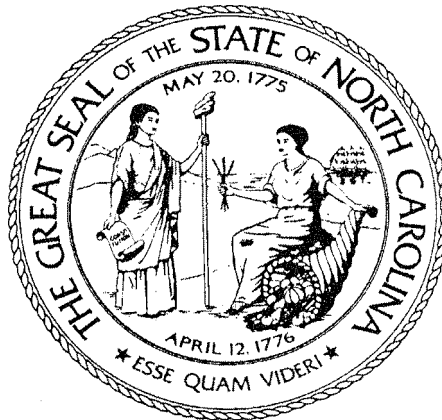


Implementation of the “Clean Smokestacks Act”

**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. XII

May 30, 2014

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**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**

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 Duke Energy Progress, Inc. and Duke Energy Carolinas, LLC appear to be in accordance with the provisions and requirements of the Clean Smokestacks Act.

Signed:



John E. Skvarla, III, Secretary
Department of Environment and Natural Resources

Signed:



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

May 30, 2014

Implementation of the “Clean Smokestacks Act”

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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 emissions 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 Duke Energy Progress, Inc. (Progress Energy).¹ 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 the 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 the 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, the 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

¹ Effective April 29, 2013, Carolina Power & Light Company, d/b/a Progress Energy Carolinas, Inc., changed its legal name to Duke Energy Progress, Inc., d/b/a Duke Energy Progress, in connection with the Duke Energy/Progress Energy merger.

Smokestacks Act,” “the Act” or “the CSA”). The Clean Smokestacks Act, in Section 14, requires the 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 the DENR and the Commission containing certain specified information. Duke Energy and Progress Energy filed their reports with the DENR and the Commission by cover letters dated March 27, 2014. 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 8, 2014, the Secretary of DENR wrote to the Utilities Commission stating that, pursuant to G.S. 62-133.6(j), the 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 emissions limits set out in G.S. 143-215.107D.

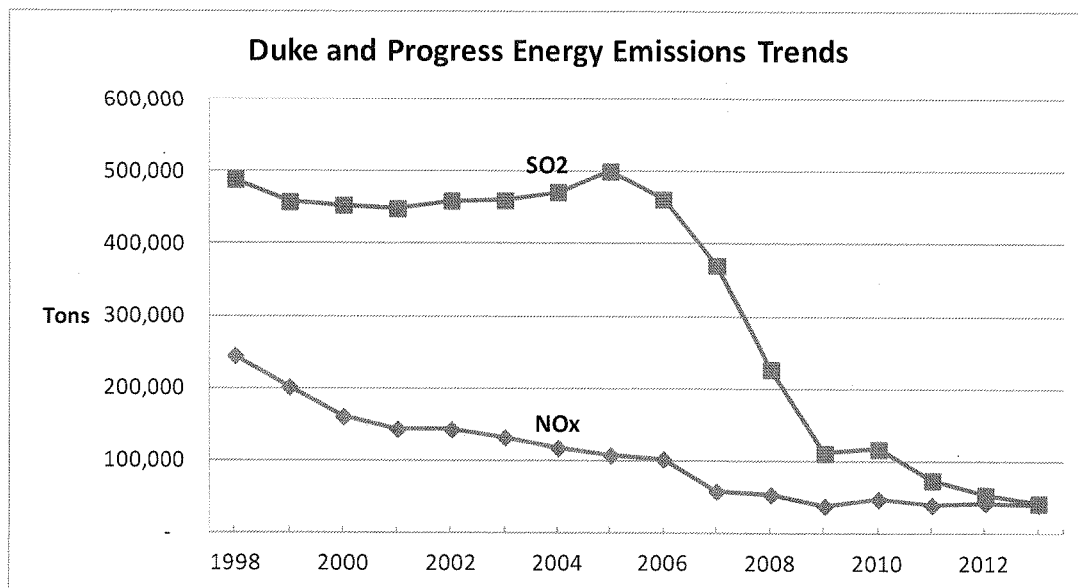
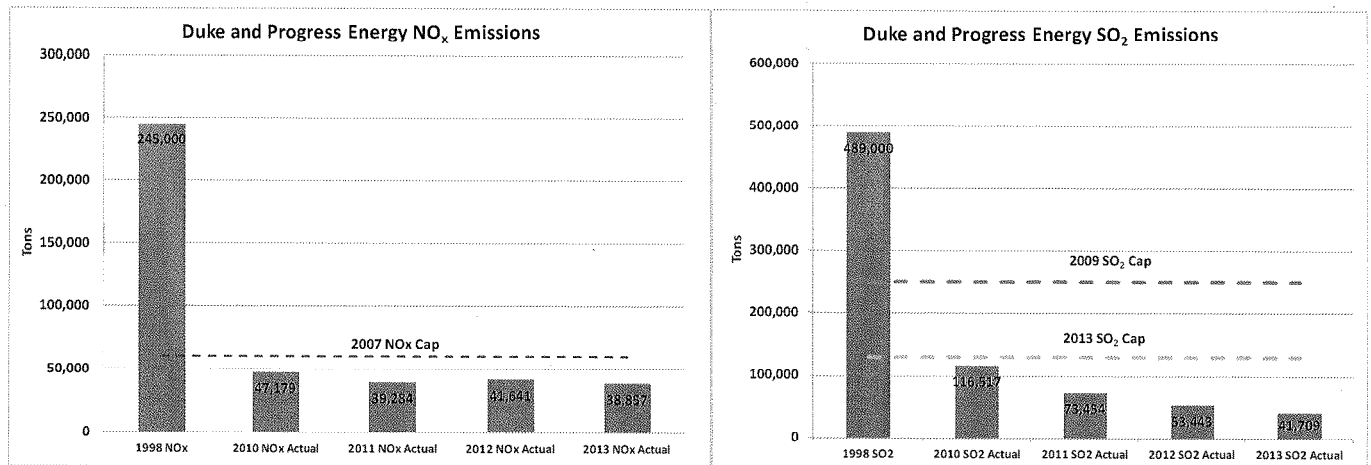
The end of 2007 marked the first step in meeting the emissions reductions required by the Clean Smokestacks Act. Duke Energy was limited to 35,000 tons of oxides of nitrogen (NO_x) in any calendar year beginning Jan. 1, 2007, and Progress Energy was limited to 25,000 tons of NO_x (combined cap of 60,000 tons NO_x). In previous annual reports, the DENR/DAQ verified that both utilities met their respective emissions limits.

