Implementation of the "Clean Smokestacks Act"

A Report to the Environmental Review Commission and the Joint Legislative Commission on Governmental Operations

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

Report No. X

June 1, 2012

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

Signed: 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

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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 investor-owned electric generating facilities. The Act also provided for the recovery of costs incurred by the utilities to achieve those limits. The emissions limitations set in the Act applied to coal-fired electric generating units operated by Duke Energy Carolinas, LLC (Duke Energy) and Progress Energy Carolinas Inc. (Progress Energy). The Act also imposed 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 Commission on Governmental Operations. The Act also requires Duke Energy and Progress Energy to submit annual reports to DENR and the Commission.

This report includes summaries of the annual reports submitted by Duke Energy and Progress Energy and describes actions and/or activities undertaken by state agencies in compliance with the Act. In summary, DENR and the Utilities 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.

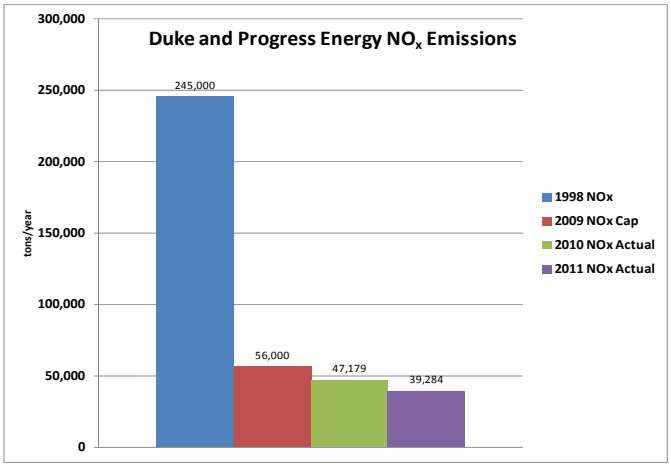
The General Assembly of North Carolina, Session 2001, passed Session Law 2002-4, also known as Senate Bill 1078. This legislation is titled "*An Act to Improve Air Quality in the State by Imposing Limits on the Emission of Certain Pollutants from Certain Facilities that Burn Coal to Generate Electricity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

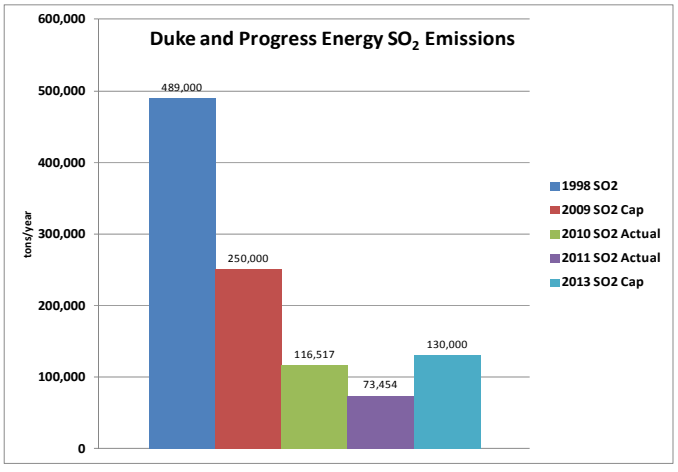
The Act, in Section 9, requires Duke Energy, and Progress Energy, to submit annual reports to DENR and the Commission containing certain specified information. Duke Energy filed its report with DENR and the Commission by cover letter dated March 27, 2012. Progress Energy filed its report with DENR and the Commission by cover letters dated March 30 and April 2, 2012, respectively. Each report was submitted in compliance with the requirements of G.S. 62-133.6(i). Duke Energy's and Progress Energy's reports are attached, and made part of this report, as Attachments A and B, respectively.

By letter dated May 15, 2012, the Secretary of DENR wrote to the Utilities 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. Duke Energy was limited to 35,000 tons of oxides of nitrogen (NOx) in any calendar year beginning Jan. 1, 2007, and Progress Energy was limited to 25,000 tons of NOx (combined cap of 60,000 tons NOx). DENR/DAQ has verified that both utilities have met their respective emission limits.

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 Progress Energy was required to emit less than 25,000 tons (combined cap of 56,000 tons NOx). Both utilities were also required to reduce their calendar year sulfur dioxide (SO_2) emissions; Duke Energy to 150,000 tons and Progress Energy to 100,000 tons (combined cap of 250,000 tons SO_2). For calendar year 2011, both utilities reported that they have continued to meet their respective limits. This has been confirmed by DENR/DAQ. The figure below shows the decrease in NOx and SO_2 emissions as a result of control measures implemented by Progress Energy and Duke Energy on a combined basis:





The reduction in SO_2 emissions required by CSA was paramount in attaining the fine particulate matter ($PM_{2.5}$) standard in the Hickory and Greensboro/High Point areas in North Carolina. In December 2009, DENR submitted to the U. S. Environmental Protection Agency (EPA) a redesignation demonstration and maintenance plan for these areas and then supplemented the maintenance plan in Dec. 2010. As part of the redesignation demonstration and maintenance plan, DENR relied on the CSA SO_2 reductions as permanent and enforceable measures that demonstrate continued maintenance of the $PM_{2.5}$ standard. On Sept. 26, 2011, the EPA adopted the CSA emission caps into the State Implementation Plan (76 FR 59250). On Nov. 18, 2011, the EPA approved the redesignation demonstration and maintenance plan for the Hickory and Greensboro/High Point areas (76 FR 71452 and 71455). In this action, the EPA redesignated the area to attainment, effective Dec. 19, 2011. The approval of the North Carolina $PM_{2.5}$ redesignation demonstration was made possible due to the CSA SO_2 emission caps. NOx reductions attributable to the CSA also helped the area meet the 1997 ozone standard.

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 (combined cap of 130,000 tons SO_2). Duke Energy's calendar year 2011 SO_2 emissions are well below the 2013 cap (22,038 tons SO_2). Progress Energy's calendar year 2011 SO_2 emissions are near the 2013 cap (51,416 tons SO_2). Progress Energy is expected to meet its 2013 target with the recently planned retirement of the Lee coal-fired plant and its replacement with a combined-cycle natural gas-fired plant.

Collectively, the two utilities have reduced NOx emissions by 84 percent and SO_2 emissions by 85 percent relative to 1998 emission levels.

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: The investor-owned utilities regulated under the Act, 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/DAQ reviewed this information and determined that the submittals complied with the Act and, as proposed, appeared adequate to achieve the emission limitations set out in G.S. 143-215.107D. The Commission agreed with and accepted DENR/DAQ's evaluations and findings.

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 Joint Legislative Utility Review Committee, predecessor to Governmental Operations. 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 11 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: Progress Energy originally submitted its compliance plan on July 29, 2002. Appendix A of Attachment B to this report contains an updated version of Progress Energy's plan, effective April 1, 2012.

Duke Energy Response: Exhibits A and B of Attachment A to this report outline Duke Energy's 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. The following changes to Duke Energy's plan for meeting emissions limits as compared to past compliance plans have been identified:

> NO_x Compliance
> Emission Rate Changes – "Expected emission rates for certain units have been adjusted in this 2012 update based on operating experience in 2011 with installed controls, targeted future performance, and planned retirements."
>
> SO_2 Compliance
> Emission Rate Changes – "Expected emission rates for certain units have been adjusted in this 2012 update based on operating experience in 2011 with installed controls, targeted future performance and planned retirements."

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 net costs incurred by Progress Energy in calendar year 2011 were $1.8 million (see Attachment B, Appendix B). Such costs were related to remediation work with respect to the wastewater treatment settling ponds at the Company's Roxboro plant.

Summary of Duke Energy Report: The actual environmental compliance net costs incurred by Duke Energy in calendar year 2011 were $3.6 million (see Attachment A, Exhibit C). Such costs were incurred with respect to flue gas desulfurization (FGD) at the Company's Allen and Cliffside Steam Stations.

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 environmental compliance cost in 2011. 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 2011. 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 net capital costs (that is, excluding the portion for which the Power Agency is responsible) actually incurred through 2011 was $1.055 billion and that future costs are currently projected to be $0. Such amount is virtually unchanged from the Company's April 2011 cost estimate.

Progress Energy's current cost estimate of $1.055 billion, which excludes allowance for funds used during construction (AFUDC), is $242 million or 30 percent 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 the Company's 2011 report. Duke Energy's current cost estimate of its compliance costs is $1.840 billion, excluding AFUDC. Such amount is basically unchanged, in all material respects, from its cost estimate of $1.843 billion as contained in its 2011 Report.

Duke Energy's current cost estimate of $1.840 billion is $340 million or 23 percent 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: For the Roxboro plant, Progress Energy requested approval to impound the repaired West Settling pond on May 10, 2011. DENR Division of Land Resources approved the request on July 7, 2011. Progress Energy has completed the permitting required to comply with the provisions of G.S. 143-215.107D.

