2002. The total calendar year 2009 emissions from the affected coal-fired Progress Energy Carolinas units are:

- NOx 19,150 tons
- SO_2 62,256 tons"

DENR/DAQ has verified these emissions using EPA's Clean Air Market Division database. It should be noted that 2007 marked the first limit imposed by the Clean Smokestacks Act, requiring Progress Energy to meet a limit of 25,000 tons of NOx and maintain this emission limit in future years. 2009 marked the second emission limit of 100,000 tons of SO_2. Progress Energy's reported NOx and SO_2 emissions for 2009 comply with the Clean Smokestacks Act limits. The Company has achieved emissions that are well below the required levels.

The Company's next steps to comply with the Clean Smokestacks Act are to maintain the NOx and SO_2 emissions limit of 25,000 tons and 100,000 tons, respectively. It must further reduce its SO_2 emissions to 50,000 tons in 2013 and maintain that level on an annual basis in future years.

Duke Energy Response: "In the 2009 calendar year, 18,543 tons of NOx and 48,551 tons of SO_2 were emitted from the Duke Energy Carolinas coal-fired units located in North Carolina and subject to the emissions limitations set out in G.S. 143-215.107D." (See Attachment A, May 6, 2010 Duke Energy letter - Revision to Correct Emissions Values).

DENR/DAQ has verified these emissions using EPA's Clean Air Market Division database. As noted before, 2007 marked the first limit imposed by the Clean Smokestacks Act, requiring Duke Energy to meet a limit of 35,000 tons of NOx. By 2009, Duke was required to further reduce its annual NOx emissions to 31,000 tons and reduce SO_2 emissions to 150,000 tons per year. Duke Energy's reported emissions for 2009 comply with the Clean Smokestacks Act NOx and SO_2 limits. The Company has achieved emissions that are well below the required levels.

The Company's next steps to comply with the Clean Smokestacks Act are to maintain the annual NOx and SO_2 emission limits of 31,000 tons and 150,000 tons per year, respectively. It must further reduce its annual SO_2 emissions to 80,000 tons in 2013 and maintain that level in future years. The Company already has met its 2013 target, and is likely to maintain these emission levels through continuous operation of the required control systems.

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 2009, 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: "Duke Energy Carolinas will surrender to the state of North Carolina 28,492 SO_2 allowances and 1,958 Annual NOx allowances. This action is the result of the June 21, 2002 agreement to surrender SO_2 allowances allocated by US EPA in excess of 150,000 allowances and NOx allowances allocated by US EPA in excess of 31,000 allowances for calendar year 2009."

The DENR/DAQ neither agrees nor disagrees with the above statement at this time.

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

Progress Energy Response: "There have been no additional requests for information from the North Carolina Utilities Commission or the Department of Environment and Natural Resources since the last report."

Duke Energy Response: "No additional information has been requested to be included in this annual data submittal."

IV. 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 (SO_2) 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/DAQ and Department of Justice (Attorney General) Activities to Implement this Section:

The State continues to pursue opportunities to carry forward the Legislature's objectives in Section 10 of the Act. 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 asked the Court to require TVA to install NOx and SO_2 controls to abate the public nuisance.

   In July 2006 the District Court denied TVA's motions to dismiss the case. On January 31, 2008, the U.S. Court of Appeals for the Fourth Circuit affirmed the District Court's refusal to dismiss the case.

   The case was tried without a jury in July 2008 in federal District Court in Asheville before Judge Lacy Thornburg. On January 13, 2009, Judge Thornburg found that four TVA coal-fired generating stations are creating a public nuisance in North Carolina. These facilities are the Bull Run, John Sevier, and Kingston plants in eastern Tennessee and the Widows Creek plant in northeastern Alabama. All of these facilities are within 100 miles of North Carolina. The Judge ordered that each unit of each facility meet emission limits for SO_2 and NOx that are consistent with the installation and continuous operation of modern pollution controls (i.e. selective catalytic reduction for NOx removal and scrubbers for SO_2 control). The court ordered that TVA meet these limits on a staggered schedule beginning immediately with the Bull Run plant and ending with the control of emissions from Widows Creek no later than December 2013.

   On January 28, 2009, TVA requested that the court extend the schedule for full control of the John Sevier facility from December 2011 to December 2014. The motion was denied on April 1, 2009. TVA has appealed the judgment.

The matter was argued to the United States Court of Appeals for the Fourth Circuit on May 14, 2010.

2) On July 8, 2005, the Attorney General filed in the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) a petition for review of the United States Environmental Protection Agency's (EPA's) Clean Air Interstate Rule (CAIR). CAIR was designed to reduce emissions of SO_2 and NOx from power plants that cause particulate matter and ozone pollution across the eastern United States. Among other things, the State alleged that CAIR 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.

On July 11, 2008, the D.C. Circuit granted North Carolina's petition in part. The court found that CAIR's trading program failed to comply with the Clean Air Act because it did not guarantee that emission reductions would be targeted to the downwind areas that need them, that EPA improperly refused to consider North Carolina's problems with maintaining national air quality standards, and that EPA set the CAIR pollution reduction deadlines without proper consideration of the tight deadlines faced by impacted States. The court also granted petitions from other parties on other issues.

On December 23, 2008, the court allowed EPA to implement CAIR temporarily while EPA developed a replacement rule that corrects CAIR's legal errors. This was consistent with North Carolina's request that the rule not be vacated, but instead be remanded to EPA to fix the deficiencies. EPA has indicated informally that it will propose a new rule in spring 2010 and finalize that rule 12 months later.

3) On July 8, 2005, the Attorney General filed a petition with EPA requesting that EPA administratively reconsider certain aspects of CAIR. EPA denied this petition. This petition was reviewed by the D.C. Circuit and resolved along with the petition for review discussed in the preceding item.

4) On March 18, 2004, the State filed a petition under §126 of the Clean Air Act requesting that EPA impose NOx and/or SO_2 controls on large coal-fired utility boilers in 13 upwind states that impact North Carolina's air quality. On March 15, 2006, EPA denied the State's petition. The Attorney General then petitioned EPA for administrative reconsideration, which was also denied. The Attorney General petitioned the D.C. Circuit for judicial review of both of these decisions.

Based on subsequent events, including the court's holding in the CAIR case, EPA conceded that it must reconsider its denial of North Carolina's

§126 petition. The court agreed and, on March 5, 2009 remanded the matter back to EPA for further consideration.

5) In April 2008, EPA finalized a rule that exempts sources of NOx in Georgia from any summertime NOx cap under EPA's "NOx SIP Call" rule. The NOx SIP Call was designed to help downwind States reduce ambient levels of ozone. Sources in Georgia are also exempt from summertime NOx controls for ozone pollution under CAIR. On June 20, 2008, the Attorney General petitioned the D.C. Circuit for review of EPA's decision to exempt Georgia sources from the NOx SIP Call. On November 24, 2009, the court ruled that North Carolina did not have standing to sue EPA on this issue. The court concluded that, through the recent adoption and/or implementation of NOx reduction rules by Georgia, sources in Georgia have reduced NOx emissions to levels consistent with the NOx SIP Call.

V. 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.*

Note: Session Law 2006-79 changed the beginning date of the requirements of this Section to September 1, 2007.

Environmental Management Commission and DENR Response: A letter was submitted to the Environmental Review Commission from Mr. Stephen T. Smith, Environmental Management Commission Chairman, dated October 12, 2009, which stated the following:

> Since the CSA was passed in June 2002, significant Federal regulatory changes have occurred. The federal Clean Air Interstate Rule (CAIR) was promulgated to require 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. Installation of state-of-the-art emissions control equipment was already required by the CSA; however CAIR may require controls on additional generating units. Although on July 11, 2008, the

D. C. Circuit Court vacated CAIR, on December 23, 2008, the Court granted USEPA's petition to remand the case without vacatur, allowing CAIR to remain in effect until a replacement rule is promulgated. On August 7, 2009, consistent with the Court's order, USEPA proposed approval of North Carolina's Clean Air Interstate Rules (NC-CAIR) into the State Implementation Plan (SIP). This approval is based, in part, on North Carolina's use of the NO_x and SO_2 budgets outlined in the remanded rule. CAIR NO_x and SO_2 emissions allowances for North Carolina utilities are even lower than those set by the Clean Smokestacks Act. Final SIP approval by USEPA will likely occur in late October 2009.