The end of 2009 marked the second milestone in emissions reductions, when Duke Energy had to further reduce calendar year NO_x emissions to 31,000 tons, and Progress Energy was required to emit less than 25,000 tons (combined cap of 56,000 tons NO_x). Also in 2009, both utilities were required to reduce calendar year sulfur dioxide (SO₂) emissions; Duke Energy to 150,000 tons and Progress Energy to 100,000 tons (combined cap of 250,000 tons SO₂). In previous annual reports, the DENR/DAQ verified that both utilities met their respective NO_x and SO₂ emissions limits.

The end of 2013 marked the last milestone in SO₂ related emissions reductions, when Duke Energy and Progress Energy had to further reduce calendar year SO₂ emissions to 80,000 tons and 50,000 tons, respectively. The combined SO₂ emissions limitation for 2013 was reduced to 130,000 tons, while the NO_x emissions limits remained unchanged in 2013. In this year’s compliance reports, both utilities reported that they have continued to meet their respective limits. The DENR/DAQ has verified compliance with all emissions limits.

Collectively, the two utilities have reduced NO_x emissions by 83 percent and SO₂ emissions by 89 percent relative to 1998 emission levels. The figure below shows the decrease in NO_x and SO₂ emissions in the past four years as a result of control

measures implemented by Progress Energy and Duke Energy. Also shown are the historical trends in NO_x and SO₂ emissions reductions since 1998.



This report is presented to meet the reporting requirement of the Act pertaining to the DENR and the Commission, as discussed above, and is submitted jointly by the 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. The 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: Exhibit A of Attachment B to this report outlines Progress 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 Plan indicates that Progress Energy has implemented all necessary projects and operational plans to assure on-going compliance with the emissions limitations set out in the Act.

Duke Energy Response: Exhibit A of Attachment A to this report outlines 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 Plan indicates that Duke Energy has implemented all necessary projects and operational plans to assure on-going compliance with the emissions limitations set out in the Act.

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: "In the 2013 calendar year, Duke Energy Progress did not incur any construction charges in support of compliance with the provisions of the Legislation. All construction projects associated with the Legislation have been completed."

Summary of Duke Energy Report: "All construction projects associated with the Legislation have been completed and the control systems installed to comply with the requirements of the Legislation are in operation. During 2013, there were accounting entries associated with closing out the scrubber projects at Allen Station Units 1-5 and Cliffside Station Unit 5. Those costs are shown in Table 1 which summarizes total costs incurred by Duke Energy Carolinas from the initiation through completion of these projects." Those accounting entries resulted in an actual environmental compliance net reduction in costs reported by Duke Energy in calendar year 2013 of \$193,000 (see Attachment A, Exhibit A). Such net reduction is composed of an increase in costs of \$557,000 for the Company's Allen Station Units 1-5 less a reduction in costs of \$750,000 related to the Company's Cliffside Station Unit 5.

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 no additional environmental compliance cost in 2013.

Summary of Duke Energy Report: Duke Energy amortized no additional environmental compliance cost in 2013.

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 as provided in its 2012 annual report, the environmental compliance costs as defined in the Legislation total \$1.05 billion. This is the final cost as all projects have been completed and accounted for.

Summary of Duke Energy Report: Duke Energy reported that as provided in its 2012 annual report, the environmental compliance costs as defined in the Legislation total \$1.84 billion. This is the final cost as all projects have been completed and accounted for.

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: "There are no outstanding permit applications. All permits associated with projects to comply with the Legislation were issued prior to 2013 as described in previous annual reports."

Summary of Duke Energy Response: "There are no outstanding permit applications. All permits associated with projects to comply with the Legislation were issued prior to 2013 as described in previous annual reports."

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: "Duke Energy Progress has finalized the construction activities necessary to comply with the provisions of the Legislation."

Summary of Duke Energy Response: "Duke Energy Carolinas has finalized the construction activities necessary to comply with the provisions of the Legislation."

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: "Duke Energy Progress has completed the permitting necessary to comply with the Provisions of the Legislation. No additional permit applications are required."

Duke Energy Response: "Duke Energy Carolinas has completed the permitting necessary to comply with the Provisions of the Legislation. No additional permit applications are required."

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 the Legislation was performed in 2013. No additional equipment testing is required going forward since all projects are now fully in operation."

Duke Energy Response: "No additional equipment testing related to compliance with the Legislation was performed in 2013. No additional equipment testing is required going forward since all projects are now fully in operation."

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

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. The DENR/DAQ has verified that emissions data reported by Progress Energy and Duke Energy are accurate.

Progress Energy Response: "In the 2013 calendar year, 16,966 tons of NO_x and 28,511 tons of SO₂ were emitted from the Duke Energy Progress coal-fired units located in North Carolina and subject to the emissions limitations set out in the Legislation. Table 1 [Exhibit A, Attachment B] provides the actual emissions for 2013 for each operational coal-fired generating unit."

Duke Energy Response: "In the 2013 calendar year, 21,891 tons of NO_x and 13,198 tons of SO₂ were emitted from the Duke Energy Carolinas coal-fired units located in North Carolina and subject to the emissions limitations set out in the Legislation. Table 2 [Exhibit A, Attachment A] provides the actual emissions for 2013 for each operational coal-fired generating unit."

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: For 2013, Progress Energy reported to have an excess of 78,050 CAIR SO₂ allowances above the emissions limitations in the Legislation. The total allocation to Progress Energy facilities for 2013 was 128,050 CAIR SO₂ allowances. The emissions limitation under the Legislation is 50,000 tons of SO₂. Progress Energy is planning to transfer the difference, 78,050 CAIR SO₂ allowances, to the State of North Carolina to fulfill the terms of the 2002 allowance surrender agreement per G.S. 143-215.107D(i). The DAQ has verified that the surrender allowance has been successfully transferred to the State of North Carolina.

For NO_x, Progress Energy had no excess allocation of NO_x allowances in 2013 above those required to meet compliance with the emissions limitations in the legislation. The total allocation to Progress Energy coal-fired facilities for 2013 was 24,406 CAIR NO_x allowances. The emissions limitation under the Legislation is 25,000 tons of NO_x. No transfer of allowance is required since excess emissions allowances are not available.

Duke Energy Response: For 2013, Duke Energy reported to have an excess of 58,961 CAIR SO₂ allowances above the emissions limitations in the Legislation. The total allocation to Duke Energy coal-fired facilities for 2013 was 138,961 CAIR SO₂ allowances. The emissions limitation under the Legislation is 80,000 tons of SO₂. Duke Energy is planning to transfer the difference, 58,961 CAIR SO₂ allowances, to the State of North Carolina to fulfill the terms of the 2002 allowance surrender agreement per G.S. 143-215.107D(i). The DAQ has verified that the surrender allowance has been successfully transferred to the State of North Carolina.