Summary of Duke Energy Response: Permitting necessary to comply with the provisions of G.S. 143-215.107D was completed in 2010. Therefore, no further permit applications were submitted in 2011. A history of permit applications submitted and permits issued is contained in Attachment A (Page 2, Item 5).

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 was completed in 2011. No further construction is anticipated.

Summary of Duke Energy Response: At the Allen Steam Station FGD, installation of additional relays to eliminate power reliability issue will be performed. Activities at the Cliffside Steam Station Unit 5 FGD will consist of final tie-in and testing of new 230 kV breakers and upgrade of controls software.

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: "PEC has completed the permitting required to comply with the provisions of G.S. 143-215.107D; therefore, there are no applications for permits anticipated for calendar year 2012."

Duke Energy Response: "Duke Energy Carolinas has completed the permitting necessary to comply with the provisions of G.S. 143-215.107D. No additional permit applications 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: "No additional equipment testing related to compliance with G.S. 143-215.107D was performed in 2011."

Duke Energy Response: "No additional equipment testing related to compliance with G.S. 143-215.107D was performed in 2011." Equipment tests conducted in prior years and their performance results are summarized in Attachment A (Page 6, Item 8).

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 measurements collected by continuous emissions monitors (CEMs). The raw CEM data are recorded and verified by the utilities, and then reported to the EPA's Clean Air Markets Division.

Progress Energy Response: "The total calendar year 2011 emissions from the affected coal-fired PEC units are:

- NOx 18,810 tons
- SO_2 51,416 tons"

DENR/DAQ has verified these emissions using DAQ compliance records and CEM data reported to the EPA Clean Air Market Division.

The first emissions reduction target imposed by the Act required Progress Energy to meet a limit of 25,000 tons of NOx in calendar year 2007, and maintain this emission limit in future years. 2009 marked the first emissions reduction target for SO_2 at 100,000 tons per year. Progress Energy's NOx and SO_2 emissions for 2011 comply with these limits. The Company continues to achieve emissions that are well below the required levels.

Progress Energy's next steps to comply with the Act are to continue meeting the annual NOx and SO_2 emissions limits of 25,000 tons and 100,000 tons, respectively; and to further reduce annual SO_2 emissions to 50,000 tons in 2013. As shown above, Progress Energy is already close to meeting the future SO_2 emissions limit. With the anticipated retirement of the Lee coal-fired plant and its replacement with a combined-cycle natural gas-fired unit, Progress Energy is well positioned to meet the Act's 2013 emissions cap.

Duke Energy Response: Duke Energy's reported emissions for calendar year 2011 are:

- NOx 20,474 tons
- SO_2 22,038 tons

DENR/DAQ has verified these emissions using DAQ compliance records and CEM data reported to the EPA Clean Air Market Division.

The first emissions limitation imposed by the Act required Duke Energy to meet a limit of 35,000 tons of NOx in 2007. 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 2011 comply with these limits. The Company continues to achieve emissions that are well below the required levels.

Duke Energy's next steps to comply with the Act are to continue meeting the annual NOx and SO_2 emission limits of 31,000 tons and 150,000 tons per year, respectively. In 2013, the annual SO_2 emissions cap drops to 80,000 tons. The Company is already meeting this target by a wide margin.

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 2011, 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: "During 2011, Duke Energy Carolinas did not acquire any allowances as the result of compliance with the emission limitations set out in N.C. General Statute 143-215.107D."

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

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 Jan. 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.

   On Jan. 13, 2009, the court 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. The judge ordered that each unit of each facility install modern pollution controls for SO_2 and NOx and meet emission limits that are consistent with the continuous operation of such controls. The court ordered that TVA meet these limits on a staggered schedule ending in 2013.

   On July 26, 2010, the United States Court of Appeals for the Fourth Circuit reversed the judgment, primarily on the ground that the action was pre-empted by the Clean Air Act. North Carolina petitioned the United States Supreme Court to review the case, but withdrew that petition pursuant to the ensuing settlement.

Meanwhile, on April 14, 2011, North Carolina, TVA, and several other parties agreed to a comprehensive settlement of a variety of air pollution allegations. The settlement was lodged with the federal district court in eastern Tennessee. The detailed settlement would, among other things, (1) subject SO_2 and NOx emissions at all of TVA's coal-fired facilities to system-wide caps that decline on an annual basis to permanent levels of 110,000 tons of SO_2 in 2019 and 52,000 tons of NOx in 2018; (2) require TVA to install modern pollution controls on or shutdown all of its coal-fired units (except certain units at the Shawnee plant in western Kentucky); and (3) require TVA to pay North Carolina $11.2 million to fund mitigation projects in North Carolina. The settlement was filed on June 30, 2011 in the U.S. District Court for the Eastern District of Tennessee and is now binding.

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 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.

   In response to the court's judgment, on July 6, 2010, EPA proposed the Clean Air Transport Rule (CATR). The rule would cap SO_2 and NOx emissions from States that impact attainment or maintenance of the national particulate matter and ozone standards in downwind states. Unlike CAIR, the CATR, as proposed, would largely abandon the interstate trading of pollution allowances. The deadlines for these emissions reductions would be coordinated with the needs of the downwind states and would ensure that the delay caused by the litigation would not negatively impact downwind states. On March 14, 2011, the Attorney General, along with the Attorney General of New York, sent a letter to the EPA Administrator requesting that EPA establish a schedule for completing the rule by the end of June 2011.

On July 6, 2011, the EPA promulgated the Cross-State Air Pollution Rule (CSAPR), rebranded from the proposed CATR. The promulgated rule does not stray far from the proposed CATR. Accordingly, CSAPR largely responds to the State's criticisms of CAIR.

Several petitions were filed in the D.C. Circuit for judicial review of CSAPR. Those petitions were consolidated and North Carolina, along with many other parties, intervened to assist EPA in the defense of CSAPR. The matter has been briefed and argued. A decision is expected in mid-2012.

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. As part of the above-referenced settlement with TVA, North Carolina withdrew the petition as it relates to TVA. At the same time, North Carolina withdrew the petition regarding all sources in Maryland in part because Maryland enacted strict emissions limits on its coal-fired electric generating units (EGUs) that provided the relief that North Carolina was seeking.

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 2010-142 changed the beginning date of the requirements of this Section to Sept. 1, 2011.

Environmental Management Commission and DENR Response: A letter dated Sept. 1, 2011, was submitted to the Environmental Review Commission from Mr. Stephen T. Smith, chairman of the Environmental Management Commission. The letter (included as Attachment C in its entirety) stated that recent actions by the State, the federal government, the Eastern Tennessee federal District Court, and the U.S. Circuit Court are affecting power plant emissions and NO_x and SO_2 regulation. It recommended that the study of further State action to achieve additional reduction of these air pollutants be presented on Sept. 1, 2013. The study will:

- "allow the affected public utilities in North Carolina time to implement their control strategies to meet the compliance deadline under CSA,
- give the NCDAQ time to quantify air quality impacts from CSA compliance and evaluate necessary additional reductions needed to meet the new ambient air quality standards, and
- give industry and NCDAQ time to implement new federal rules and court actions."

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 Sept. 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. DAQ also made preliminary estimates of 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 Jan. 1, 2007. Under the rule, emissions of mercury from each coal-fired unit at Duke Energy and Progress Energy have to be controlled to the maximum degree that is technically and economically feasible or the unit must be shut down by a prescribed date.

In July 2008, DENR/DAQ submitted its fourth report on mercury emissions and controls for coal-fired electrical utility boilers. This report, required under 15A NCAC 2D.2509(b), discussed the technology, benefits and costs to further reduce mercury emissions from coal-fired electrical utility boilers (EGUs) in North Carolina. Also required under 15A NCAC 2D.2509(b), is the fifth mercury report, which is currently being drafted for submission to the Environmental Management Commission (due July 1, 2012). The 2008 and 2012 reports provide updated information from the three earlier CSA reports on the same issues related to the control of mercury emissions from coal-fired EGUs and from other principal sources of mercury. Information must be presented on the most recent mercury emissions, projected future emissions, existing and emerging control technology performance and costs, recent EPA rules with mercury emission limits, dispersion and deposition modeling, mercury in fish trends and mercury-related health indicators of people consuming local fish.

The controls needed to comply with the 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 and beyond. The Clean Smokestacks Act greatly reduces mercury emissions as a co-benefit of the NOx and SO_2 controls from EGUs within the State. In 2002, the mercury emissions from the CSA facilities were 3,382 pounds (lbs). In 2009, those emissions dropped to 1,257 lbs, which is a 63 percent reduction in the mercury emissions. 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 or recently promulgated national mercury and air toxics standard.