On March 12, 2008, USEPA promulgated a more stringent 8-hour standard for ozone, revising the standard for the first time in more than a decade. In March 2009, the North Carolina Division of Air Quality made recommendations to USEPA on what areas of the state should be designated as nonattainment under the new standard. However, on September 16, 2009, the USEPA announced it would reconsider the 2008 ozone standard. The USEPA will propose a more-stringent ozone standard in December 2009 and issue a final decision by August 2010. The state's attainment demonstration SIP will be due to USEPA in December 2013 identifying any new NO_x control strategies that may be needed to attain the new standard. That analysis may require additional targeted emission reductions beyond CSA in certain critical areas in North Carolina and in other states.

On July 15, 2009, USEPA proposed a revision to the current annual NOx standard by adding a 1-hour daily NOx standard. Although this proposal seems to be aimed at emission reductions from sources other than utilities, the North Carolina Division of Air Quality is studying the potential effect of this new proposal on all emission sources.

In judicial actions pursuant to Section 10 of the Clean Smokestacks Act authorizing other actions to achieve emissions reduction in NO_x and SO_2 from other states and entities, the North Carolina Attorney General on January 20, 2006, filed suit alleging that NO_x and SO_2 emissions from Tennessee Valley Authority (TVA) power plants were inadequately controlled and created a public nuisance. On January 13, 2009, the federal District Court in Asheville found four TVA coal-fired generating facilities within 100 miles of North Carolina to be creating a public nuisance in the state. The court ordered that each unit at each of these facilities meet emission limits for NO_x and SO_2 consistent with the installation and continuous operation of modern pollution controls no later than December 2013. TVA has appealed the decision of the Court.

In other actions by the North Carolina Attorney General, a petition was filed under §126 of the Clean Air Act requesting that USEPA impose NO_x and SO_2 controls on large coal-fired utility boilers in 13 upwind states that impact air quality in North Carolina. Although USEPA originally denied both the petition and administrative reconsideration, the State petitioned the D.C. Circuit for judicial review. Based in part upon the outcome of the CAIR case, USEPA conceded that it must reconsider its earlier denial and the court remanded the matter back to the USEPA on March 5, 2009.

In April 2008, USEPA exempted sources of NO_x in Georgia from any summertime NO_x emissions cap. The NO_x cap had been required by a separate federal rule designed to help downwind states reduce ambient levels of ozone. Sources in Georgia are also exempt from summertime NO_x controls for ozone under the remanded CAIR. On June 20, 2008, the North Carolina Attorney General petitioned the D.C. Circuit for a review of USEPA's April 2008 action to exempt Georgia and a decision is expected on this petition in early 2010. The outcome of this case could impact the extent to which Georgia sources are controlled or participate in Federal cap and trade programs. The Division of Air Quality will need to analyze the downwind impacts in North Carolina as they study whether additional reductions are needed beyond CSA.

SL2009-390, passed in the 2009-2010 legislative session, has the potential to further reduce power plant emissions of NO_x and SO_2 from Progress Energy. SL2009-390 amends G.S. §62-110.1 by allowing an expedited certification process through the Utilities Commission when coal-fired generating units are retired and replaced by natural gas generating units. When compared to coal, natural gas will achieve reductions of NO_x and SO_2 and other air pollutants, promoting cleaner air. Progress Energy has formally announced that three coal-fired boilers at its Lee Plant in Wayne County, N.C. will be replaced by gas-fired turbines by 2013. It is anticipated that federal climate change legislation may also result in further reductions of NO_x and SO_2 emissions as utility companies decide how to most economically address future required reductions of carbon dioxide emissions.

Given the recent actions by the state, the federal government, the Asheville federal District Court and the D.C. Circuit Court affecting power plant emissions and NO_x and SO_2 regulation, and given possible federal climate change legislation, it is recommended that the study of further State action to achieve additional reduction of these air contaminants be presented on December 1, 2013. That reporting date will:

- Allow the affected public utilities in North Carolina time to implement their control strategies to meet the compliance deadline under CSA,
- Give the Division of Air Quality time to quantify air quality impacts from CSA compliance, and
- Give industry and the Division time to implement new Federal rules and court actions.

Any reports made prior to the implementation of these control strategies would likely provide little new or beneficial information beyond the Division's ongoing analyses to meet other obligations, such as the federal Clean Air Act requirements. Furthermore, since evolution of new control technologies is fairly long-term, I recommend that reporting thereafter be on a three-year basis.

VI. 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 (SO_2) 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 (SO_2) 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: DENR/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 would result from the control of NOx and SO_2 from coal-fired utility boilers. Also, preliminary estimates were made for this co-benefit for 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". DENR/DAQ has also submitted the third and final report titled Mercury Emissions and Mercury Controls for Coal-Fired Electrical Utility Boilers. In 2006, DENR/DAQ developed a state mercury rule that goes beyond the now-vacated federal Clean Air Mercury Rule (CAMR). The North Carolina mercury rules, contained in Section 15A NCAC 02D .2500, became effective January 1, 2007. The coal-fired units of Duke Energy and Progress Energy have to meet this State-only requirement. This requirement is that the emissions of mercury from <u>each</u> coal-fired unit at Duke Energy and Progress Energy have to be controlled to the maximum degree that is technically and economically feasible or shut down by a prescribed date. The EPA will develop standards under the Clean Air Act Section 112 to reduce hazardous air pollutant (HAP) emissions (including mercury) from Coal- and Oil-fired Electric Utility Steam Generating Units. The rule is expected to be proposed in March 2011 and promulgated in November 2011.

Although the courts have since vacated CAMR, and it is unclear what the EPA's requirements will be, mercury reductions in North Carolina remain on schedule. The controls needed to comply with the North Carolina Clean Smokestacks Act provide significant co-benefits in the form of mercury emission reductions. Therefore, mercury emission reductions in North Carolina will continue through the year 2013. By 2018, all of the Duke Energy and Progress Energy units will either have controls in place or be shut down, as a matter of State law. The North Carolina Clean Smokestacks Act greatly reduces mercury emissions (as a co-benefit of the NOx and SO_2 controls) from sources within the State. Although CAIR has been remanded to EPA for revisions, it is reasonable to believe that a revised CAIR will require emission reductions beyond Clean Smokestacks, of which mercury reduction is a likely co-benefit. It is expected that CAIR reductions from our border states will provide further reductions in mercury deposition in North Carolina.

VII. 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 (CO_2) 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 (CO_2). 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 (CO_2) 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 (CO_2) is reduced as a result of the reductions in the emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO_2) 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: DENR/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". DENR/DAQ submitted the third and final report titled, "Carbon Dioxide (CO_2) 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 was to assess possible mitigation options, carry out analysis and make recommendations that state policy makers could consider for state-level climate action planning which included CO_2 and other greenhouse gas (GHG) reductions. Impacts on economic opportunities and co-benefits of proposed potential mitigation options were evaluated through a formal consensus-based stakeholder process. Determination of economic benefits to North Carolina was also assessed. The inaugural meeting of the CAPAG was held on February 16, 2006, and the CAPAG made recommendations regarding 56 mitigation options 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 GHG registry). The work of developing these recommendations and evaluating potential GHG emissions reductions was divided among five technical work groups.

The CAPAG commissioned a secondary economic analysis expanding the technical work groups' implementation-only cost analysis to also include jobs impacts. This analysis, conducted by Appalachian State University (ASU), was incorporated into the final CAPAG report. A summary conclusion from the ASU analysis stated:

> By 2020, the mitigation options analyzed would result in the creation of more than 15,000 jobs, $565 million in employee and proprietor income, and $302 million in gross state product. For the study period, 2007-2020, the mitigation options analyzed would generate more than $1.2 billion net present value (NPV) in net gross state product.

One of the earlier recommendations of the CAPAG, a Renewable Energy and Energy Efficiency Portfolio Standard (REPS), was enacted by Session Law 2007-397 (SB3) and codified under G.S. 62-133.8. The Utilities Commission, in the context of an extensive rulemaking proceeding, has developed and issued comprehensive rules implementing the provisions of G.S. 62-133.8, including provisions related to REPS. The final CAPAG report can be found at http://www.ncclimatechange.us/.

On October 28, 2008, the Air Quality Committee of the Environmental Management Commission held a public hearing on proposed amendments to the Air Quality Annual Emissions Reporting Rule for major stationary (point) sources. The amendments propose to add GHGs including CO_2, to the list of compounds reported as emissions releases annually by major point sources, including electric power utilities such as Duke Energy and Progress Energy. An inventory of GHG emissions was identified by the CAPAG technical workgroup on cross-cutting issues and unanimously supported as a mitigation option. On October 30, 2009, EPA promulgated the

“Mandatory Reporting of Greenhouse Gases”, a regulation to require reporting of GHG emissions from certain large emissions sources. The rule would apply to electricity generation. On November 19, 2009, the Environmental Management Commission chose not to take action on amendments to the NC Annual Emissions Reporting Rule (15A NCAC 02Q .0207) because GHG emissions data collected under the federal rule are considered to be sufficient in content and are expected to be released to the public in a reasonable timeframe. The Environmental Management Commission has requested the DENR/DAQ to provide updates by November 2010 if any significant action occurs that could impact the decision.