For NO_x, Duke Energy reported to have an excess of 1,987 CAIR NO_x allowances in 2013 above the emissions limitations in the Legislation. The total allocation to Duke Energy affected coal-fired facilities for 2013 was 32,987 CAIR NO_x allowances. The emissions limitation under the legislation is 31,000 tons of NO_x. Duke Energy is planning to transfer the difference, 1,987 CAIR NO_x allowances, to the State of North Carolina to fulfill the terms of the 2002 allowance surrender agreement per G.S. 143-215.107D(i). The DAQ has verified that the surrender allowance has been successfully transferred to the State of North Carolina.

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

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 (SO₂) comparable to those required by G.S. 143-215.107D, as enacted by Section 1 of this act, on a comparable schedule. The State shall give particular attention to those states and other entities whose emissions negatively impact air quality in North Carolina or whose failure to achieve comparable reductions would place the economy of North Carolina at a competitive disadvantage.*

DENR/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 SO₂ 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 SO₂ 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 SO₂ and NOx and meet emissions 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 SO₂ 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 SO₂ 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. The settlement is being successfully implemented, including the provision of funds directly to North Carolina for approved projects.

- 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 SO₂ and NO_x 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 emissions 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 SO₂ and NO_x 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. On August 21, 2012

the Court held that CSAPR was unlawful because (i) EPA sought to impose a Federal Implementation Plan on states before providing adequate guidance for states to develop their own implementation plans and (ii) EPA improperly calculated states' contributions to other states' attainment problems.

On June 24, 2013, the United States Supreme Court agreed to hear the case. The case was argued to the Court on December 10, 2013. North Carolina, along with several other States and local governments, filed briefs in support of the Court granting review and requesting that the Court reverse the D.C. Circuit's judgment and reinstate CSAPR.

On April 29, 2014, the United States Supreme Court reversed the D.C. Circuit, and held that (i) the plain text of the Clean Air Act allowed the States in the first instance to determine whether and to what extent their interstate emissions were unlawful and, where a State failed to do so, EPA could impose a Federal Implementation Plan, (ii) EPA's calculation of the States' interstate contributions to downwind nonattainment was a permissible construction of the Clean Air Act, and (iii) the Clean Air Act did not prohibit EPA from considering the cost of emission controls when determining the appropriate level of reductions.

- 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 NO_x and/or SO₂ 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 NO_x in Georgia from any summertime NO_x cap under EPA's "NO_x SIP Call" rule. The NO_x SIP Call was designed to help downwind states reduce ambient levels of ozone. Sources in Georgia are also exempt from summertime NO_x 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.

- 6) In 2012, EPA promulgated a rule commonly known as the Mercury Air Toxics Standards (MATS Rule). In general, the MATS Rule regulates emissions of hazardous air pollutants from fossil-fuel fired steam generating units. Reductions in emissions of hazardous air pollutants from these sources will invariably result in decreases in emissions of SO₂ and NOx as well. The rule was challenged in by petition for review in the D.C. Circuit. North Carolina intervened to support the rule. On April 15, 2014, the D.C. Circuit rejected all challenges to the rule.

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 (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 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 (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 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 (EMC) and DENR Response: A letter dated November 14, 2013, was submitted to the Environmental Review Commission from Mr. Benne C. Hutson, Chairman of the Environmental Management Commission (see Attachment C). The letter stated that North Carolina EGU emissions of SO₂ and NOx have been significantly reduced in response to the CSA requirements, and all of the state's EGUs are reported to be on course to meet the CAIR and MATS rules. Utilities in nearby states with coal-fired EGUs are also expected to significantly reduce NOx and SO₂ emissions by installing controls on their larger units and closing their smaller ones in order to meet the USEPA MATS rule by March 2015. Whether these reductions are sufficient for North Carolina to attain a more stringent ozone standard will be determined by the DENR following USEPA's promulgation of such a standard, expected in 2015.

The EMC recommended that the DENR continue to evaluate the need for reductions beyond CSA from North Carolina utilities based on what additional emission reductions are needed to attain and maintain the National Ambient Air Quality Standards (NAAQS). If additional controls are necessary, the letter recommended that the DENR initiate necessary rule changes, or open the permits for the respective power plant to include the new emissions limitation, or both. The DENR's evaluation of the need for additional controls will occur upon EPA issuing a new or revised NAAQS. The EMC also recommended that a report every two years is no longer necessary.

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

DAQ Actions to Implement this Section: The 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 SO₂ 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." The DENR/DAQ has also submitted the third and final report titled Mercury Emissions and Mercury Controls for Coal-Fired Electrical Utility Boilers. In 2006, the 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, the 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 was submitted to the Environmental Management Commission in July 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 was 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. In addition, as required (by Jan. 1, 2013) under 15A NCAC 2D.2511(b), Duke Energy and Progress Energy each submitted a mercury control plan to the DENR/DAQ. Each plan described how each coal-fired generating unit will comply with the requirement to either install and operate mercury controls or shut down after Dec. 31, 2018.

The controls needed to comply with the 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 NO_x and SO₂ controls from EGUs within the State. In 2002, the mercury emissions from the CSA facilities were 3,382 pounds (lbs) and have dropped steadily since. In 2010, those emissions dropped to 962 lbs, which is a 72 percent reduction in the mercury emissions since 2002. Mercury emissions have dropped further in 2012 to 453 lbs, representing an 87 percent reduction since 2002.

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. Based on emission test results submitted to DAQ under 15A NCAC 2D.2511(d), Duke Energy and Progress Energy appear to be well-positioned to comply with the MATS mercury emission limits by the April 2015 compliance date. On April 15, 2014, the U.S. Court of Appeals for the D.C. Circuit Court upheld the EPA EGU MATS rule against a consolidation of legal challenges by state, industry, labor, and environmental petitioners.

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

DENR Actions to Implement this Section: The 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 CO₂ control from coal-fired utility boilers. The second report primarily focused on "definition of options." The DENR/DAQ submitted the third and final report titled, "Carbon Dioxide (CO₂) Emission Reduction Strategies for North Carolina," to the Environmental Management Commission and the Environmental Review Commission as required. Numerous recommendations were set forth in this report, including a recommendation for a North Carolina Climate Action Plan. The 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). The 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 CO₂ 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.