On Feb. 16, 2012, the EPA finalized the national Mercury and Air Toxics Standards (MATS) for new and existing coal- and oil-fired EGUs. The rule replaces the court-vacated CAMR, and mercury reductions in North Carolina remain on schedule. The rule establishes power plant emission standards for mercury, acid gases, and non-mercury metallic toxic pollutants. According to the EPA, the standards will "prevent 90 percent of the mercury in coal burned in power plants from being emitted to the air; reduce 88 percent of acid gas emissions from power plants; and cut 41 percent of sulfur dioxide emissions from power plants beyond the reductions expected from the Cross State Air Pollution Rule." Existing sources will have up to four years to comply with the MATS.

As noted earlier herein, on July 6, 2011, the EPA promulgated the Cross-State Air Pollution Rule. A decision from the D.C. Circuit related to petitions filed for a judicial review of this rule is expected in mid-2012. If the D.C. Circuit upholds the rule, the final rule will likely require emissions reductions beyond Clean Smokestacks for North Carolina utilities and mercury reduction is likely to be an added benefit. It is expected that 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 remaining text summarizes related actions at the state and federal level.

North Carolina Actions

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). DENR formed a related stakeholder group called the Climate Action Plan Advisory Group (CAPAG). CAPAG's purpose was to assess possible climate change mitigation options, carry out analysis related to emission trends, climate scenarios and technology options, and make recommendations for state-level climate action planning, including 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 Feb. 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 final CAPAG report can be found at http://www.ncair.org/ncclimatechange/.

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.

Federal Actions

On Oct. 30, 2009, EPA promulgated the "Mandatory Reporting of Greenhouse Gases," a regulation that requires reporting of GHG emissions from certain large emissions sources. The rule would apply to major emitters, including electric power utilities such as Duke Energy and Progress Energy. As a result of this action, on Nov. 19, 2009, the N.C. Environmental Management Commission chose not to take action on amendments to the N.C. Annual Emissions Reporting Rule (as recommended by CAPAG) because GHG emissions data collected under the federal rule are considered to be sufficient in content and expected to be publically available.

On Dec. 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. The standards would be phased in beginning with model year 2012 through 2016. The implementation of EPA's light-duty vehicle standard resulted in GHGs being 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 Dec. 18, 2008, memorandum entitled "EPA's Interpretation of Regulations that Determine Pollutants Covered by Federal 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 Jan. 2, 2011, when the vehicle rule took effect.

To limit the number of stationary sources that would be subject to GHG regulations, the EPA promulgated a rule on May 13, 2010, that would apply a tailored approach to GHG regulations under the PSD and Title V programs of the CAA. The Tailoring Rule temporarily raises statutory thresholds and sets a PSD significance level for GHGs. By tailoring the applicability thresholds, only large emitting sources would be affected. EPA is phasing in the permitting requirements. In Step 1 (starting Jan. 2011), large industrial facilities that must already obtain CAA permits for non-GHGs must also include GHG requirements in these permits if they are newly constructed and have the potential to emit 75,000 tons per year (tpy) of carbon dioxide equivalent (CO2e) or more or if they make changes at the facility that increase GHG emissions by that amount. In Step 2 (starting July 2011), in addition to facilities described above, all new facilities emitting GHGs in excess of 100,000 tpy of CO2e and facilities making changes that would increase GHG emissions by at least 75,000 tpy CO2e, and that also exceed 100/250 tpy of GHGs on a mass basis, will be required to obtain permits that address GHG emissions. On March 8, 2012, the EPA Proposed Step 3 PSD and Title V Tailoring Rule that retained the initial GHG permitting thresholds of 100,000/75,000 tpy CO2e. Sources subject to the Clean Smokestacks Act are likely to be affected by the GHG Tailoring Rule. Future modifications at these sites, determined to meet significant emission levels, would require a review of best available control technologies. This will most likely consist of energy efficiency improvements at the affected sites.

On Dec. 23, 2010, the EPA entered into two proposed settlement agreements to issue rules that will address GHG emissions from fossil fuel-fired power plants and refineries. The CAA requires the EPA to set new source performance standards (NSPS) for industrial categories that cause, or significantly contribute to, air pollution. These standards set the level of pollution new facilities may emit and address air pollution from existing facilities. On March 27, 2012, EPA released a proposed GHG NSPS for new fossil fuel-fired EGUs. EPA is proposing that new fossil fuel-fired power plants meet an output-based standard of 1,000 pounds of carbon dioxide per megawatt-hour (lb CO2/MWh gross). The proposal covers fossil fuel-fired boilers, integrated gasification combined cycle (IGCC) units, and stationary combined cycle turbine units that generate electricity for sale and are larger than 25 megawatts (MW). The proposal would not cover existing units, including units that need permits for modifications, nor would it cover new power plant units that have permits and start construction within 12 months of the proposal. EPA is also proposing that plants may opt to meet a 30-year average of CO2 emissions to meet the standard, under which the plants would meet a 1,800 lb CO2/MWh gross emissions standard for the first 10 years and then ratchet down to a 600 lb CO2/MWh gross emissions standard over the next 20 years. According to EPA, this would allow carbon capture and sequestration (CCS) to be transitioned in over a period of 10 years in order to meet the lower standard. Comments are due by June 12, 2012.

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 the Public Staff's 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 the Public Staff's 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 continue to routinely monitor, audit and make reports to the Commission regarding Duke Energy's recording of accelerated amortization, per se. But rather, the Commission expressed the opinion that such monitoring, auditing, and reporting should be undertaken 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 has recorded accelerated amortization since 2008.

The Public Staff filed its last Clean Smokestacks Act report concerning Progress Energy, and certain comments regarding Duke Energy, with the Commission on May 12, 2009. Such matters 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 2012 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 2012, for each IOU is estimated to be as follows:

Progress Energy:

- Total company $106.7 million
- N.C. retail $73.6 million
- Residential customer monthly bill impact with usage @ 1,000 kWh per month $1.97
- Residential customer monthly bill with usage @1,000 kWh $106.00

[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.

Duke Energy:

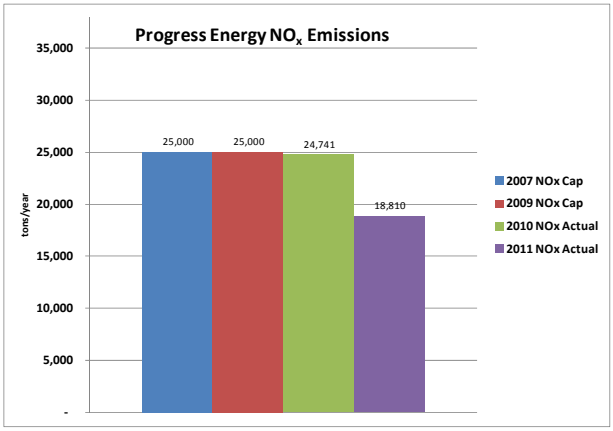
- Total company $199.7 million
- N.C. retail $145.1 million
- Residential customer monthly bill impact with usage @ 1,000 kWh per month $2.64
- Residential customer monthly bill with usage @1,000 kWh $105.50

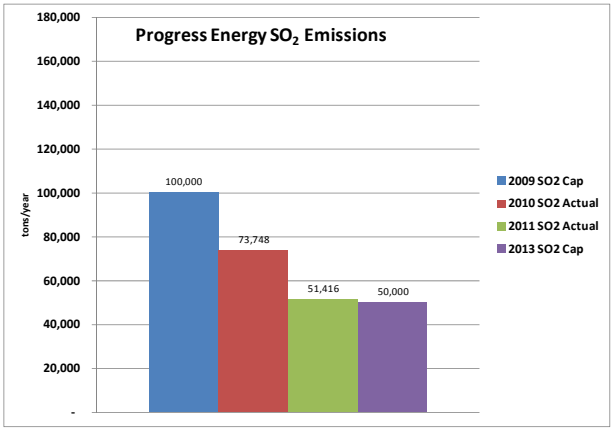
IX. Conclusions

DENR/DAQ

DENR/DAQ has carefully reviewed and considered the information provided by Progress Energy and Duke Energy in their compliance plan submittals for calendar year 2011. Both companies continue to meet the emissions limitations as specified in the Act.