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act (CAA). In the Endangerment Finding, the Administrator found “that the current and projected concentrations of the six key well-mixed greenhouse gases--carbon dioxide (CO2)…--in the atmosphere threaten the public health and welfare of current and future generations.” In the Cause or Contribute Finding, the Administrator found “that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to the greenhouse gas pollution which threatens public health and welfare.”

On April 1, 2010, the EPA set national emission standards under Section 202(a) of the CAA to control GHGs from passenger cars and light-duty trucks, and medium-duty passenger vehicles, as part of a joint rulemaking with the National Highway Traffic Safety Administration (NHTSA). The standards would be phased in beginning with model year 2012 through 2016. The implementation of EPA’s light-duty vehicle standard will make GHG emissions subject to regulation under the CAA for the first time. As written in the CAA, air pollutants that are subject to regulation under the statute, are subject to prevention of significant deterioration (PSD) and operating-permit provisions for stationary sources (CAA Section 169(3)). To identify when stationary sources are subject to regulation, the EPA completed its reconsideration of the December 18, 2008, memorandum entitled “EPA’s Interpretation of Regulations that Determine Pollutants Covered by Federal Prevention of Significant Deterioration (PSD) Permit Program.” The final action, issued on March 29, 2010, confirms that “any new pollutant that EPA may regulate becomes covered under the PSD program on the date when the EPA rule regulating that new pollutant takes effect.” It then clarifies that for GHGs that date will be January 2, 2011, when the vehicle rule is expected to take effect.

To limit the number of stationary sources that would be subject to GHG regulations, the EPA is expected to finalize a rule in May 2010, that would apply a tailored approach to the major source thresholds under the PSD and Title V programs of the CAA by temporarily raising statutory thresholds and setting a PSD significance level for GHGs. By tailoring the applicability thresholds, it is expected that only large emitting sources would be affected by GHG regulations. EPA is expected to “phase-in-permit requirements, where by the first half of 2011, only those facilities that already must apply for CAA permits as a result of non-GHG emissions will be required to address their GHG emissions in their permit applications.” “Other large sources are expected to be phased in between the latter half of 2010 and 2013." Sources subject to the Clean Smokestacks Act would be affected by the soon to be promulgated Tailoring Rule and the extent of actual compliance requirements will depend on the content of the final rule.

It should also be noted that the U.S. Senate is expected to introduce a comprehensive climate and energy bill that would require GHG emissions in the U.S. to be reduced by 17% in 2020 from 2005 levels. Since the electricity generation sector is a major contributor to these emissions, the bill has the potential to impact sources already complying with the Clean Smokestacks Act.

VIII. Supplementary Information

Public Staff ─ North Carolina Utilities Commission Audit Reports: As noted in earlier reports, the Public Staff ─ North Carolina Utilities Commission (Public Staff) has audited the books and records of the IOUs with regard to the costs incurred and amortized in compliance with the Act and has filed reports of its findings with the Commission. According to these reports, the Public Staff's audits have confirmed that the costs in question have been incurred in compliance with the Act and have been properly accounted for.

By letter dated May 20, 2008, the Public Staff requested that the Commission confirm that its audit and reporting responsibilities with respect to the costs incurred and amortized by Duke Energy in compliance with the Act have been fulfilled with the filing of its 2008 report; inasmuch as Duke Energy's obligation under the Act, with respect to accelerated amortization, had been completed as of December 31, 2007. By letter dated July 10, 2008, the Commission advised the Public Staff that, in consideration of the foregoing, it was of the opinion that the Public Staff should not need to further monitor and make reports to the Commission regarding Duke Energy's recording of accelerated amortization, per se. The Commission further advised that the Commission was

> . . . also of the opinion that the Public Staff does not need to conduct further regularly scheduled investigations or make further regularly scheduled reports to the Commission relating specifically and exclusively to Duke's compliance with the Act. But rather, the Commission is of the opinion that such investigations should be undertaken and that such reports should be provided on a case-by-case basis as circumstances and/or events may require.

Progress Energy's obligation under the Act, with respect to accelerated amortization, was completed in June 2008. Consequently, neither IOU recorded accelerated amortization in 2009.

The Public Staff filed its most recent Clean Smokestacks Act report concerning Progress Energy and it also filed certain comments regarding Duke Energy with the

Commission on May 12, 2009. Such filings were addressed in DENR and the Commission's 2009 Clean Smokestacks Act joint report.

In its May 12, 2009 cover letter accompanying its 2008 Progress Energy Clean Smokestacks Act report, the Public Staff requested that the Commission ". . . confirm that its audit and reporting responsibilities with respect to costs incurred and amortized by [Progress Energy] in compliance with the Clean Smokestacks Act have been fulfilled with the filing of [the Public Staff's report for 2008]." While the Commission has not responded to that request directly, its expectations regarding any further audits and reports by the Public Staff relating exclusively to compliance with the Act are the same for Progress Energy as they are for Duke Energy.

Estimated 2010 Cost-of-Service Impact of IOUs' Continuing Compliance with the Act: The cost-of-service[1] or, synonymously, the revenue requirement impact of continuing compliance with the Act, for calendar year 2010, for each IOU is estimated to be as follows:

Progress Energy:

● Total company	$123.9 million
● N.C. retail	$86.3 million
● Residential customer monthly bill impact with usage @ 1,000 kWh per month	$2.36
● Residential customer monthly bill with usage @1,000 kWh	$106.43

Duke Energy:

● Total company	$129.4 million
● N.C. retail	$94.2 million
● Residential customer monthly bill impact with usage @ 1,000 kWh per month	$1.75
● Residential customer monthly bill with usage @1,000 kWh	$94.66

[1] The annual cost of service or, synonymously, annual revenue requirement of an investor-owned public utility, such as Progress Energy and/or Duke Energy, is typically defined as the sum total of reasonable operating expenses, depreciation expense, taxes, and a reasonable return on the net valuation of property.

IX. Conclusions

DENR/DAQ

DENR/DAQ carefully reviewed and considered the information provided by Progress Energy and Duke Energy in their April 1 and March 29, 2010 (revised May 6, 2010), respectively, compliance plan submittals.

Progress Energy has completed nearly all of the emissions control projects and associated work to assure compliance with the Clean Smokestacks Act. The remaining work and associated expenditures will be completed by the end of 2010. Progress Energy has maintained its NOx and SO_2 limits for 2009 through measured monitoring data. There is reason to believe that it is on track to meet its annual SO_2 limit of 50,000 tons in 2013. Progress Energy's initial SO_2 control plan included putting scrubbers on eight units. Progress Energy's 2004 SO_2 emissions were 195,655 tons with no scrubbers. The 2007 emissions were reduced to 147,242 tons with two scrubbers operational the entire year in Asheville. And in 2008, SO_2 emissions were reduced to 94,221 tons with two scrubbers fully operational at Roxboro and two others available for part of the year (Roxboro). The Mayo unit became operational in 2009. Calendar year SO_2 emissions were 62,256 tons, which are well below the 100,000 tons limit. By 2013, Progress Energy plans to "retire the Lee coal-fired plant and replace the plant with a combined-cycle natural gas-fired unit. Accomplishing this retirement and replacement eliminates the need for an SO_2 scrubber on Sutton Unit 3 in order to comply with the 2013 Clean Smokestacks Act limits." It is reasonable to conclude that with the annual operation of the two Asheville units, all four Roxboro units, one Mayo unit, and retirement of the three Lee units, Progress Energy is likely to meet and maintain its SO_2 emissions limit for 2013. Progress Energy has completed the air permitting required to comply with the Clean Smokestacks Act.

Similarly, Duke Energy has met its 2009 annual emission limits of 31,000 tons NOx and 150,000 tons SO_2. Duke Energy has completed installing controls for NOx reductions for the purposes of Clean Smokestacks Act compliance. The combination of SCR, SNCR, and low NOx burners, along with year-round operation of these controls, have achieved calendar year 2009 emissions of 18,541 tons, which is below Duke Energy's final annual target of 31,000 tons of NOx per year.

Duke Energy's SO_2 control plan included installation and operation of 12 scrubbers to meet emission limits of 150,000 tons in 2009 and 80,000 tons in 2013. During 2009, 11 of the 12 scrubbers were in operation. These units have so far reduced Duke Energy's SO_2 emissions from 298,781 tons (2005) to 48,549 tons (2009). With the final scrubber work to be completed in 2010 at Cliffside Unit 5, Duke Energy's SO_2 controls will be in place several years ahead of planned schedule. The Company has already met its 2013 target, and is likely to maintain these emission levels through continuous operation of the required control systems.