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 §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 §202(a) of the CAA to control GHGs from passenger cars and light-duty trucks, and medium-duty passenger vehicles, as part of a joint rulemaking with the National Highway Traffic Safety Administration (NHTSA). The standards would be phased in beginning with model year 2012 through 2016. On August 28, 2012, the EPA and NHTSA issued a joint final rulemaking to extend the national program to model year 2017 through 2025 passenger vehicles. By 2025, the rule calls for vehicle manufacturers to meet a CO₂ standard projected to be equivalent to 54.5 miles per gallon on an average fleet-wide basis. In August 2011, the two agencies issued the first GHG and fuel efficiency standards for model years 2014 to 2018 trucks and buses. These standards will jointly reduce fuel use and greenhouse gas emissions from medium- and heavy-duty vehicles, which range in size from the largest pickup trucks and vans to semi trucks.

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 §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 raised statutory thresholds and set a PSD significance level for GHGs. By tailoring the applicability thresholds, only large emitting sources would be affected. EPA phased in the permitting requirements by raising the applicability threshold to 100,000 tons per year (tpy) of carbon dioxide equivalent (CO_{2e}) major source and 75,000 tpy significance level. In the latter half of 2010, EPA issued a series of related rules to conform State Implementation Plans (SIPs), SIP approvals and Title V programs to the thresholds in the Tailoring rule, and to ensure GHGs were considered regulated pollutants in the subject states.

On April 18, 2013, several industry groups filed petitions with the U.S. Supreme Court seeking review of a court decision upholding EPA's authority to regulate GHG emissions under the Clean Air Act (*Coalition for Responsible Regulation v. EPA*). In a similar action, thirteen states filed a petition on April 22, 2013, seeking the U.S. Supreme Court's review. On June 26, 2013, the U.S. Court of Appeals for the D.C. Circuit issued a consolidated opinion that rejected all the petitioners' challenges and upheld all four GHG regulations: 1) Endangerment and Cause or Contribution Finding under §202(a) of the Clean Air Act ("Endangerment Finding", 74 Federal Register 66496, December 15, 2009); 2) Light-Duty Vehicle GHG Emission Standards and Corporate Average Fuel Economy Standards ("Light-Duty Vehicle Rule", 75 Federal Register 25324, May 7, 2010); 3) Reconsideration of Interpretation of Regulations that Determine Pollutants ("Johnson Memo Reconsideration", 75 Federal Register 17004, April 2, 2010); and 4) Prevention of Significant Deterioration and Title V GHG Tailoring Rule ("Tailoring Rule", 75 Federal Register 31514, June 3, 2010).

On February 24, 2014, the U.S. Supreme Court heard oral arguments that considered whether EPA's regulation of GHGs from automobiles automatically triggers the Clean Air Act's PSD and Title V permitting requirements for GHG emissions from stationary sources. The Supreme Court refused to review the broad set of issues decided by the D.C. Circuit and examined only the narrower question of the statutory "trigger" for stationary source GHG permitting under the PSD and Title V programs. A decision is expected in the summer of 2014.

On June 25, 2013, the President announced his “Presidential Climate Action Plan” and issued a memorandum which directed the EPA Administrator to take several actions regarding “power plant carbon pollution standards.” The standards will affect existing coal-fired EGUs and future, new fossil-fuel fired power plants. For new power plants, the President directed EPA to issue a revised proposal by September 20, 2013. In response to this requirement, EPA proposed “New Source Performance Standards (NSPS) for GHG Emissions from New Electric Generating Units under Clean Air Act §111(b).” The DENR is currently reviewing this proposal and plans to submit comments related to proposed best system of emission reductions (BSER) for new coal-fired and natural-gas fired EGUs. For existing power plants, the President directed EPA to issue a proposal by June 1, 2014 and finalize GHG emissions guidelines under §111(d) of the CAA by June 1, 2015. The DENR and the Public Staff – North Carolina Utilities Commission (Public Staff) have been actively engaged in the EPA stakeholder process and submitted comments expressing the agencies’ thoughts on the BSER requirements that will affect state implementation plan submittal under §111(d). The DENR also submitted a document titled “North Carolina §111(d) Principles” to the EPA Administrator to help inform the discussion surrounding the development of the upcoming proposed rule.

VIII. Supplementary Information

Public Staff – North Carolina Utilities Commission Audit Reports: As noted in earlier reports, the 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 2014 Cost-of-Service Impact of IOUs' Continuing Compliance with the Act: The cost-of-service² or, synonymously, the revenue requirement impact of continuing compliance with the Act, for calendar year 2014, for each IOU is estimated to be as follows:

Progress Energy:

- Total company \$88.7 million
- N.C. retail \$58.9 million
- Residential customer monthly bill impact with usage @ 1,000 kWh per month \$1.58
- Residential customer monthly bill with usage @1,000 kWh \$109.27

Duke Energy:

- Total company \$189.1 million
- N.C. retail \$133.8 million
- Residential customer monthly bill impact with usage @ 1,000 kWh per month \$2.38
- Residential customer monthly bill with usage @1,000 kWh \$110.59

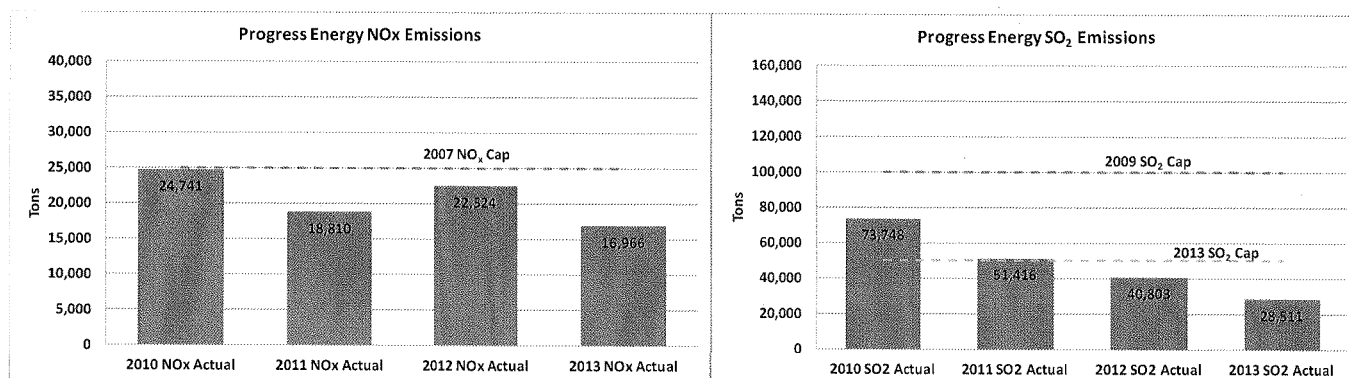
² The annual cost of service or, synonymously, annual revenue requirement of an investor-owned public utility, such as Progress Energy and/or Duke Energy, is typically defined as the sum total of reasonable operating expenses, depreciation expense, taxes, and a reasonable return on the net valuation of property.