Progress Energy has completed all of the emissions control projects and associated work to assure compliance with the Clean Smokestacks Act. No further construction is anticipated. The Company has installed a mix of combustion devices, which minimize the formation of NOx (e.g., 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 (e.g., selective catalytic reduction and selective non-catalytic reduction technologies). Progress Energy has continued to meet its 2009 annual emission limit of 25,000 tons NOx. Calendar year 2011 NOx emissions were 18,810 tons (see figure below):

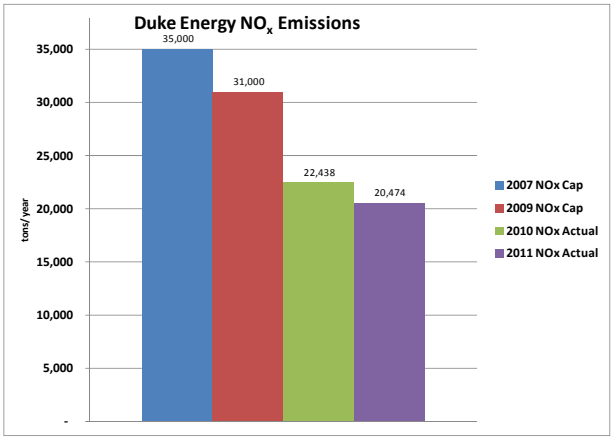


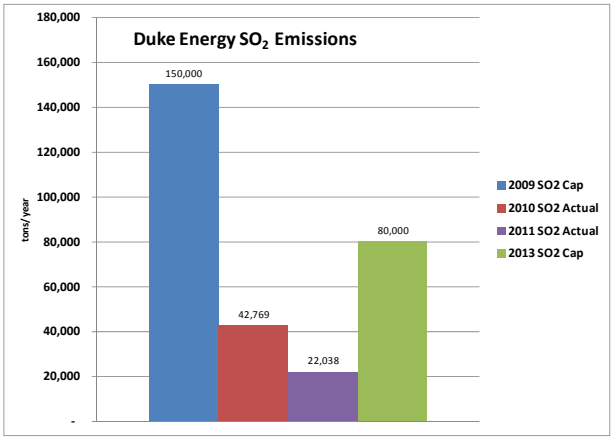


Progress Energy's initial SO_2 control plan included putting scrubbers on eight units. The Company's 2004 SO_2 emissions were 195,655 tons with no scrubbers. Progress Energy has continued to meet its 2009 SO_2 limit of 100,000 tons. Calendar year 2011 SO_2

emissions were 51,416 tons. By 2013, Progress Energy plans to retire the Lee coal-fired plant and replace the plant with a combined-cycle natural gas-fired unit. 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 on track to meet its SO_2 limit of 50,000 tons in 2013.

Duke Energy has completed all emissions control projects to assure compliance with the Clean Smokestacks Act. The Company has completed installing controls for NOx reductions, which consists of a combination of selective catalytic reduction and selective non-catalytic reduction technologies, and low NOx burners. Duke Energy has continued to meet its 2009 annual emissions limit of 31,000 tons for NOx. Calendar year 2011 NOx emissions were 20,474 tons (see figure below):





Duke Energy's SO_2 control plan included installation and operation of 12 scrubbers to meet emissions limits of 150,000 tons in 2009 and 80,000 tons in 2013. Duke Energy has completed installation of wet flue-gas desulfurization scrubbers on all 12 generating units, and all scrubbers were in operation at the end of 2010. These units have so far reduced Duke Energy's SO_2 emissions from 298,781 tons (in 2005) to 22,038 tons (in 2011). Duke Energy's SO_2 controls are several years ahead of the planned schedule. The Company has already met its 2013 SO_2 target, and is likely to maintain such emissions 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 Clean Smokestacks annual reports for calendar year 2011. Based upon those reports and in consideration of DENR's findings, 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, *NOx and SO_2 Compliance Plan Annual Update*, Submitted by Cover Letter Dated March 27, 2012

Attachment B: Progress Energy Carolinas Inc. *Annual NC Clean Smokestacks Act Compliance Report*, Submitted by Cover Letters to DENR and the Commission Dated March 30 and April 2, 2012, respectively.

Attachment C: Letter from Stephen Smith, Chairman of the N.C. Environmental Management Commission to the N.C. Environmental Review Commission, *Emissions Reductions Beyond the Clean Smokestacks Act*, Sept. 1, 2011.

Duke Energy®
Carolinas

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March 27, 2012

Mrs. Gail L. Mount, Deputy Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

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 0011

Dear Mrs. Mount and Secretary 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") regarding 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 are the original and thirty (30) copies of Duke Energy Carolinas' Compliance Plan Annual Update for 2012 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 – Except for finalizing a small amount of project close-out work, Duke Energy Carolinas has completed installation of wet flue-gas desulfurization scrubbers on our twelve largest generating units. At the end of 2010 all twelve scrubbers were in operation. In 2011, Duke Energy Carolinas operated below its 2011 SO_2 emission limit of 150,000 tons and below the 80,000 ton emissions limit that will be applicable beginning in 2013.

Exhibits A and B outline current unit specific technology selections, operational year, 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 estimate of the costs of these pollution control projects is included in Exhibit C. Duke Energy's current total predicted cost to comply is equivalent to the cost predicted in the 2008 report (NC CAP 007).

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

Duke Energy Carolinas, LLC

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

2012 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 technology selections by facility and unit, actual and projected operational dates, actual 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:

   NO_X Compliance

   Expected emission rates for certain units have been adjusted in this 2012 update based on operating experience in 2011 with installed controls, targeted future performance and planned retirements; and

   SO_2 Compliance

   Expected emission rates for certain units have been adjusted in this 2012 update based on operating experience in 2011 with installed controls, targeted future performance and planned retirements.

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 2011 calendar year, Duke Energy Carolinas incurred construction charges of $3,585,000 on activities in support of compliance with the provisions of G.S. 143-215.107D. Exact amounts associated with each project are provided in Exhibit C. A description of the associated activities is provided below:

   Allen Steam Station FGD

   - Switchyard relay modification design and preliminary field work;
   - Engineering support of Absorber corrosion warranty claim;

   Cliffside Steam Station Unit 5 FGD

   - Achieved Final Completion of the construction contract portion of the project;
   - Completed installation of 230kV Breakers on FGD Aux Transformer.

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 2011 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, actual charges and forecasts for active projects have been updated as compared to the 2011 filing. The net overall cost is currently predicted to be $1.84 billion and is basically unchanged from the overall cost predicted in the 2008 report.

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.**

   Permitting necessary to comply with the provisions of G.S. 143-215.107D was completed in 2010. The permits necessary to comply are as follows:

   SO_2 Controls Permits

   Allen Steam Station FGD

   - Request to revise NPDES Permit to include FGD wastewater – Submitted 1/24/06; received revision 9/11/06
   - Authorization to Construct (ATC) application for Wastewater Treatment System – Submitted 9/14/06; received Permit to Construct 12/15/06
   - Air Permit Application for Allen FGD project Submitted 4/10/06; received Air Permit 6/30/06
   - Stack contractor applied for air permit associated with flue liner fabrication on 11/1/06 and received permit on 2/2/07.
   - Landfill Site Suitability Application – Submitted 10/31/07; received 12/7/07
   - Landfill Permit to Construct – Submitted 3/25/08; received permit to construct 9/4/08
   - Landfill Supplemental Stability Analysis – Submitted 8/11/09; accepted 12/9/09
   - Landfill Permit to Operate – Submitted 11/20/09; granted 12/9/09
   - Landfill Permit to Operate Phase 1 cell 2 – Submitted 9/3/10; granted 12/8/10

- Erosion control permits received in 2006 (7/13/06 and 12/18/06).
- Submittal to DENR/ACOE regarding stream crossing of entrance road – Received permits 5/25/06
- Received permit from NCDOT to improve Highway NC273 at the Allen FGD entrance road on 12/3/08.
- FAA Permit for Stack – Submitted 12/9/05, received permit 1/11/06

Belews Creek Steam Station FGD

- Request to revise NPDES Permit to include FGD wastewater – Submitted 6/30/04; received Permit Revision 5/16/05
- Authorization to Construct (ATC) application for Constructed Wetlands – Submitted 7/21/05; received Permit to Construct 12/27/05
- Authorization to Construct (ATC) application for Wastewater Treatment System – Submitted 7/21/05; received Permit to Construct 12/27/05
- Air Permit Application for Belews Creek FGD project Submitted 4/18/05; received Air Permit 2/6/06
- Air Permit – Notice of Intent to Construct – Submitted 10/11/05; received Permit to Construct 10/24/05
- FGD Landfill Site Suitability Application – Submitted 3/30/05; received Site Suitability Approval Letter 6/19/06
- Revised FGD Landfill Construction Plan Application – Submitted 9/30/05; received Permit to Construct 6/29/06
- FGD Landfill Permit to Operate – Submitted 9/28/07; granted 1/24/08
- Initial Erosion Control Permit – Submitted 2/4/05; received Permit 3/7/05
- Erosion Control Permit to construct Used Oil Building – Submitted August 2008; received permit 10/10/08
- Revisions to Erosion Control Permit submitted on various dates; most recent revised permit received 3/30/06
- Authorization to Construct Sanitary Waste Lagoon – Submitted 3/23/06; received Permit to Construct 9/1/06
- Existing Sewage Lagoon Approval to Decommission – Submitted 10/31/06; received permit 1/25/07
- Building Permit to construct Used Oil Building – Submitted August 2008; received permit 10/21/08
- FAA Permit for Stack – Submitted 7/22/05, received permit 9/1/05