COMMISSION

The Commission has also carefully reviewed and considered the information and data provided by the investor-owned public utilities in their 2009 Clean Smokestacks annual reports. Based upon those annual updates, the Commission is also of the opinion that Progress Energy and Duke Energy continue to be in compliance with the Act.

SUMMARY

In summary, DENR and the Commission conclude that the actions taken to date by Progress Energy and Duke Energy are in accordance with the provisions and requirements of the Clean Smokestacks Act. Further, the compliance plans and schedules proposed by Progress Energy and Duke Energy appear adequate to achieve the emissions limitations set out in G.S. 143-215.107D.

Attachments

Attachment A: Duke Energy Carolinas, LLC, 2010 Annual Data Submittal (Revised), Submitted by Cover Letter Dated May 6, 2010

Attachment B: Progress Energy Carolinas, Inc. North Carolina's Clean Smokestacks Act Calendar Year 2009 Progress Report, Submitted by Cover Letter Dated April 1, 2010

Duke Energy® Carolinas

GEORGE T. EVERETT, Ph.D.
Director
Environment and Legislative Affairs

Duke Energy Carolinas, LLC
3700 Glenwood Avenue
Suite 330
Raleigh, NC 27612

919-235-0955
704-906-5351 cell
919-828-5240 fax
gteverett@duke-energy.com

May 6, 2010

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

FILED
MAY 06 2010
N.C. Clerk's Office
Utilities Commission

Mr. Dee A. Freeman, Secretary
North Carolina Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

Subject: Docket No. E-7, Sub 718
Duke Energy Carolinas, LLC
NO_x and SO_2 Compliance Plan Annual Update
Record No: NC CAP 009 – Revision to Correct Emissions Values

Dear Ms. Vance and Mr. Freeman

Duke Energy Carolinas, LLC is required by Senate Bill 1078 ("North Carolina Clean Air Legislation") to file information on or before April 1 of each year to update the North Carolina Utilities Commission ("Commission") of the progress to date, upcoming activities and expected plans to achieve the emissions limitations set out in G.S. 143-215.107D. Enclosed for filing is a revised version of the original and thirty (30) copies of Duke Energy Carolinas' Compliance Plan Annual Update for 2010 that fully describe the Company's efforts to comply with the North Carolina Clean Air Legislation.

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

NO_x Control – Duke Energy Carolinas has completed installing controls for NO_x reductions originally planned under the North Carolina Clean Air Legislation. The combination of SCR, SNCR, and low NO_x burners, along with year round operation of these controls, has achieved and continues to maintain annual emissions below Duke Energy Carolinas' final annual target of 31,000 tons of NO_x per year.

SO_2 Control – The installation of wet scrubbers on our twelve largest generating units continues to be our plan for compliance with the 2009-2012 and 2013 and beyond SO_2 caps under the North Carolina Clean Air Legislation. During 2009, eleven of the twelve scrubbers were in operation and Duke Energy Carolinas operated well below its 2009 SO_2 emission limit of 150,000 tons. With the final scrubber work at Cliffside Unit 5 to be completed this year, our SO_2 controls will be in place several years ahead of the 2013 final deadline in the Clean Air Legislation.

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

Duke Energy Carolinas will continue to examine the technology selection, implementation schedule and associated costs. Annual updates will be provided to the 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
Director, Environmental and Legislative Affairs
Duke Energy Carolinas

Enclosures

cc: Parties of Record

Duke Energy Carolinas, LLC

General Assembly of North Carolina Session 2001
Senate Bill 1078 – Improve Air Quality/Electric Utilities (NC Clean Air Legislation)
2010 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 for technology selections by facility and unit, actual and projected operational dates, actual and 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 described below:

NO_x Compliance

- Emission Rate Changes – Expected rates for certain units have been adjusted in this 2010 update based on operating experience in 2009 with installed controls and targeted future performance.

SO_2 Compliance

- Emission Rate Changes – Expected rates have been adjusted in this 2010 update based on operating experience in 2009 and targeted future performance.

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 2009 calendar year, Duke Energy Carolinas spent **$149,211,300** 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

- Began operation of the Unit #1 absorber,
- Began operation of the Unit #3 absorber,
- Completed gypsum handling system,
- Completed Highway modification NC273 at the FGD entrance road,
- Completed generating unit tie-ins for Units 1-5.

Cliffside Steam Station Unit 5 FGD

- Completed erection of the Unit 5 absorber vessel,
- Completed initial tie-in to the Unit 5 stack and installation of blanking plates,
- Received and set Unit 5 auxiliary transformer,

- Constructed wastewater treatment facility,
- Erected limestone and gypsum material handling equipment,
- Completed steel erection for dewatering building, absorber building and reagent prep building,
- Received equipment and begin ball mill assembly.

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

As discussed in the December 20, 2007 order associated with rates and environmental compliance costs (Docket E-7 Sub 829), no additional amounts were amortized related to construction work activity in the 2009 calendar year in support of compliance with the provisions of G.S. 143-215.107D. **$1,050,000,000** was amortized in total for the program through year-end 2007.

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. While there has been no significant change to the scope or timing associated with any of these projects, forecasts for active projects have been updated as compared to the 2009 filing. The net overall cost has been reduced $17,036,000 or approximately 1% from the previously forecasted costs. This change can be attributed to unused contingency or risk items included in the previous forecast.

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.**

<u>Allen Steam Station FGD</u>

- Request to revise NPDES Permit to include FGD wastewater – Submitted 1/24/2006; received revision 9/11/2006
- Submittal to DENR/ACOE regarding stream crossing of entrance road – Received permits 5/25/2006
- Air Permit Application – Submitted 4/10/2006; received Permit 6/30/2006
- Authorization to Construct (ATC) application for Wastewater Treatment System – Submitted 9/14/2006; received Permit to Construct 12/15/2006
- NOTE: All erosion control permits are in EPC contractor's scope for the Allen FGD Project and were received in 2006 (7/13/2006 and 12/18/2006). EPC contractor also received permit from NCDOT to improve Highway NC273 at the Allen FGD entrance road on 12/3/2008. Stack contractor

also applied for air permit associated with flue liner fabrication on 11/1/2006 and received on 2/2/2007.

Belews Creek Steam Station FGD

- Request to revise NPDES Permit to include FGD wastewater – Submitted 6/30/2004; received Permit Revision 5/16/2005
- Initial Erosion Control Permit – Submitted 2/4/2005; received Permit 3/7/2005
- Landfill Site Suitability Application – Submitted 3/30/2005; received Site Suitability Approval Letter 6/19/2006
- Air Permit Application for Belews Creek FGD project – Submitted 4/18/2005; received Air Permit 2/6/2006
- Authorization to Construct (ATC) application for Wastewater Treatment System – Submitted 7/21/2005; received Permit to Construct 12/27/2005
- Authorization to Construct (ATC) application for Constructed Wetlands – Submitted 7/21/2005; received Permit to Construct 12/27/2005
- Revised Landfill Construction Plan Application – Submitted 9/30/2005; received Permit to Construct 6/29/2006
- Air Permit – Notice of Intent to Construct – Submitted 10/11/2005; received Permit to Construct 10/24/2005
- Authorization to Construct Sanitary Waste Lagoon – Submitted 3/23/2006; received Permit to Construct 9/1/2006
- Existing Sewage Lagoon Approval to Decommission – Submitted 10/31/2006; received permit 1/25/2007
- Permit to operate the FGD Residue Landfill – Submitted Certification Report on 9/28/2007; received permit 1/24/2008
- Erosion Control Permit to construct Used Oil Building – Submitted August 2008; received permit 10/10/2008
- Building Permit to construct Used Oil Building – Submitted August 2008; received permit 10/21/2008
- NOTE: Revisions to Erosion Control Permit submitted on various dates; most recent revised permit received 3/30/2006

Cliffside Steam Station Unit 5 FGD

- Air Permit Application for Cliffside Unit 5 FGD project – Submitted 12/16/2005; received 12/15/2006
- Request to revise NPDES Permit (including new Cliffside Unit 6) – Submitted 4/30/2007; Received Permit Revision 8/13/2007
- FAA Permit for Stack – received permit 10/30/2007
- Landfill Site Suitability Application – Submitted 1/7/08; received 11/18/08
- Authorization to Construct (ATC) application for Wastewater Treatment System – received Permit to Construct 9/22/08
- Building Permits from Cleveland & Rutherford Counties for WFGD Control Room – received 1/26/09

- Landfill Construction Plan Application – Submitted 12/18/08, received 6/4/09
- CCP Landfill Erosion and Sedimentation Control Plan – Submitted 2/2/09, received 3/16/09
- Design Hydrogeologic Report and Water Quality Monitoring Plan – Submitted 7/08, received 6/3/09
- Rutherford County Watershed Protection Plan – Submitted 3/13/09, received 5/14/09
- Roadway Erosion and Sedimentation Control Plan – Submitted 6/12/09 received 11/3/09
- Air Permit Application for Cliffside Station FGD Project (Common Support Facilities for Units 5&6) - Submitted 12/23/09; received 2/3/10.