IX. Conclusions

DENR/DAQ

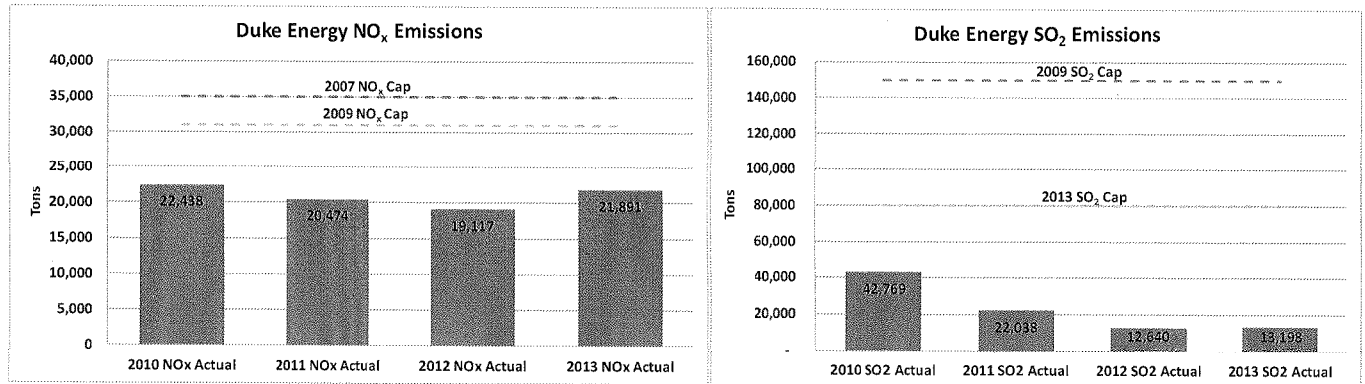
The DENR/DAQ has carefully reviewed and considered the information provided by Progress Energy and Duke Energy in their compliance plan submittals for calendar year 2013. Both companies continue to meet the emissions limitations as specified in the Act.

Progress Energy has completed all of the emissions control projects and associated work to assure compliance with the Act. No further construction is anticipated. The Company has installed a mix of combustion devices, which minimize the formation of NO_x (e.g., low-NO_x burners and over-fire air technologies), and post-combustion controls, which reduce NO_x 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 2007 annual emission limit of 25,000 tons NO_x. Calendar year 2013 NO_x emissions were 16,966 tons (see figure below):



Progress Energy's initial SO₂ control plan included putting scrubbers on eight units. The Company's 2004 SO₂ emissions were 195,655 tons with no scrubbers. Progress Energy has met its 2013 SO₂ limit of 50,000 tons. Calendar year 2013 SO₂ emissions were 28,511 tons (see Figure above).

Duke Energy has completed all emissions control projects to assure compliance with the Act. The Company has completed installing controls for NO_x reductions, which consists of a combination of selective catalytic reduction and selective non-catalytic reduction technologies, and low NO_x burners. Duke Energy has continued to meet its 2009 annual emissions limit of 31,000 tons for NO_x. Calendar year 2013 NO_x emissions were 21,891 tons (see figure below):



Duke Energy's SO₂ 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 completed installation of wet flue-gas desulfurization scrubbers on all 12 generating units, and all scrubbers were in operation at the end of 2010. Duke Energy has met its 2013 SO₂ limit of 80,000 tons. Calendar year 2013 SO₂ emissions were 13,198 tons (see Figure above).

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 2013. Based upon those reports and in consideration of the 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, the 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 emissions limitations set out in G.S. 143-215.107D have been met.

Attachments

- Attachment A:** Duke Energy Carolinas, LLC, *Annual NC Clean Smokestacks Act Compliance Report*, Submitted by Cover Letters to the DENR and the Commission Dated March 27, 2014.
- Attachment B:** Duke Energy Progress, Inc. *Annual NC Clean Smokestacks Act Compliance Report*, Submitted by Cover Letters to the DENR and the Commission Dated March 27, 2014.
- Attachment C:** Letter from Benne C. Hutson, Chairman of the N.C. Environmental Management Commission to the N.C. Environmental Review Commission, *Emissions Reductions Beyond the Clean Smokestacks Act*, November 14, 2013.



Kendrick C. Fentress
Associate General Counsel

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kendrick.fentress@duke-energy.com

March 27, 2014

VIA ELECTRONIC FILING

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

**Re: Annual NC Clean Smokestacks Act Compliance Report
Docket No. E-7, Sub 718**

Dear Ms. Mount:

Duke Energy Carolinas, LLC submits the report for calendar year 2013 regarding the status of compliance with the provisions of the North Carolina Clean Smokestacks Act (the "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.

Please do not hesitate to contact me if you have questions.

Sincerely,

A handwritten signature in black ink that reads 'Kendrick C. Fentress'.

Kendrick C. Fentress

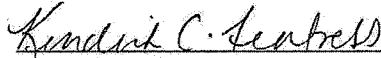
Enclosures

cc: Parties of Record

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Clean Smokestacks Act Compliance Report has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1st Class Postage Prepaid, properly addressed to parties of record.

This the 27th day of March, 2014.


Kendrick C. Fentress
Associate General Counsel
Duke Energy Corporation
P.O. Box 1551/ NCRH 20
Raleigh, North Carolina 27602
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OFFICIAL COPY

Mar 27 2014



MITCHELL C. GRIGGS
Vice President
Environmental Services

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March 26, 2014

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

Mr. John E. Skvarla, III, 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 SO₂ Compliance Plan Annual Update

Dear Chief Clerk Mount and Secretary Skvarla,

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 is the Compliance Plan Annual Update for 2013 that fully describes the company's efforts to comply with the North Carolina Clean Air Legislation.

During 2013, the annual emissions from the North Carolina coal-fired units owned and operated by the company totaled less than the required amounts:

	NO _x Emissions	SO ₂ Emissions
2013 Clean Air Legislation Limit	21,891 Tons	80,000 Tons
2013 Actual Emissions	13,198 Tons	13,198 Tons

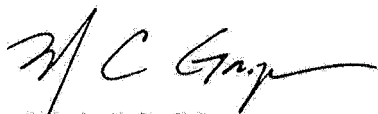
Exhibit A provides the company's response to the required annual reporting elements that are listed in G.S. 62-133.6(i). As noted in this exhibit, there is no additional information to report for calendar year 2013 for many of those reporting elements. The only new information on costs of implementation relate to close-out of accounting for certain projects. As of 2013, all plans and processes for compliance have been fully implemented.