Cliffside Steam Station Unit 5 FGD

- Request to revise NPDES Permit (including new Cliffside Unit 6) – Submitted 4/30/07; Received Permit Revision 8/13/07
- Authorization to Construct (ATC) application for Wastewater Treatment System – received Permit to Construct 9/22/08
- Air Permit Application for Cliffside Unit 5 FGD project
- Submitted 12/16/05; received Air Permit 12/15/06

- Air Permit Application for Cliffside Station FGD Project (Common Support Facilities for Units 5&6) - Submitted 12/23/09; received permit 2/3/10.
- Landfill Site Suitability Application – Submitted 1/7/08; received 11/18/08
- Landfill Construction Plan Application – Submitted 12/18/08, received 6/4/09
- Landfill Permit to Operate – Submitted 8/23/10; granted 9/7/10
- Roadway Erosion and Sedimentation Control Plan – Submitted 6/12/09 received 11/3/09
- CCP Landfill Erosion and Sedimentation Control Plan – Submitted 2/2/09, received 3/16/09
- Building Permits from Cleveland & Rutherford Counties for WFGD Control Room – received 1/26/09
- 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
- FAA Permit for Stack – Submitted 8/22/07, received permit 10/30/07

Marshall Steam Station FGD

- Request to revise NPDES Permit to include FGD wastewater – Submitted 10/27/04; received Permit Revision 4/25/05
- 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
- Authorization to Construct (ATC) Vertical Flow Constructed Wetlands – Submitted 2/1/10; received 6/1/10
- Air Permit Application for Marshall FGD project
- Submitted 9/17/03; received Air Permit 2/5/04
- Air Permit Revisions (for material handling issues) – Submitted 9/2/05; received approval 12/7/05
- FGD Landfill Construction Plan Application – Submitted 4/1/04; received 2/4/05
- FGD Landfill Permit Documents (to line landfill) – Submitted 12/15/05; received 6/5/06
- FGD Landfill Permit to Operate – Submitted 10/27/06; granted 11/21/06"
- Sedimentation and Erosion Control Plan Permits for Gypsum Landfill – Submitted 3/31/04; received 4/21/04
- Sedimentation and Erosion Control Plan Permits for Constructed Wetland Treatment System – Submitted 7/26/04; received 8/18/04
- Sedimentation and Erosion Control Plan Permits for Limestone/Gypsum Conveyor – Submitted 6/17/04; received 7/9/04 For Conveyor Expansion – Submitted 12/15/04; received 12/30/04
- FAA Permit for Stack – Submitted 5/3/04, received permit 6/10/04

NO_X Control Permits

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 for municipal water tie-ins Received 4/27/06

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.**

Duke Energy Carolinas is finalizing the construction activities necessary to comply with the provisions of G.S. 143-215.107D. The following construction activities are to be conducted in 2012:

Allen Steam Station FGD

- Installation of additional relays to eliminate power reliability issue.

Cliffside Steam Station Unit 5 FGD

- Complete final tie-in and testing of new 230kV Breakers.
- Upgrade of the controls software.

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.**

Duke Energy Carolinas has completed the permitting necessary to comply with the provisions of G.S. 143-215.107D. No additional permit applications are expected.

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

No additional equipment testing related to compliance with G.S. 143-215.107D was performed in 2011.

Equipment tests conducted in prior years that were used in evaluating technology selections are repeated in this report for reference.

Cliffside Steam Station FGD, Unit 5

The Cliffside 5 FGD System was commissioned in 2010 and a Performance Test was conducted on November 18-19, 2010. The Performance Test results reported by the Testing Contractor indicated the FGD System's SO_2 removal efficiency achieved its performance guarantee of 99%.

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 NO_X with ammonia slip of less than 5 ppm at full load.

Belews Creek Steam Station SCR

SCR Equipment installation was completed in 2003. Tests performed during the months of August and September 2004 showed that when the SCR equipment was in service during this time, emissions of NO_X averaged 0.07lb/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 2011 calendar year, 20,474 tons of NO_X and 22,038 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.**

    During 2011, Duke Energy Carolinas did not acquire any allowances as the result of compliance with the emission limitations set out in G.S. 143-215.107D.

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

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

Duke Energy Carolinas Compliance for NC Clean Air Legislation as of 4/1/2012
(Exhibit A)

NO_x							
				2011		2012 Predicted	2013 Predicted
Facility	Unit or Boiler	Technology	Initial Operational Year	Emission Rate lb/MMBtu	Tons	Tons	Tons
Allen	1	SNCR	2003	0.209	502	111	75
Allen	2	SNCR	2007	0.211	422	84	58
Allen	3	SNCR	2005	0.211	1,102	711	817
Allen	4	SNCR	2006	0.213	1,303	862	992
Allen	5	SNCR	2008	0.199	1,071	552	463
Belews Creek	1	SCR	2003	0.058	2,041	2,193	2,002
Belews Creek	2	SCR&Burners	2004	0.052	1,961	2,097	2,259
Buck	5	Burners	2007				
Buck	6	Burners	2007				
Buck	7	Burners	2007				
Buck	8	SNCR	2006	0.183	306	118	19
Buck	9	SNCR	2006	0.203	333	50	7
Cliffside	1	Tuning Only	2004				
Cliffside	2	Tuning Only	2004				
Cliffside	3	Tuning Only	2004				
Cliffside	4	Tuning Only	2004				
Cliffside	5	SCR	2002	0.057	709	544	665
Cliffside	6	SCR	2012			483	1,146
Dan River	1	Burners	2008	0.384	132		
Dan River	2	Burners	2006	0.376	131		
Dan River	3	Burners	2006	0.314	272		
Marshall	1	SNCR	2006	0.216	1,551	1,226	1,314
Marshall	2	SNCR	2007	0.210	1,971	1,462	1,534
Marshall	3	SNCR/SCR[1]	2005/2008	0.042	828	3,346	2,917
Marshall	4	SNCR	2007	0.239	4,734	3,587	3,591
Riverbend	7	SNCR	2007	0.233	173	12	
Riverbend	8	SNCR&Burners	2008	0.281	220	11	
Riverbend	9	SNCR&Burners	2006	0.204	317	29	
Riverbend	10	SNCR	2006	0.246	393	33	
NC Coal Fleet Expected/Actual Total:					**20,474**	**17,513**	**17,859**
Compliance Limit:					**31,000**	**31,000**	**31,000**

Duke Energy Carolinas Compliance for NC Clean Air Legislation as of 4/1/2012
(Exhibit B)

SO_2							
				2011		2012 Predicted	2013 Predicted
Facility	Unit or Boiler	Technology	Initial Operational Year	Emission Rate lb/MMBtu	Tons	Tons	Tons
Allen	1	Scrubber	2009	0.093	225	51	34
Allen	2	Scrubber	2009	0.101	202	39	27
Allen	3	Scrubber	2009	0.070	366	325	374
Allen	4	Scrubber	2009	0.065	400	395	454
Allen	5	Scrubber	2009	0.088	472	253	212
Belews Creek	1	Scrubber	2008	0.048	1,676	2,710	2,474
Belews Creek	2	Scrubber	2008	0.044	1,632	2,586	2,786
Buck	5						
Buck	6						
Buck	7						
Buck	8			1.158	1,932	852	139
Buck	9			1.163	1,907	363	48
Cliffside	1						
Cliffside	2						
Cliffside	3						
Cliffside	4						
Cliffside	5	Scrubber	2010	0.025	308	622	760
Cliffside	6	Scrubber	2012			662	1,571
Dan River	1			1.276	438	5	
Dan River	2			1.261	440	1	
Dan River	3			1.235	1,069	34	
Marshall	1	Scrubber	2007	0.080	577	584	626
Marshall	2	Scrubber	2007	0.072	681	696	730
Marshall	3	Scrubber	2007	0.065	1,291	1,594	1,389
Marshall	4	Scrubber	2006	0.066	1,305	1,708	1,710
Riverbend	4			1.519	1,128	71	
Riverbend	5			1.534	1,204	70	
Riverbend	6			1.529	2,381	175	
Riverbend	7			1.502	2,406	203	
NC Coal Fleet Expected/Actual Total:					**22,038**	**14,000**	**13,335**
Compliance Limit:					**150,000**	**150,000**	**80,000**