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
- Air Permit Revisions (for material handling issues) – Submitted 9/2/05; received 12/7/05
- Landfill Permit Documents (to line landfill) – Submitted 12/15/05; received 6/5/06
- Permit to Operate Marshall FGD Landfill – Submitted 10/27/06; received 11/21/06

Allen Steam Station SNCRs, Unit 2 and Unit 5

- Air Permit Application – Submitted 4/24/06; Received 6/30/06

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
- Building/Plumbing permit from Gaston County Building and Standards – Received 4/27/06 for municipal water tie-ins

Buck Steam Station Burners, Unit 3 and Unit 4

- Air Permit Application – Submitted 9/15/06; Received 2/15/07

Buck Steam Station SNCR, Unit 5 and Unit 6

- Air Permit Application – Submitted 3/10/06; Received 5/16/06

Dan River Steam Station Burners, Unit 1, Unit 2 and Unit 3

- Air Permit Application – Submitted 2/23/06; Received 9/11/06

Marshall Steam Station SNCRs, Unit 1 and 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

Marshall Steam Station SNCR, Unit 4

- Air Permit Application – Submitted 4/28/06; Received 9/12/06

Riverbend Steam Station SNCRs, Unit 4 and Unit 5

- 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 Burners, Unit 6

- Air Permit Application – Submitted 5/14/03; Received 9/30/03

Riverbend Steam Station SNCRs, Unit 6 and 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

- Complete final drawing turnover and archival.
- Complete strainer replacement with automatic strainers due to algae issue.
- Complete installation of additional relays to eliminate reliability issue with Belmont Tie.

Cliffside Steam Station Unit 5 FGD

- Complete backfeed power to Unit 5 Auxiliary Transformers (Completed 3/04/10).

- Complete, commission, and turnover the control of the Raw Water Pump Structure and Clarifier to the station (at completion of Unit-5 Spring, 2010, outage).
- Complete upgrade of the Unit-5 Distributed Control System (DCS) – during the Unit-5 Spring, 2010, Outage.
- Complete project mechanical systems.
- Finalize FGD System tie-in to Unit-5 (Fall, 2010, Tie-In Outage).
- Complete FGD System Testing and Tuning.
- Turnover control of the FGD facility the station.
- Complete FGD System Performance Testing.

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.**

Cliffside will request a permit to operate the CCP Landfill in 2010. No additional applications for permits are expected.

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

No additional equipment related testing occurred in 2009. The SNCR and SCR tests that occurred in prior years that were used in evaluating technology selections are repeated in this 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 2004 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 2009 calendar year, **18,543** tons of NO_x and **48,551** tons of SO_2 were emitted from the Duke Energy Carolinas 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.

Duke Energy Carolinas will surrender to the state of North Carolina 28,492 SO2 allowances and 1,958 Annual NOx allowances. This action is the result of the June 21, 2002 agreement to surrender SO2 allowances allocated by US EPA in excess of 150,000 allowances and NOx allowances allocated by US EPA in excess of 31,000 allowances for calendar year 2009.

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.

Duke Energy Carolinas Compliance for NC Clean Air Legislation as of 4/1/2010
(Exhibit A)

NO$_x$									
				2009 Compliance		2009 Compliance Revised		2010 Compliance	
Facility	Unit	Technology	Operational Date	Actual Rate #/MMBTUs	Tons	Actual Rate #/MMBTUs	Tons	Expected Rate #/MMBTUs	Tons
Allen	1	SNCR	2003	0.205	267	0.205	301	0.17	446
Allen	2	SNCR	2007	0.197	252	0.203	432	0.17	356
Allen	3	SNCR	2005	0.180	885	0.180	885	0.18	927
Allen	4	SNCR	2006	0.187	1,045	0.187	1,045	0.18	1,116
Allen	5	SNCR	2008	0.197	1,021	0.199	1,159	0.18	936
Belews Creek	1	SCR	2003	0.045	1,320	0.045	1,320	0.06	1,871
Belews Creek	2	SCR&Burners	2004	0.050	1,445	0.050	1,445	0.06	1,722
Buck	3	Burners	2007	0.203	27	0.203	27	0.28	91
Buck	4	Burners	2007	0.267	17	0.267	17	0.30	52
Buck	5	SNCR	2006	0.164	147	0.164	147	0.16	253
Buck	6	SNCR	2006	0.167	184	0.167	184	0.16	318
Cliffside	1	Tuning Only	2004	0.402	21	0.402	21	0.43	61
Cliffside	2	Tuning Only	2004	0.375	25	0.375	25	0.41	58
Cliffside	3	Tuning Only	2004	0.312	43	0.312	43	0.41	159
Cliffside	4	Tuning Only	2004	0.380	48	0.380	48	0.41	154
Cliffside	5	SCR	2002	0.065	911	0.065	911	0.06	726
Dan River	1	Burners	2008	0.257	47	0.257	47	0.25	86
Dan River	2	Burners	2006	0.266	53	0.266	53	0.25	97
Dan River	3	Burners	2006	0.259	150	0.259	150	0.21	580
Marshall	1	SNCR	2006	0.200	3,708	0.214	3,708	0.20	4,709
Marshall	2	(combined stack)	2007						
Marshall	3	SNCR/SCR[1]	2005/2008	0.058	1,300	0.058	1,300	0.06	1,404
Marshall	4	SNCR	2007	0.215	4,736	0.215	4,736	0.20	4,411
Riverbend	4	SNCR	2007	0.216	229	0.196	61	0.19	206
Riverbend	5	SNCR&Burners	2008	0.196	61	0.200	69	0.19	193
Riverbend	6	SNCR&Burners	2006	0.200	69	0.214	180	0.19	418
Riverbend	7	SNCR	2006	0.214	180	0.216	229	0.19	428
			Expected/Actual Total:		**18,190**		**18,543**		**21,778**
			Compliance Limit:		**31,000**		**31,000**		**31,000**

[1] SNCR Technology in service on Marshall Unit 3 was replaced by SCR Technology in 2008 in support of 8-hour ozone attainment demonstration in the Charlotte region. Similar to other SCR additions to comply with other laws besides the North Carolina Clean Air Legislation, costs associated with this Marshall Unit 3 SCR project are not "environmental compliance costs" within the meaning of that term as used in the North Carolina Clean Air Legislation.

<u>Technology</u>

Burners -- Overfired Air or Separated Overfired Air with associated Mill Classifier installations
SCR -- Selective Catalytic Reduction
SNCR -- Selective Non-Catalytic Reduction

Duke Energy Carolinas Compliance for NC Clean Air Legislation as of 4/1/2010
(Exhibit B)

SO$_2$											
				2009 Compliance		2009 Compliance Revised		2010 Compliance		2013 Compliance	
Facility	Unit	Technology	Operational Date	Actual Rate #/MMBTUs	Tons	Actual Rate #/MMBTUs	Tons	Expected Rate #/MMBTUs	Tons	Expected Rate #/MMBTUs	Tons
Allen	1	Scrubber	2009	0.282	390	0.290	443	0.15	394	0.15	351
Allen	2	Scrubber	2009	0.453	604	0.437	780	0.15	314	0.15	325
Allen	3	Scrubber	2009	0.571	2,827	0.571	2,827	0.15	773	0.15	878
Allen	4	Scrubber	2009	0.540	2,936	0.540	2,936	0.15	930	0.15	1,023
Allen	5	Scrubber	2009	0.346	1,780	0.331	1,846	0.15	780	0.15	821
Belews Creek	1	Scrubber	2008	0.061	2,004	0.061	2,004	0.15	4,677	0.15	3,686
Belews Creek	2	Scrubber	2008	0.063	2,215	0.063	2,215	0.15	4,305	0.15	5,555
Buck	3			1.055	123	1.055	123	1.40	457		
Buck	4			1.046	59	1.046	59	1.40	243		
Buck	5			1.069	986	1.069	986	1.40	2,211	1.40	1,455
Buck	6			1.094	1,226	1.094	1,226	1.40	2,784	1.40	1,787
Cliffside	1			1.466	64	1.466	64	1.60	226		
Cliffside	2			1.463	92	1.463	92	1.60	228		
Cliffside	3			1.427	173	1.427	173	1.60	619		
Cliffside	4			1.448	167	1.448	167	1.60	601		
Cliffside	5	Scrubber	2010	1.453	22,484	1.453	22,484	1.20	14,525	0.15	1,654
Cliffside	6	Scrubber	2011							0.12	3,006
Dan River	1			1.325	239	1.325	239	1.75	604		
Dan River	2			1.331	257	1.331	257	1.75	680		
Dan River	3			1.372	901	1.372	901	1.75	4,834		
Marshall	1	Scrubber (combined stack)	2007	0.088	1,497	0.088	1,497	0.15	3,532	0.15	2,648
Marshall	2										
Marshall	3	Scrubber	2007	0.068	1,592	0.068	1,592	0.15	3,040	0.15	3,354
Marshall	4	Scrubber	2006	0.069	1,482	0.069	1,482	0.15	2,870	0.15	2,742
Riverbend	4			1.472	445	1	445	1.70	1,990	1.70	530
Riverbend	5			1.531	503	1.531	503	1.70	1,860	1.70	422
Riverbend	6			1.590	1,479	1.590	1,479	1.70	4,000	1.70	835
Riverbend	7			1.575	1,731	1.575	1,731	1.70	4,090	1.70	1,131
			Expected/Actual Total:		48,256		48,551		61,565		32,202
			Compliance Limit:		150,000		150,000		150,000		80,000