Ms. Gail L. Mount, Chief Clerk
Mr. John E. Skvarla, III, Secretary
March 26, 2014
Page 2

The North Carolina Clean Air Legislation has successfully achieved its objective of promoting significant reductions in emissions of sulfur dioxide and nitrogen oxides and other pollutants including mercury to the benefit of the citizens of North Carolina. Going forward, Duke Energy Carolinas would like to review the provisions of the Legislation with the Commission and the Division of Air Quality to determine whether certain requirements related to the annual reporting for planned activities and expenditures provides any further useful purpose. Because these requirements are currently contained in the Legislation, further actions may be required if there is a mutual interest in revisiting the requirements.

If you have questions regarding any aspect of our report, please do not hesitate to contact my office at (704) 382-8451.

Sincerely,



Mitchell C. Griggs,
Vice President, Environmental Services
Duke Energy

Enclosures

xc: Christopher J. Ayers
Executive Director – Public Staff

xc: Sheila Holman, Director
North Carolina Division of Air Quality

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

Exhibit A - 2013 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.**

Duke Energy Carolinas has implemented all necessary projects and operational plans to assure on-going compliance with the emissions limitations set out in the Legislation (the Legislation), as reported in previous annual reports.

- 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.**

All construction projects associated with the Legislation have been completed and the control systems installed to comply with the requirements of the Legislation are in operation. During 2013, there were accounting entries associated with closing out the scrubber projects at Allen Station Units 1-5 and Cliffside Station Unit 5. Those costs are shown in Table 1 which summarizes total costs incurred by Duke Energy Carolinas from the initiation through completion of these projects.

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

There were no additional amounts amortized related to construction work activity in the 2013 calendar year in support of compliance with the provisions of the Legislation. All construction projects associated with the NC Clean Smokestacks Act provisions have been completed prior to 2013, and there will be no further amortized amounts associated with the Legislation.

- 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.**

As reported in the 2012 annual report for Duke Energy Carolinas, the "environmental compliance costs" as defined in the Legislation total \$1.84 billion. This is the final cost as all projects have been completed and accounted for.

- 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.**

There are no outstanding permit applications. All permits associated with projects to comply with the Legislation were issued prior to 2013 as described in previous annual reports.

- 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 has finalized the construction activities necessary to comply with the provisions of the Legislation.

- 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 the Legislation. No additional permit applications are required.

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

No additional equipment testing related to compliance with the Legislation was performed in 2013. No additional equipment testing is required going forward since all projects are now fully in operation.

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

In the 2013 calendar year, 21,891 tons of NO_x and 13,198 tons of SO₂ were emitted from the Duke Energy Carolinas coal-fired units located in North Carolina and subject to the emissions limitations set out in the Legislation. Table 2 provides the actual emissions for 2013 for each operational coal-fired generating unit.

- 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.**

Refer to Table 3 for a summary of the excess allowances as described in G.S. 143-215.107D(i).

For 2013, Duke Energy Carolinas had an excess of 58,961 CAIR SO₂ allowances above the emissions limitations in the Legislation. The total allocation to these facilities for 2013

was 138,961 CAIR SO₂ allowances, and the emissions limitation under the Legislation is 80,000 tons of SO₂.

For 2013, Duke Energy Carolinas had an excess of 1,987 CAIR NO_x allowances above the emissions limitations in the Legislation. The total allocation to these affected coal-fired facilities for 2013 was 32,987 CAIR NO_x allowances, and the emissions limitation set out in the Legislation was 31,000 tons.

Duke Energy Carolinas will transfer these 58,961 CAIR SO₂ allowances and 1,987 CAIR NO_x allowances to the State of North Carolina to fulfill the terms of the 2002 allowance surrender agreement which was entered into as described in G.S. 143-215.107D(i).

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.

Table 1. Final Cost Summary for Duke Energy Carolinas Projects to Implement NC Clean Air Legislation