Duke Energy Carolinas Compliance Costs for NC Clean Air Legislation as of 4/1/2012
(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 ($000)	2011 ($000)	2012 ($000)	Project Total ($000)	
Allen	1-5	Scrubber	2009	$1,100	($12)	$5,348	$62,753	$209,063	$153,698	$51,765	($1,385)	$182	$0	$482,512	SO_2
Belews Creek	1-2	Scrubber	2008	$1,121	$5,999	$106,434	$250,648	$128,058	$34,629	$1,338	($0)	$0	$0	$528,227	
Cliffside	5	Scrubber	2010	$978	$287	$112	$3,175	$57,778	$77,525	$96,111	$79,671	$3,403	$534	$319,576	
Marshall	1-4	Scrubber	2007	$10,214	$92,096	$218,130	$74,163	$23,632	($1,250)	$0	($228)	$0	$0	$416,757	
Allen	1	SNCR	2003	$3,224	$365	$0	$0	$0	$0	$0	$0	$0	$0	$3,589	NO_x
Allen	2	SNCR	2007	$0	$0	$239	$2,711	$2,332	($208)	$0	$0	$0	$0	$5,074	
Allen	3	SNCR	2005	$216	$2,584	$4,092	$32	$0	$0	$0	$0	$0	$0	$6,924	
Allen	4	SNCR	2006	$0	$218	$1,122	$4,258	$171	$16	$0	$0	$0	$0	$5,785	
Allen	5	SNCR	2008	$99	$165	$122	$23	$2,161	$2,425	$0	$0	$0	$0	$4,994	
Buck	3	Burner	2007	$0	$0	$0	$615	$3,565	$0	$0	$0	$0	$0	$4,179	
Buck	3	Classifier	2007	$0	$0	$0	$0	$216	$0	$0	$0	$0	$0	$216	
Buck	4	Burner	2007	$0	$0	$0	$358	$1,882	$1	$0	$0	$0	$0	$2,241	
Buck	4	Classifier	2007	$0	$0	$0	$0	$93	$0	$0	$0	$0	$0	$93	
Buck	5	SNCR	2006	$0	$268	$346	$4,837	$183	$160	$0	$0	$0	$0	$5,794	
Buck	6	SNCR	2006	$0	$266	$335	$3,814	($685)	($29)	($2)	$0	$0	$0	$3,699	
Dan River	1	Burner	2008	$0	$0	$0	$0	$1,560	$1,633	$0	$0	$0	$0	$3,194	
Dan River	1	Classifier	2008	$0	$0	$0	$0	$124	$0	$0	$0	$0	$0	$124	
Dan River	2	Burner	2006	$0	$0	$775	$1,694	$239	$0	$0	$0	$0	$0	$2,708	
Dan River	2	Classifier	2005	$0	$0	$131	$0	$0	$0	$0	$0	$0	$0	$131	
Dan River	3	Burner	2006	$192	$513	$679	$1,441	$377	$0	$0	$0	$0	$0	$3,202	
Dan River	3	Classifier	2005	$0	$0	$184	$0	$0	$0	$0	$0	$0	$0	$184	
Marshall	1	SNCR	2006	$1	$167	$1,418	$2,106	$182	$0	$0	$0	$0	$0	$3,874	
Marshall	2	SNCR	2007	$198	$185	$778	$2,761	$1,382	$322	$0	$0	$0	$0	$5,626	
Marshall	3	SNCR	2005	$1,577	$652	$2,042	$32	$0	$0	$0	$0	$0	$0	$4,304	
Marshall	4	SNCR	2007	$0	$0	$43	$2,614	$494	$0	$0	$0	$0	$0	$3,151	
Riverbend	4	SNCR	2007	$0	$46	$474	$1,082	$1,982	($53)	$0	$0	$0	$0	$3,531	
Riverbend	5	Burner	2005	$650	$2,313	$180	$0	$0	$0	$0	$0	$0	$0	$3,143	
Riverbend	5	Classifier	2005	$0	$160	$0	$0	$0	$0	$0	$0	$0	$0	$160	
Riverbend	5	SNCR	2008	$0	$2	$322	$1,475	$2,587	$6	$0	$0	$0	$0	$4,390	
Riverbend	6	Burner	2005	$572	$510	$2,096	$0	$0	$0	$0	$0	$0	$0	$3,179	
Riverbend	6	Classifier	2005	$0	$0	$189	$0	$0	$0	$0	$0	$0	$0	$189	
Riverbend	6	SNCR	2006	$0	$2	$340	$3,454	$504	$4	$0	$0	$0	$0	$4,304	
Riverbend	7	SNCR	2006	$0	$48	$486	$3,939	$521	$5	$0	$0	$0	$0	$4,999	
			Subtotals:	$20,142	$106,834	$346,420	$427,984	$438,400	$268,884	$149,211	$78,058	$3,585	$534		
													NC Clean Air Legislation program forecast [1]:	$1,840,053	

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

ATTACHMENT A
PAGE 12 OF 14

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

3/27/2012
Date

Subscribed and sworn to before me,
This 27th day of March, 2012.

MARIA EDWARDS NOTARY PUBLIC WAKE COUNTY, NC

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

3/27/2012
Date

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

Progress Energy

April 2, 2012

Ms. Gail Mount
Deputy 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. Mount:

Progress Energy Carolinas, Inc. submits the attached report for calendar year 2011 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 Service Company, LLC
P.O. Box 1551
Raleigh, NC 27602

VERIFICATION

STATE OF NORTH CAROLINA)
)
COUNTY OF WAKE)

NOW, BEFORE ME, the undersigned, personally came and appeared, Charles M. Gates, who first duly sworn by me, did depose and say:

That he is Charles M. Gates, Vice President-Power Operations of Carolina Power & Light Company, d/b/a Progress Energy Carolinas, Inc.; he has the authority to verify the foregoing Progress Energy Carolinas, Inc. North Carolina Clean Smokestacks Act Calendar Year 2011 Progress Report; that he has read said Report and knows the contents thereof are true and correct to the best of his knowledge and beliefs.

Charles M. Gates
Vice President-Power Operations
Progress Energy Carolinas, Inc.

Subscribed and sworn to me
this 2nd day of April, 2012.

Janet O. Johnson
Notary Public

My Comission Expires June 23, 2013

JANET O. JOHNSON
NOTARY
* * *
PUBLIC
CHATHAM COUNTY, N.C.

Progress Energy

March 30, 2012

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 2011 regarding the status of its compliance with the provisions of the North Carolina Clean Smokestacks Act (Act).

During 2011, 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 all of the emissions control projects and associated work undertaken to assure compliance with the Act. As originally discussed in last year's 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.

Please contact me at (727) 820-5153 if you have any questions.

Sincerely,

Michael Olive
Director, Environmental Services and Strategy

c: North Carolina Utilities Commission
Sheila Holman, DAQ

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

bc: Len Anthony
John Moreci
Michael Reid
Alan Madewell
Earl Enzor
Mike Kennedy

North Carolina Clean Smokestacks Act
Calendar Year 2011 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, 2012.

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 2011, PEC incurred actual capital costs of $1,811,000.

Roxboro

Construction related to remediation work on the waste water treatment settling ponds was completed in 2011.

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

The Company amortized $0 in 2011. 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 2011 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 future capital costs are currently projected to be $0.

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.

PEC has completed the permitting required to comply with the provisions of G.S. 143-215.107D. The Company applied for and/or received the following permits in 2011:

Roxboro Plant

Dam Safety Submittals

PEC requested approval to impound the repaired West Settling Pond on May 10, 2011. Approval to impound the repaired West Settling Pond was received from the Division of Land Resources on July 7, 2011.

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 2011, work on the settling ponds was completed. There is no further construction anticipated.

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.

PEC has completed the permitting required to comply with the provisions of G.S. 143-215.107D; therefore, there are no applications for permits anticipated for calendar year 2012.

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

No additional equipment testing related to compliance with G.S. 143-215.107D was performed in 2011.

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 74% reduction in SO_2 since 2002. The total calendar year 2011 emissions from the affected coal-fired PEC units are:

NOx 18,810 tons
SO_2 51,416 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 2011, 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, 2012

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.

In 2011, PEC owned and operated 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 installed NOx emissions controls on its coal-fired power plants beginning in 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 (18,810 tons of NOx in 2011 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