ATTACHMENT A
PAGE 11 OF 14

Duke Energy Carolinas Compliance Costs for NC Clean Air Legislation as of 4/1/2010
(Exhibit C)

				Spent to Date							Remaining		
Facility	Unit(s)	Technology	Operational Date	2001-'03 ($000)	2004 ($000)	2005 ($000)	2006 ($000)	2007 ($000)	2008 ($000)	2009 ($000)	2010-2011 ($000)	Project Total ($000)	
Allen	1-5	Scrubber	2009	$1,100	($12)	$5,348	$62,753	$209,063	$153,698	$51,765	$1,600	$485,315	
Belews Creek	1-2	Scrubber	2008	$1,121	$5,999	$106,434	$250,648	$128,058	$34,629	$1,338	$0	$528,227	SO_2
Cliffside	5	Scrubber	2010	$978	$287	$112	$3,175	$57,778	$77,525	$96,111	$50,000	$285,967	
Marshall	1-4	Scrubber	2007	$10,214	$92,096	$218,130	$74,163	$23,632	($1,250)	$0	$0	$416,985	
Allen	1	SNCR	2003	$3,224	$365	$0	$0	$0	$0	$0	$0	$3,589	
Allen	2	SNCR	2007	$0	$0	$239	$2,711	$2,332	($208)	$0	$0	$5,074	
Allen	3	SNCR	2005	$216	$2,584	$4,092	$32	$0	$0	$0	$0	$6,924	
Allen	4	SNCR	2006	$0	$218	$1,122	$4,258	$171	$16	$0	$0	$5,785	
Allen	5	SNCR	2008	$99	$165	$122	$23	$2,161	$2,425	$0	$0	$4,994	
Buck	3	Burner	2007	$0	$0	$0	$615	$3,565	$0	$0	$0	$4,179	
Buck	3	Classifier	2007	$0	$0	$0	$0	$216	$0	$0	$0	$216	
Buck	4	Burner	2007	$0	$0	$0	$358	$1,882	$1	$0	$0	$2,241	
Buck	4	Classifier	2007	$0	$0	$0	$0	$93	$0	$0	$0	$93	
Buck	5	SNCR	2006	$0	$268	$346	$4,837	$183	$160	$0	$0	$5,794	
Buck	6	SNCR	2006	$0	$266	$335	$3,814	($685)	($29)	($2)	$0	$3,699	
Dan River	1	Burner	2008	$0	$0	$0	$0	$1,560	$1,633	$0	$0	$3,194	
Dan River	1	Classifier	2008	$0	$0	$0	$0	$124	$0	$0	$0	$124	
Dan River	2	Burner	2006	$0	$0	$775	$1,694	$239	$0	$0	$0	$2,708	
Dan River	2	Classifier	2005	$0	$0	$131	$0	$0	$0	$0	$0	$131	NO_x
Dan River	3	Burner	2006	$192	$513	$679	$1,441	$377	$0	$0	$0	$3,202	
Dan River	3	Classifier	2005	$0	$0	$184	$0	$0	$0	$0	$0	$184	
Marshall	1	SNCR	2006	$1	$167	$1,418	$2,106	$182	$0	$0	$0	$3,874	
Marshall	2	SNCR	2007	$198	$185	$778	$2,761	$1,382	$322	$0	$0	$5,626	
Marshall	3	SNCR	2005	$1,577	$652	$2,042	$32	$0	$0	$0	$0	$4,304	
Marshall	4	SNCR	2007	$0	$0	$43	$2,614	$494	$0	$0	$0	$3,151	
Riverbend	4	SNCR	2007	$0	$46	$474	$1,082	$1,982	($53)	$0	$0	$3,531	
Riverbend	5	Burner	2005	$650	$2,313	$180	$0	$0	$0	$0	$0	$3,143	
Riverbend	5	Classifier	2005	$0	$160	$0	$0	$0	$0	$0	$0	$160	
Riverbend	5	SNCR	2008	$0	$2	$322	$1,475	$2,587	$6	$0	$0	$4,390	
Riverbend	6	Burner	2005	$572	$510	$2,096	$0	$0	$0	$0	$0	$3,179	
Riverbend	6	Classifier	2005	$0	$0	$189	$0	$0	$0	$0	$0	$189	
Riverbend	6	SNCR	2006	$0	$2	$340	$3,454	$504	$4	$0	$0	$4,304	
Riverbend	7	SNCR	2006	$0	$48	$486	$3,939	$521	$5	$0	$0	$4,999	
			Subtotals:	$20,142	$106,834	$346,420	$427,984	$438,400	$268,884	$149,211	$51,600		
											NC Clean Air Legislation program forecast [1]:	$1,809,476	

[1] The NC Clean Air Legislation program forecast excludes all financing-related accounting entries

VERIFICATION

I, George T. Everett, state and attest that the attached information updating the North Carolina Utilities Commission on progress to date, upcoming activities and expected strategies to achieve the emissions limitations set out in N.C.G.S. 143-215.107.D is filed on behalf of Duke Energy Carolinas, LLC. I have reviewed said Annual Update, and in the exercise of due diligence have made reasonable inquiry into the accuracy of the information provided therein; and that, to the best of my knowledge, information, and belief, all of the information contained therein is accurate and true and no material information or fact has been knowingly omitted or misstated therein.

George T. Everett

George T. Everett
Director, Environmental and Legislative Affairs
Duke Energy Carolinas

5/6/2010
Date

Subscribed and sworn to before me,
This 6th day of May, 2010.

Maria Edwards
NOTARY PUBLIC

My commission expires: 3/2/2013

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's NOx and SO2 Compliance Plan Annual Update in No. E-7, Sub 718, has been served by electronic mail, hand delivery or by depositing a copy in the Unites States Mail, first class postage prepaid, properly addressed to parties of record.

George T. Everett

George T. Everett
Director, Environmental and Legislative Affairs
Duke Energy Carolinas

5/6/2010
Date

George T. Everett
Director, Environmental and Legislative Affairs
Duke Energy Carolinas

Progress Energy

April 1, 2010

FILED
APR 0 1 2010
Clerk's Office
N.C. Utilities Commission

Ms. Renne Vance
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 Ms. Vance:

Progress Energy Carolinas, Inc. submits the attached report for calendar year 2009 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
General Counsel
Progress Energy Carolinas, Inc.

LSA:mhm

Attachment

STAREG940

Progress Energy

April 1, 2010

Mr. Dee Freeman
Secretary
North Carolina Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

Dear Secretary Freeman:

Progress Energy Carolinas, Inc. (PEC, Company) submits the attached report for calendar year 2009 regarding the status of its compliance with the provisions of the North Carolina Clean Smokestacks Act (Act).

During 2009, the Company's annual NOx emissions from its North Carolina coal-fired units again totaled less than 25,000 tons, and our SO_2 emissions totaled less than 100,000 tons. We have developed plans and processes to assure that we continue to meet the requirements of the Act while balancing operational flexibility, unit performance, and cost.

As the report shows, PEC has completed nearly all of the emissions control projects and associated work undertaken to assure compliance with the Act. The remaining work and associated expenditures will be completed this year. As discussed in our July 31, 2009 report, the Lee coal-fired plant will be retired by 2013, providing additional compliance assurance with the Act's 2013 emissions cap.