Facility	Technology	Operational Date	Spent to Date											Project Total (\$000)
			2001-'03 (\$000)	2004 (\$000)	2005 (\$000)	2006 (\$000)	2007 (\$000)	2008 (\$000)	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)	
Allen 1-5	Scrubber	2009	\$1,100	(\$12)	\$5,348	\$62,753	\$209,06	\$153,69	\$51,765	(\$1,385)	\$182	\$110	\$557	\$483,179
Belews Creek 1-2	Scrubber	2008	\$1,121	\$5,999	\$106,43	\$250,64	\$128,05	\$34,629	\$1,338	(\$0)	\$0	\$0	\$0	\$528,227
Cliffside 5	Scrubber	2010	\$978	\$287	\$112	\$3,175	\$57,778	\$77,525	\$96,111	\$79,67	\$3,403	\$198	(\$750)	\$318,490
Marshall 4	Scrubber	2007	\$10,214	\$92,096	\$218,13	\$74,163	\$23,632	(\$1,250)	\$0	(\$228)	\$0	\$0	\$0	\$416,757
Allen 1-5	SNCR	2003	\$3,224	\$365	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,589
Allen 2	SNCR	2007	\$0	\$0	\$239	\$2,711	\$2,332	(\$208)	\$0	\$0	\$0	\$0	\$0	\$5,074
Allen 3	SNCR	2005	\$216	\$2,584	\$4,092	\$32	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,924
Allen 4	SNCR	2006	\$0	\$218	\$1,122	\$4,258	\$171	\$16	\$0	\$0	\$0	\$0	\$0	\$5,785
5	SNCR	2008	\$99	\$165	\$122	\$23	\$2,161	\$2,425	\$0	\$0	\$0	\$0	\$0	\$4,994
Buck 3	Burner	2007	\$0	\$0	\$0	\$615	\$3,565	\$0	\$0	\$0	\$0	\$0	\$0	\$4,179
Buck 3	Classifie	2007	\$0	\$0	\$0	\$0	\$216	\$0	\$0	\$0	\$0	\$0	\$0	\$216
Buck 4	Burner	2007	\$0	\$0	\$0	\$358	\$1,882	\$1	\$0	\$0	\$0	\$0	\$0	\$2,241
Buck 4	Classifie	2007	\$0	\$0	\$0	\$0	\$93	\$0	\$0	\$0	\$0	\$0	\$0	\$93
Buck 5	SNCR	2006	\$0	\$268	\$346	\$4,837	\$183	\$160	\$0	\$0	\$0	\$0	\$0	\$5,794
Buck 6	SNCR	2006	\$0	\$266	\$335	\$3,814	(\$685)	(\$29)	(\$2)	\$0	\$0	\$0	\$0	\$3,699
Dan River 1	Burner	2008	\$0	\$0	\$0	\$0	\$1,560	\$1,633	\$0	\$0	\$0	\$0	\$0	\$3,194
Dan River 1	Classifie	2008	\$0	\$0	\$0	\$0	\$124	\$0	\$0	\$0	\$0	\$0	\$0	\$124
Dan River 3	Burner	2006	\$0	\$0	\$775	\$1,694	\$239	\$0	\$0	\$0	\$0	\$0	\$0	\$2,708
Dan River 2	Classifie	2005	\$0	\$0	\$131	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$131
Dan River 3	Burner	2006	\$192	\$513	\$679	\$1,441	\$377	\$0	\$0	\$0	\$0	\$0	\$0	\$3,202
Dan River 3	Classifie	2005	\$0	\$0	\$184	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$184
Marshall 1	SNCR	2006	\$1	\$167	\$1,418	\$2,106	\$182	\$0	\$0	\$0	\$0	\$0	\$0	\$3,874
Marshall 2	SNCR	2007	\$198	\$185	\$778	\$2,761	\$1,382	\$322	\$0	\$0	\$0	\$0	\$0	\$5,626
Marshall 3	SNCR	2005	\$1,577	\$652	\$2,042	\$32	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,304
Marshall 4	SNCR	2007	\$0	\$0	\$43	\$2,614	\$494	\$0	\$0	\$0	\$0	\$0	\$0	\$3,151
Riverbend 4	SNCR	2007	\$0	\$46	\$474	\$1,082	\$1,982	(\$53)	\$0	\$0	\$0	\$0	\$0	\$3,531
Riverbend 5	Burner	2005	\$650	\$2,313	\$180	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,143
Riverbend 5	Classifie	2005	\$0	\$160	\$0	\$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	\$0	\$4,390
Riverbend 6	Burner	2005	\$572	\$510	\$2,096	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,179
Riverbend 6	Classifie	2005	\$0	\$0	\$189	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$189
Riverbend 6	SNCR	2006	\$0	\$2	\$340	\$3,454	\$504	\$4	\$0	\$0	\$0	\$0	\$0	\$4,304
Riverbend 7	SNCR	2006	\$0	\$48	\$486	\$3,939	\$521	\$5	\$0	\$0	\$0	\$0	\$0	\$4,999
Subtotals:			\$20,142	\$106,83	\$346,42	\$427,98	\$438,40	\$268,88	\$149,21	\$78,05	\$3,585	\$309	(\$193)	\$1,839,63

SO₂

NO_x

Table 2. Duke Energy Carolinas 2013 Actual Emissions

	NO_x	SO₂
	2013 Actual Emissions	2013 Actual Emissions
Facility	Tons	Tons
Allen 1	87	20
Allen 2	57	17
Allen 3	1,001	279
Allen 4	1,422	374
Allen 5	589	156
Belews Creek 1	2,356	2,472
Belews Creek 2	2,658	2,603
Buck 6	Retired	
Buck 7	Retired	
Buck 8 *	80	456
Buck 9 *	17	100
Cliffside 1	Retired	
Cliffside 2	Retired	
Cliffside 3	Retired	
Cliffside 4	Retired	
Cliffside 5	656	460
Cliffside 6	951	399
Dan River 1	Retired	
Dan River 2	Retired	
Dan River 3	Retired	
Marshall 1	1,665	662
Marshall 2	1,796	726
Marshall 3	1,439	849
Marshall 4	6,953	2,467
Riverbend 7	Retired	
Riverbend 8	Retired	
Riverbend 9 *	89	667
Riverbend 10 *	73	491
Total Coal Emissions	21,891	13,198
NC CSA Allowable	31,000	80,000

Table 3. Duke Energy Carolinas Allowance Surrender Requirement for 2013

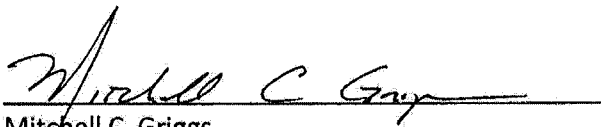
	NC Clean Air NOx Surrender (Tons of Emissions and Tons of CAIR NOx Allowances)					
	Actual Emissions	NC NOx Emissions Cap	2013 CAIR NOx Allocation	2013 CAIR NOx Reallocation	Total CAIR NOx Allocation	To Surrender – CAIR NOx Allocation Above Cap
Duke Energy Carolinas	21,891	31,000	31,630	1,357	32,987	1,987

	NC Clean Air SO2 Surrender (Tons of Emissions and Tons of CAIR SO2 Allowances)			
	Actual Emissions	NC SO2 Emissions Cap	2013 CAIR SO2 Allocation	To Surrender – CAIR SO2 Allocation Above Cap
Duke Energy Carolinas	13,198	80,000	138,961	58,961

VERIFICATION

I, Mitchell C. Griggs, 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 these annual updates 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.



Mitchell C. Griggs,
Vice President, Environmental Services
Duke Energy

3/26/2014

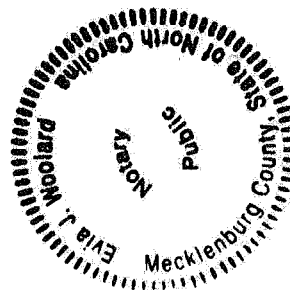
Date

Subscribed and sworn to before me,
This 26th day of March, 2014.



NOTARY PUBLIC

My commission expires: August 14, 2016





Kendrick C. Fentress
Associate General Counsel

Mailing Address:
NCRH 20/P. O. Box 1551
Raleigh, North Carolina 27602

o: 919.546.6733
f: 919.546.2694

kendrick.fentress@duke-energy.com

March 27, 2014

VIA ELECTRONIC FILING

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

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

Dear Ms. Mount:

Duke Energy Progress, Inc. submits the report for calendar year 2013 regarding the status of compliance with the provisions of the North Carolina Clean Smokestacks Act (the "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.

Please do not hesitate to contact me if you have questions.

Sincerely,

A handwritten signature in cursive script that reads 'Kendrick C. Fentress'.

Kendrick C. Fentress

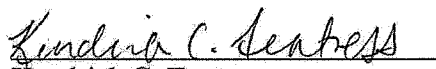
Enclosures

cc: Parties of Record

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Progress, Inc.'s Clean Smokestacks Act Compliance Report has been served by electronic mail, hand delivery, or by depositing a copy in the United States Mail, 1st Class Postage Prepaid, properly addressed to parties of record.