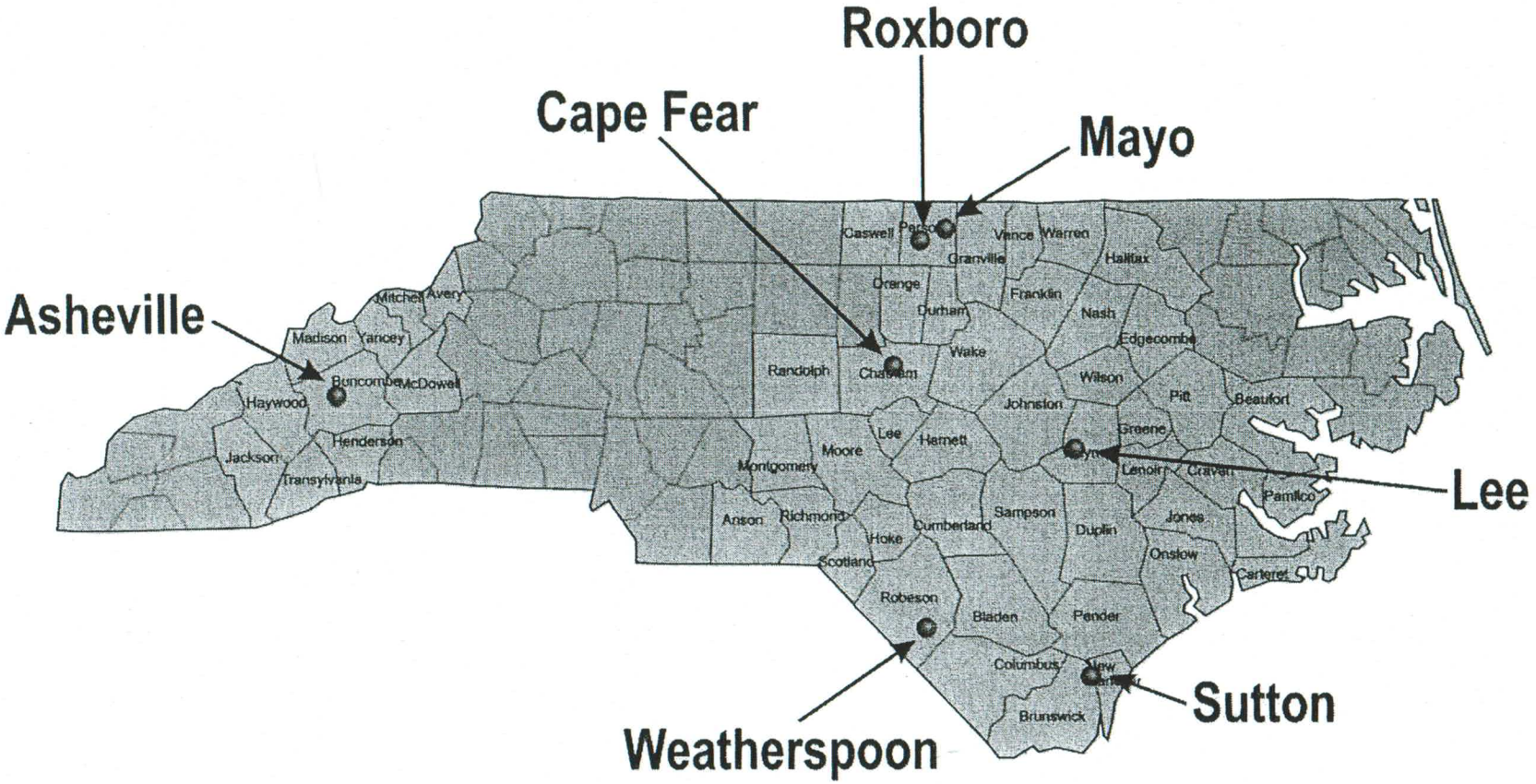
PEC has installed wet flue gas desulfurization systems (FGD or "scrubbers") to remove 97% of the SO_2 from the flue gas at its Asheville, Mayo and Roxboro boilers.

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 additional scrubbers in order to comply with the 2013 Clean Smokestacks Act limits.

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 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 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		401
Asheville 2	185	Scrubber	2006		447
Cape Fear 5	144				821
Cape Fear 6	172				749
Lee 1	74				
Lee 2	77				
Lee 3	246				
Mayo 1	727	Scrubber	2009		1,306
Roxboro 1	369	Scrubber	2008		543
Roxboro 2	662	Scrubber	2007		981
Roxboro 3	693	Scrubber	2008		933
Roxboro 4	698	Scrubber	2007		662
Sutton 1	97				1,052
Sutton 2	104				1,196
Sutton 3	403				6,656
Weatherspoon 1	48				
Weatherspoon 2	48				
Weatherspoon 3	75				
Total	5,013				15,747

[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 2011 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	$ 108	$ 0	$ 0	$ 0	$ 220,396
Roxboro FGD Common	-$ 15	$ 5,560	$ 10,030	$ 51,717	$ 72,934	$ 36,491	-$ 1,360	$ 2,717	$ 4	$ 0	$ 0	$ 0	$ 178,078
Roxboro 1 FGD	$ 434	$ 0	$ 0	$ 3,135	$ 12,164	$ 32,841	$ 24,905	$ 1,181	-$200	$ 0	$ 0	$ 0	$ 74,459
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**	**-$ 88**	**$0**	**$ 0**	**$ 0**	**$ 974,754**
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	13	$ 0	$ 0	$ 0	$ 19,659
Roxboro WWT	$ 0	$ 0	$ 0	$ 791	$ 11,965	$ 16,932	$ 5,127	$ 4,815	$5,339	$1,811	$ 0	$ 0	$ 46,780
Total Waste Water Treatment	**$ 0**	**$ 0**	**$ 0**	**$ 13,156**	**$ 13,253**	**$ 20,668**	**$ 11,732**	**$ 13,815**	**$5,352**	**$ 1,811**	**$ 0**	**$ 0**	**$ 79,787**
Total NC Smokestacks	**$ 1,393**	**$ 26,527**	**$ 80,184**	**$ 181,273**	**$ 272,819**	**$ 330,124**	**$ 113,242**	**$ 41,902**	**$5,264**	**$ 1,811**	**$ 0**	**$ 0**	**$ 1,054,541**
Total Estimated AFUDC							$ 6,158	$ 4,312	$ 153	$ 134	$ 0	$ 0	$ 10,757

Notes:

1. Historic year costs are actual, there are no current or future year costs anticipated
2. Costs reflect the Power Agency contribution

September 1, 2011

The Honorable David Rouzer (Chair)
The Honorable Mitch Gillespie (Co-Chair)
The Honorable Ruth Samuelson (Co-Chair)
Environmental Review Commission

Subject: Emissions Reductions Beyond the Clean Smokestacks Act

Dear Sen. Rouzer, Rep. Gillespie, Rep. Samuelson:

Session Law 2002-4 Section 11 (attached) instructs the Environmental Management Commission (EMC) to study the desirability of requiring and the feasibility of obtaining reductions in emissions of oxides of nitrogen (NO_x) and sulfur dioxide (SO_2) beyond those required by the Clean Smokestacks Act (CSA). The EMC is also to report its findings and recommendations biennially to the General Assembly and the Environmental Review Commission beginning Sept. 1, 2011. (Note: Session Law 2010-142 changed the reporting frequency from annual to biennial and the beginning date of the requirements of this Section to Sept. 1, 2011).

A number of federal, judicial and legislative actions have occurred that will affect the NO_x and SO_2 emissions from electric-generating facilities and other industrial sources. A few of the major actions are the promulgation of the Cross-State Air Pollution Rule (CSAPR); the proposed mercury and air toxic standards for electric-generating units; the revised national ambient air quality standards for ozone, SO_2 and nitrogen dioxide (NO_2); the Tennessee Valley Authority (TVA) settlement; and the legislative action that allows an expedited certification process when coal-fired generating units are retired and replaced by natural gas generating units. All of these actions, as well as others, are discussed in more detail below. Given that these and other actions are affecting power plant emissions, the EMC recommends delaying the study of what

additional state action is needed to achieve further reductions of NO_x and SO_2 until the next reporting date.

Federal Actions

Cross State Air Pollution Rule (CSAPR): The USEPA promulgated the Cross State Air Pollution Rule on July 6, 2011 and adopted federal implementation plans, or FIPs, for each of the states covered by the rule. Compliance with Phase I of CSAPR for the annual NO_x and SO_2 program begins Jan. 1, 2012, and for the ozone season NO_x program May 1, 2012. A second phase of further emission reductions begins in 2014. Twenty-three states are required to reduce their annual NO_x and SO_2 emissions and 20 states are required to reduce ozone season NO_x emissions. Figure 1 is an USEPA map that shows the states that are regulated by the CSAPR. Each state covered by the CSAPR has a pollution limit or budget. The rule allows limited trading among the sources within the same program (annual or ozone season) either in the same state or between different states, but only to the extent consistent with an emission ceiling for each state. In addition to the state-by-state trading restrictions, the rule also limits trading regionally. The CSAPR includes provisions to ensure each state will make the emission reductions necessary to fulfill the "good neighbor" provisions of the Clean Air Act. Therefore, North Carolina utilities will be required to reduce their emissions beyond the levels necessary to comply with the Clean Smokestacks Act and utilities in neighboring states will have to reduce their emissions. Compliance with CSAPR will result in reductions by NC utilities of NO_x and SO_2 emissions beyond the reductions required by the Clean