We appreciate the excellent work of the Department staff, particularly those in the Air Quality and Water Quality divisions, who have supported our efforts to complete the projects in a timely manner to assure we meet the Act's requirements. We also want to express our best regards to Keith Overcash, the director of the Division of Air Quality, who we understand will be retiring later this year. Mr. Overcash was an early champion of the Act and has maintained an active interest in its successful implementation in the years that followed. We wish him well.

Please contact me at (919) 546-3775 if you have any questions.

Sincerely,

Caroline Choi

Caroline Choi
Director, Energy Policy and Strategy

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

c: North Carolina Utilities Commission
Keith Overcash, DAQ

Progress Energy Carolinas, Inc. (PEC)
North Carolina Clean Smokestacks Act
Calendar Year 2009 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), 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 Act 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.

Under G.S. § 143-215.107D(f), "each investor-owned public utility…may determine how it will achieve the collective emissions limitations imposed by this section." PEC originally submitted its compliance plan on July 29, 2002. Appendix A contains an updated version of this plan, effective April 1, 2010.

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.

In 2009, Progress Energy Carolinas, Inc. incurred actual capital costs of $41,902,000.

<u>Mayo</u>

The Mayo scrubber was completed and placed in service in April, 2009.

<u>Roxboro</u>

Construction related to remediation work on the waste water treatment settling and flush ponds continued during 2009. The flush pond remediation was completed in 2009.

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

Progress Energy Carolinas, Inc. amortized $0 in 2009. No additional amortization is anticipated.

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 through 2009 and the projected costs for future years through 2013. The costs shown are the net costs to PEC, excluding the portion for which the Power Agency is responsible. The estimated total capital costs, including escalation, are currently projected to be $1.060 billion. This represents a decrease of $342 million from the April 2009 cost estimate of $1.402 billion.

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 has completed the permitting required to comply with the provisions of G.S. 143-215.107D. Progress Energy applied for and/or received the following permits in 2009:

Roxboro Plant

Authorization to Construct

A request for addendum for the Authorization to Construct for repairs to the gypsum settling pond and flush pond for the waste water treatment system was submitted on January 12, 2009. Agency approval was obtained on May 15, 2009.

A request for Authorization to Construct for an additional settling pond for the waste water treatment system was submitted on March 11, 2009. Agency approval was obtained on June 15, 2009.

Mayo Plant

Air Permit

A renewal application for the Title V Air Permit was submitted on November 30, 2007. This application contained an update to include New Source Performance Standards (NSPS) requirements for the emergency quench water pump. Agency approval was obtained on May 27, 2009.

A permit application for changes to the air permit was submitted on January 15, 2009, which included revisions to the limestone silo control device arrangement and installation of a dry sorbent injection system for SO_3 control.

NPDES Permit

A revision to the NPDES permit to include limestone and gypsum truck traffic in support of scrubber operation was requested on February 11, 2009. Agency approval was obtained on October 14, 2009.

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.**

Roxboro

During 2010, work on the settling ponds will continue. With the Division of Land Resources assuming jurisdiction for certain impoundments and dam safety in 2009, these projects are being permitted in 2010.

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.**

Progress Energy has completed the air permitting required to comply with the provisions of G.S. 143-215.107D. The Division of Land Resources assumed jurisdiction for certain impoundments and dam safety in 2009. As a result, the settling pond projects at the Roxboro plant are being permitted in 2010.

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

Performance testing of the scrubbers on Roxboro Unit 1 and Mayo Unit 1 was completed in 2009. The testing confirmed that each scrubber achieved its performance guarantee of 97% SO_2 removal efficiency.

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 affected coal-fired PEC units have achieved a combined 68% reduction in NOx and a 71% reduction in SO_2 since 2002. The total calendar year 2009 emissions from the affected coal-fired Progress Energy Carolinas units are:

NOx 19,150 tons
SO_2 62,256 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 2009, 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.

There have been no additional requests for information from the North Carolina Utilities Commission or the Department of Environment and Natural Resources since the last report.

Appendix A

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

April 1, 2010

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. Under the law, G.S. § 143-215.107D, PEC's annual NOx emissions must not exceed 25,000 tons beginning in 2007 and annual SO_2 emissions must not exceed 100,000 tons beginning in 2009 and 50,000 tons beginning in 2013. These caps represent a 56% reduction in NOx emissions from 2002 levels and a 74% reduction in SO_2 emissions from 2002 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. Under G.S. § 143-215.107D(f), "each investor-owned public utility…may determine how it will achieve the collective emissions limitations imposed by this section."

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 been achieved (19,150 tons of NOx in 2009 compared with 112,000 tons in 1997), and compliance with the Clean Smokestacks Act's 25,000 ton cap has been achieved each year since the cap became effective in 2007. This target was 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 summer net generation capability, and installed NOx control technologies.

Sulfur Dioxide Emissions Control Plan

PEC has installed wet flue gas desulfurization systems (FGD or "scrubbers") to remove 97% of the SO_2 from the flue gas at its Asheville, Mayo and Roxboro boilers.

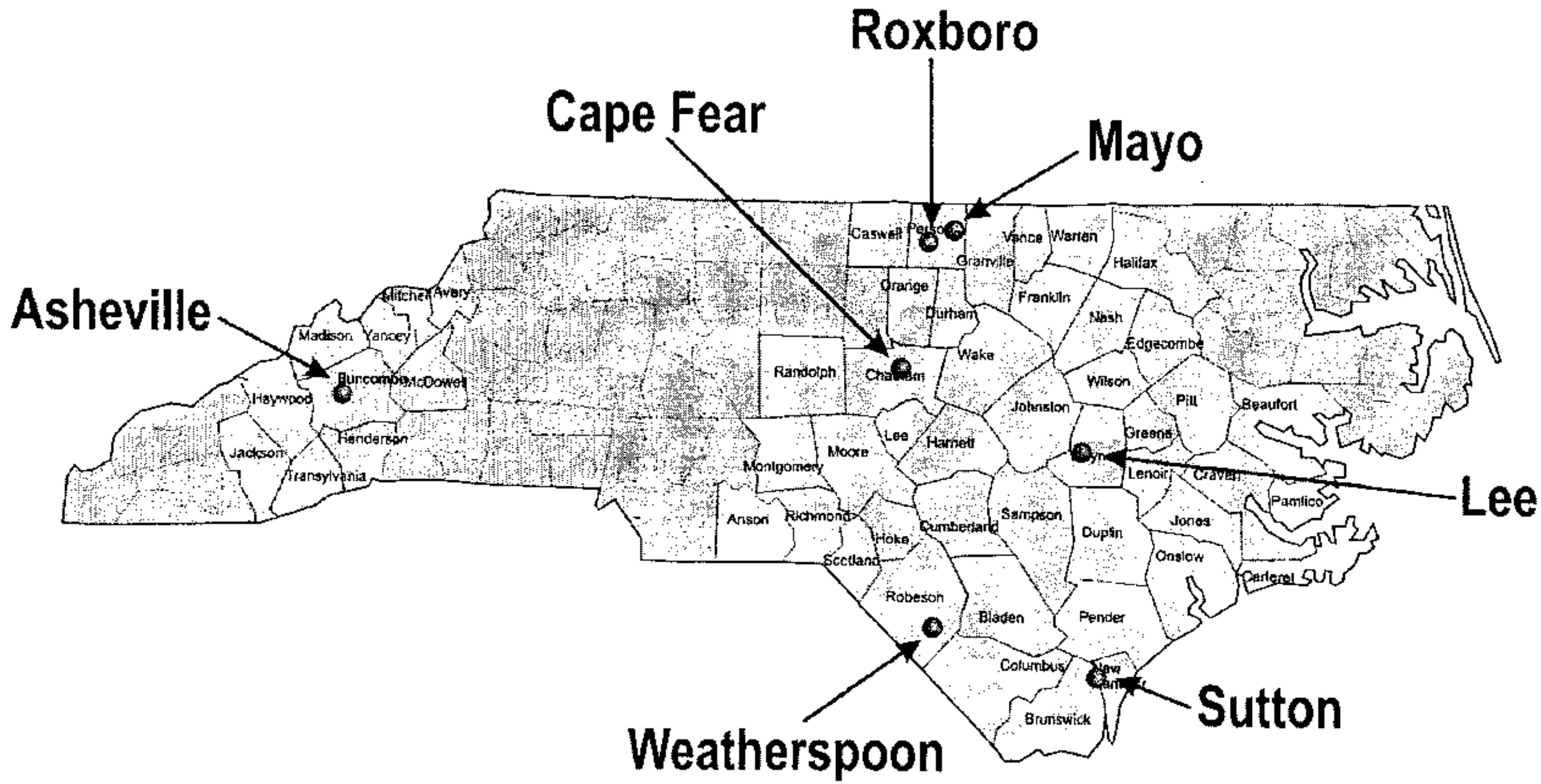
Wet scrubbers produce unique waste and byproduct streams. Issues related to wastewater permitting and solid waste disposal are being addressed for each site accordingly.