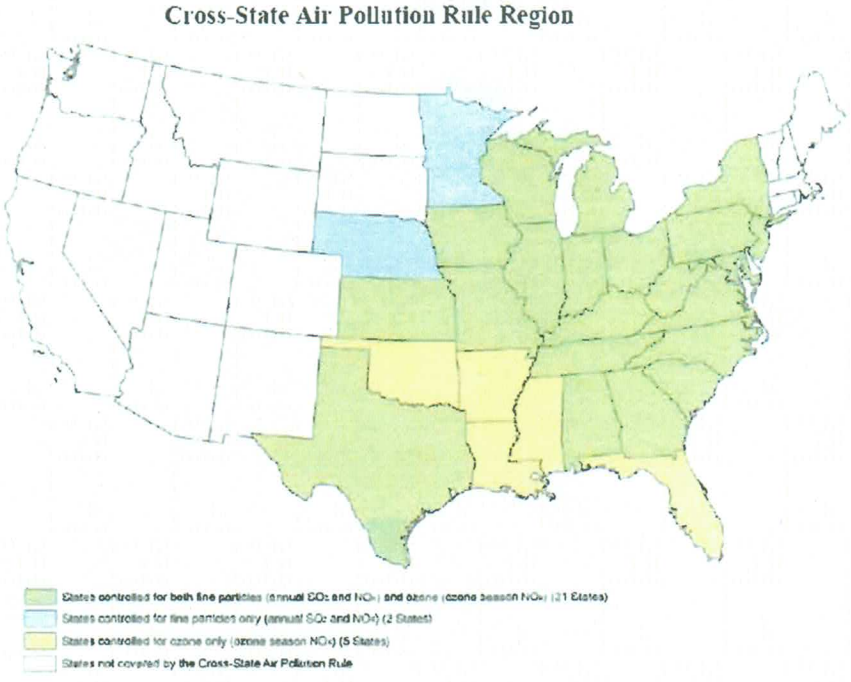


Figure 1. States impacted by the Cross-State Air Pollution Rule. (figure by the USEPA)

Smokestacks Act. Full compliance with CSAPR throughout the covered states is expected to result in lower ozone and fine particulate matter levels in North Carolina and throughout the eastern United States. The USEPA also plans to propose another air quality transport rule within the next year to require additional NO_x emission reductions if necessary to address transport under the more stringent ozone standard that is awaiting final action by USEPA.

Mercury and Air Toxics Standards for Electric Generating Units: On May 3, 2011, the USEPA proposed mercury and air toxics standards for electric generating units. As proposed, the rule would limit the emissions of mercury, heavy metals (arsenic, chromium and nickel) and acid gases (hydrogen chloride), as well as set limits for particulate matter and SO_2 emissions for new and existing coal and oil-fired, electric generating sources. The USEPA is currently required to finalize this rule by November 2011.

Ozone Standard: On Sept. 16, 2009, the USEPA announced it would reconsider the 8-hour ozone standard that EPA adopted on March 12, 2008. Reconsideration of the standard responded to criticism from environmental and public health organizations that the 2008 standard did not reflect scientific and public health recommendations. In January 2010, the USEPA proposed a more stringent ozone standard; the draft rule requested comment on several different standards within a range (all more stringent than the 2008 standard). USEPA expects to make a decision on the final standard in fall 2011. The state's State Implementation Plan (SIP) demonstrating attainment with the new standard will be due to the USEPA sometime in 2015 or 2016 and will identify 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 in order to show compliance with the 2011 ozone standard.

NO_2 Standard: On Jan. 22, 2010, the USEPA revised the NO_2 standard by adding a 1-hour NO_2 standard to the existing annual standard. North Carolina is not expected to have any areas designated nonattainment under the 1-hour NO_2 standard. Currently, all monitors across the country are in compliance with the new 1-hour NO_2 standard. However, the USEPA does not believe that the current monitoring network is adequate to determine if areas are attaining the short term standard and has proposed new monitoring requirements. The USEPA has indicated the entire country will be designated as unclassifiable/attainment in October 2011, and that an additional designation process will occur in 2017 after the new monitoring sites have gathered 3 years of complete data. The NCDAQ will be developing a SIP to show that adequate authority and resources exist to implement the new standard (an "infrastructure SIP"), and a maintenance plan to demonstrate how the state will maintain the NO_2 standard. The infrastructure and maintenance SIPs are due to the USEPA by January 22, 2013.

SO_2 Standard: The USEPA revised the primary SO_2 standard on June 2, 2010, by setting a new 1-hour standard and revoking the previous annual and daily standards.

The USEPA will require a maintenance plan, under Section 110(a) of the Clean Air Act, demonstrating that sources of SO_2 comply with the 1-hour SO_2 standard. The NCDAQ has started reviewing the potential effects of this new standard on emission sources and believes this standard may require additional SO_2 controls or emission limits on some facilities. The NCDAQ will be developing an infrastructure SIP to show that adequate authority and resources exist to implement the new standard, and a maintenance plan to demonstrate how the state will maintain the SO_2 standard. The infrastructure and maintenance SIPs are due to the USEPA by June 2, 2013.

Judicial Actions

Section 10 of the CSA directed the state to take actions to achieve emissions reductions in NO_x and SO_2 from other states and entities contributing to air pollution in North Carolina. On Jan. 20, 2006, the North Carolina Attorney General filed suit alleging that NO_x and SO_2 emissions from TVA coal-fired power plants were inadequately controlled and created a public nuisance. On Jan. 13, 2009, the federal district court in Asheville found that the four TVA coal-fired generating facilities that are within 100 miles of North Carolina were 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 Dec. 2013. The U.S. Court of Appeals for the Fourth Circuit reversed the district court's ruling and North Carolina sought review in the United States Supreme Court.

On April 14, 2011, North Carolina announced a settlement with TVA to resolve alleged Clean Air Act violations at coal-fired power plants in Alabama, Kentucky and Tennessee. The settlement (which also involved USEPA, three other states and three environmental organizations) requires TVA to install state-of-the-art pollution controls at nearly all its 59 coal-fired units at its 11 plants by the end of 2018. Alternatively, TVA may retire units or repower units to combust biomass. The settlement also requires the annual surrender by TVA of any excess NO_x and SO_2 allowances resulting from actions taken under the settlement. A consent decree implementing the agreement was signed by Judge Thomas Varlan of the U.S. District Court for the Eastern District of Tennessee on June 30, 2011 and is now final. Since the decree satisfies North Carolina's need for reductions of emissions of SO_2 and NO_x from TVA's facilities, North Carolina dismissed its petition for the Supreme Court to review the public nuisance case.

In a separate action, the North Carolina Attorney General filed a petition under Section 126 of the Clean Air Act requesting that the 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. As a result of the TVA settlement, North Carolina has dismissed the Section 126 petition as it pertains to TVA's facilities. The State has also dropped its request for additional controls on facilities in the state of Maryland due to intervening actions that have resulted in substantial, permanent reductions of pollutants from Maryland that impact North Carolina.

In April 2008, the USEPA determined that sources of NO_x in Georgia would not be required to comply with any summertime NO_x emissions cap under the NO_x SIP Call. The USEPA issued the "SIP Call" when it determined that the state's plans - the SIPs - were substantially deficient because they did not abate NO_x emissions that violated the "good neighbor" provision. A SIP Call is a notice to a state to take corrective action to address the deficiency. The USEPA had promulgated the NO_x SIP Call in 1998 to help downwind states reduce ambient levels of ozone. The original NO_x SIP Call identified states in which the NO_x emissions from certain sectors were significantly contributing to nonattainment in, or interfering with maintenance in downwind states. On June 20, 2008, the North Carolina Attorney General petitioned the D.C. Circuit to review the USEPA's April 2008 decision that the NO_x SIP Call did not apply to Georgia. On Nov. 24, 2009, the court held that North Carolina had no cause to pursue the issue any further because in the intervening years Georgia had required such substantial reductions of NO_x emissions from its power plants that Georgia sources were in effect complying with the NO_x SIP Call. The USEPA has established an ozone season emissions budget for Georgia as part of the Cross State Air Pollution Rule.

Legislative Actions

Session Law 2009-390 has the potential to further reduce power plant emissions of NO_x and SO_2 from Progress Energy. Session Law 2009-390 amended 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. As compared to coal-fired units, natural gas units produce lower levels of NO_x, 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 will be replaced by gas-fired turbines by 2013 as will three additional coal-fired boilers at its Sutton facility in New Hanover County by 2014. 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.

Recommendation

Given the recent actions by the state, the federal government, the Eastern Tennessee federal District Court and the U.S. Circuit Court affecting power plant emissions and NO_x and SO_2 regulation, it is recommended that the study of further state action to achieve additional reduction of these air contaminants be presented on Sept. 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 NCDAQ time to quantify air quality impacts from CSA compliance and evaluate necessary additional reductions needed to meet the new ambient air quality standards, and
- give industry and NCDAQ time to implement new federal rules and court actions.

The September 2013 report may also include recommendations as to what additional actions are needed to meet the new federal ambient air quality standards.

Sincerely,

Stephen T. Smith

Stephen T. Smith, Chairman
Environmental Management Commission

Attachment

STS/lab

cc: Dee Freeman
Robin Smith
Sheila Holman
Kari Barsness
Marion Deerhake
Mariah Matheson

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2001

SESSION LAW 2002-4
SENATE BILL 1078

SECTION 11. 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 (SO2) 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 emissions 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 (SO2) 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 effects that these reductions would have on public health, the environment, and 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.