PEC has determined that retirement of the Lee coal-fired plant and replacement of that plant with a combined-cycle natural gas-fired unit represents a cost-effective resource plan for our system. Accomplishing this retirement and replacement by 2013 eliminates the need for an SO_2 scrubber on Sutton Unit 3 in order to comply with the 2013 Clean Smokestacks Act limits.

With this plan, additional controls are not needed at Sutton 3 to meet the 2013 Clean Smokestacks Act limits; therefore, that unit is no longer shown in Appendix B and the compliance costs have been reduced accordingly.

Attachment 3 details PEC's North Carolina coal-fired electric generating units, their summer net generation capability and installed SO_2 control technologies. Attachment 3 also projects annual SO_2 emissions on a unit-by-unit basis based on the energy demand forecast and expected efficiencies of the SO_2 emissions controls employed. These projections are based on the planned removal technologies and PEC's current fuel and operating forecasts. 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.

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



Attachment 2: PEC's 2010 NOx Control Plan for North Carolina Coal-fired Units

Unit	MW Rating	Control Technology	Operation Date[1]
Asheville 1	191	LNB/AEFLGR/**SCR**	2007
Asheville 2	185	LNB/OFA/SCR	
Cape Fear 5	144	ROFA/ROTAMIX	
Cape Fear 6	172	ROFA/ROTAMIX	
Lee 1	74	WIR	
Lee 2	77	**LNB**	2006
Lee 3	246	LNB/**ROTAMIX**	2007
Mayo 1	727	LNB/OFA/SCR	
Roxboro 1	369	LNB/OFA/SCR	
Roxboro 2	662	TFS2000/SCR	
Roxboro 3	693	LNB/OFA/SCR	
Roxboro 4	698	LNB/OFA/SCR	
Sutton 1	97	SAS	
Sutton 2	104	**LNB**	2006
Sutton 3	403	LNB/ROFA/ROTAMIX	
Weatherspoon 1	48		
Weatherspoon 2	48		
Weatherspoon 3	75	WIR	
Total	5,013		

AEFLGR – Amine-Enhanced Flue Lean Gas Reburn
LNB = Low NOx Burner
SCR = Selective Catalytic Reduction
OFA = Overfire Air
ROFA = Rotating Opposed-fired Air
ROTAMIX = Injection of urea to further reduce NOx
WIR = Underfire Air
TFS2000 = Combination Low-NOx Burner/Overfire Air
SAS = Separated Air Staging

[1] This is the operation date for the control technology installed to comply with the North Carolina Clean Smokestacks Act only (shown in bold).

Attachment 3: PEC's 2010 SO_2 Control Plan for North Carolina Coal-Fired Units

Unit	MW Rating	Technology	Operation Date		Projected SO_2 Tons, 2013
Asheville 1	191	Scrubber	2005		300
Asheville 2	185	Scrubber	2006		260
Cape Fear 5	144				5,890
Cape Fear 6	172				5,010
Lee 1	74				0
Lee 2	77				0
Lee 3	246				0
Mayo 1	727	Scrubber	2009		1,800
Roxboro 1	369	Scrubber	2008		840
Roxboro 2	662	Scrubber	2007		1,150
Roxboro 3	693	Scrubber	2008		1,150
Roxboro 4	698	Scrubber	2007		1,220
Sutton 1	97				1,750
Sutton 2	104				2,460
Sutton 3	403				10,440
Weatherspoon 1	48				300
Weatherspoon 2	48				390
Weatherspoon 3	75				1,120
Total	5,013				34,080

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

Appendix B
PEC Actual Costs Through 2008 and Projected Costs Through 2013
PGN Financial View Cost Net of Power Agency Reimbursement (in thousands)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Asheville 1 FGD	$ 100	$ 9,652	$ 33,574	$ 35.769	$ 3,930	-$ 1,850	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 81,175**
Asheville 1 SCR	$ 0	$ 0	$ 688	$ 1,423	$ 14,608	$ 11,942	-$ 262	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 28,400**
Asheville 2 FGD	$ 100	$ 7,742	$ 28,390	$ 24,238	$ 11,701	-$ 1,543	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 70,629**
Asheville FGD Common	$ 467	$ 0	$ 0	$ 0	$ 0	-$ 479	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	**-$ 12**
Mayo 1 FGD	$ 187	$ 0	$ 276	$ 644	$ 22,794	$ 104,886	$ 67,703	$ 23,799	$ 244	$ 0	$ 0	$ 0	**$ 220,532**
Roxboro FGD Common	-$ 15	$ 5,560	$ 10,030	$ 51,717	$ 72,934	$ 36,491	-$ 1,360	$ 2,717	$ 0	$ 0	$ 0	$ 0	**$ 178,074**
Roxboro 1 FGD	$ 434	$ 0	$ 0	$ 3,135	$ 12,164	$ 32,841	$ 24,905	$ 1,181	$ 0	$ 0	$ 0	$ 0	**$ 74,659**
Roxboro 2 FGD	$ 120	$ 3,574	$ 6,848	$ 30,782	$ 46,014	$ 18,975	-$ 357	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 105,955**
Roxboro 3 FGD	$ 0	$ 0	$ 244	$ 10,628	$ 36,661	$ 49,985	$ 9,006	$ 255	$ 0	$ 0	$ 0	$ 0	**$ 106,779**
Roxboro 4 FGD	$ 0	$ 0	$ 0	$ 9,074	$ 28,550	$ 57,610	$ 1,876	$ 135	$ 0	$ 0	$ 0	$ 0	**$ 97,245**
Lee 3 Rotamix	$ 0	$ 0	$ 0	$ 198	$ 6,424	$ 600	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 7,222**
Lee 2 LNB	$ 0	$ 0	$ 133	$ 273	$ 1,886	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 2,292**
Sutton 2 LNB	$ 0	$ 0	$ 0	$ 236	$ 1,900	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 2,136**
Total without Waste Water	**$ 1,393**	**$ 26,527**	**$ 80,184**	**$ 168,118**	**$ 259,566**	**$ 309,456**	**$ 101,510**	**$ 28,087**	**$ 244**	**$0**	**$ 0**	**$ 0**	**$ 975,086**
Asheville WWT	$ 0	$ 0	$ 0	$ 12,365	$ 1,289	-$ 306	$ 0	$ 0	$ 0	$ 0	$ 0	$ 0	**$ 13,348**
Mayo WWT	$ 0	$ 0	$ 0	$ 0	$ 0	$ 4,042	$ 6,604	$ 9,000	$ 0	$ 0	$ 0	$ 0	**$ 19,646**
Roxboro WWT	$ 0	$ 0	$ 0	$ 791	$ 11,965	$ 16,932	$ 5,127	$ 4,815	$ 11,791	$ 0	$ 0	$ 0	**$ 51,421**
Total Waste Water Treatment	**$ 0**	**$ 0**	**$ 0**	**$ 13,156**	**$ 13,253**	**$ 20,668**	**$ 11,732**	**$ 13,815**	**$ 11,791**	**$ 0**	**$ 0**	**$ 0**	**$ 84,414**
Total NC Smokestacks	**$ 1,393**	**$ 26,527**	**$ 80,184**	**$ 181,273**	**$ 272,819**	**$ 330,124**	**$ 113,242**	**$ 41,902**	**$ 12,034**	**$ 0**	**$ 0**	**$ 0**	**$ 1,059,501**
Total Estimated AFUDC							$ 6,158	$ 4,312	$ 0	$ 0	$ 0	$ 0	$ 10,470

Notes:

1. Historic year costs are actual, current year costs are projected, and future year costs are escalated
2. Costs reflect the Power Agency contribution

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF WAKE)

NOW, BEFORE ME, the undersigned, personally came and appeared, Paula Sims, who first duly sworn by me, did depose and say:

That she is Paula Sims, Senior Vice President-Power Operations of Carolina Power & Light Company, d/b/a Progress Energy Carolinas, Inc.; she has the authority to verify the foregoing Progress Energy Carolinas, Inc. North Carolina Clean Smokestacks Act Calendar Year 2009 Progress Report; that she has read said revised Report and knows the contents thereof; are true and correct to the best of her knowledge and beliefs.

Paula Sims
Senior Vice President-Power Operations
Progress Energy Carolinas, Inc.

Subscribed and sworn to me
this 23 day of March, 2010.

Carol Pl[illegible]
Notary Public Comm expires: Oct 26, 2013

246373