This the 27th day of March, 2014.


Kendrick C. Fentress
Associate General Counsel
Duke Energy Corporation
P.O. Box 1551/ NCRH 20
Raleigh, North Carolina 27602
Tel: 919.546.6733
kendrick.fentress@duke-energy.com



MITCHELL C. GRIGGS
Vice President
Environmental Services

Duke Energy
526 S. Church St.
Charlotte, NC 28202

704-382-8451
704-382-0249 (fax)
mitchell.griggs@duke-energy.com

March 26, 2014

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

Mr. John E. Skvarla, III, Secretary
North Carolina Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

Subject: Docket No. E-2, Sub 815
Duke Energy Progress, Inc.
NO_x and SO₂ Compliance Plan Annual Update

Dear Chief Clerk Mount and Secretary Skvarla,

Duke Energy Progress, Inc., doing business as Duke Energy Progress, is required by Senate Bill 1078 ("North Carolina Clean Air Legislation" or "the 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 is the Compliance Plan Annual Update for 2013 that fully describes the company's efforts to comply with the North Carolina Clean Air Legislation.

During 2013, the annual emissions from the North Carolina coal-fired units owned and operated by the company totaled less than the required amounts:

	NO _x Emissions	SO ₂ Emissions
2013 Clean Air Legislation Limit	25,000 Tons	50,000 Tons
2013 Actual Emissions	19,966 Tons	28,511 Tons

Exhibit A provides the company's response to the required annual reporting elements that are listed in G.S. 62-133.6(i). As noted in this exhibit, there is no additional information to report for calendar year 2013 for many of those reporting elements. As of 2013, all plans and processes for compliance have been fully implemented.

Ms. Gail L. Mount, Chief Clerk
Mr. John E. Skvarla, III, Secretary
March 26, 2014
Page 2

The North Carolina Clean Air Legislation has successfully achieved its objective of promoting significant reductions in emissions of sulfur dioxide and nitrogen oxides and other pollutants including mercury to the benefit of the citizens of North Carolina. Going forward, Duke Energy Progress would like to review the provisions of the Legislation with the Commission and the Division of Air Quality to determine whether certain requirements related to the annual reporting for planned activities and expenditures provides any further useful purpose. Because these requirements are currently contained in the Legislation, further actions may be required if there is a mutual interest in revisiting the requirements.

If you have questions regarding any aspect of our report, please do not hesitate to contact my office at (704) 382-8451.

Sincerely,



Mitchell C. Griggs,
Vice President, Environmental Services
Duke Energy

Enclosures

xc: Christopher J. Ayers
Executive Director – Public Staff

xc: Sheila Holman, Director
North Carolina Division of Air Quality

Duke Energy Progress, Inc.
General Assembly of North Carolina Session 2001
Senate Bill 1078 – Improve Air Quality/Electric Utilities (NC Clean Air Legislation)

Exhibit A - 2013 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.**

Duke Energy Progress, Inc. d/b/a Duke Energy Progress has implemented all necessary projects and operational plans to assure on-going compliance with the emissions limitations set out in G.S. 143-215.107D (the Legislation), as reported in previous annual reports.

- 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 2013 calendar year, Duke Energy Progress did not incur any construction charges in support of compliance with the provisions of the Legislation. All construction projects associated with the Legislation have been completed.

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

There were no additional amounts amortized related to construction work activity in the 2013 calendar year in support of compliance with the provisions of the Legislation. All construction projects associated with the Legislation have been completed prior to 2013, and there will be no further amortized amounts associated with the Legislation.

- 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.**

As reported in the 2012 annual report for Duke Energy Progress, the "environmental compliance costs" as defined in the Legislation total \$1.05 billion. This is the final cost as all projects have been completed and accounted for.

- 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.**

There are no outstanding permit applications. All permits associated with projects to comply with the Legislation were issued prior to 2013 as described in previous annual reports.

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 Progress has finalized the construction activities necessary to comply with the provisions of the Legislation.

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 Progress has completed the permitting necessary to comply with the provisions of the Legislation. No additional permit applications are required.

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

No additional equipment testing related to compliance with the Legislation was performed in 2013. No additional equipment testing is required going forward since all projects are now fully in operation.

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

In the 2013 calendar year, 16,966 tons of NO_x and 28,511 tons of SO₂ were emitted from the Duke Energy Progress coal-fired units located in North Carolina and subject to the emissions limitations set out in the Legislation. Table 1 provides the actual emissions for 2013 for each operational coal-fired generating unit.

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.

Refer to Table 2 for a summary of the excess allowances as described in G.S. 143-215.107D(i).

For 2013, Duke Energy Progress had an excess of 78,050 CAIR SO₂ allowances above the emissions limitations in the Legislation. The total allocation to these facilities for 2013 was 128,050 CAIR SO₂ allowances, and the emissions limitation under the Legislation was 50,000 tons of SO₂. Duke Energy Progress will transfer these 78,050 CAIR SO₂ allowances to the State of North Carolina to fulfill the terms of the 2002 allowance surrender agreement which was entered into as described in G.S. 143-215.107D(i).

For 2013, Duke Energy Progress had no excess allocation of NOx allowances above those required to meet compliance with the emissions limitations in the Legislation. The total allocation to these affected coal-fired facilities for 2013 was 24,406 CAIR NOx allowances, and the emissions limitations set out in the Legislation was 25,000 tons.

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.

Table 1. Duke Energy Progress 2013 Actual Emissions

	NO_x	SO₂
	2013 Actual Emissions	2013 Actual Emissions
Facility	Tons	Tons
Asheville 1	368	276
Asheville 2	457	542
Cape Fear 5	Retired	
Cape Fear 6	Retired	
Lee 1	Retired	
Lee 2	Retired	
Lee 3	Retired	
Mayo 1	2,648	4,570
Roxboro 1	1,298	2,013
Roxboro 2	3,449	4,457
Roxboro 3	2,845	2,968
Roxboro 4	2,467	3,204
Sutton 1*	408	1,308
Sutton 2*	284	986
Sutton 3*	2,742	8,187
Weatherspoon 1	Retired	
Weatherspoon 2	Retired	
Weatherspoon 3	Retired	
Total Coal Emissions	16,966	28,511
NC CSA Allowable	25,000	50,000

* Sutton Units 1, 2, and 3 retired effective November 27, 2013.

Table 2. Duke Energy Progress Allowance Surrender Requirement for 2013

	NC Clean Air NOx Surrender (Tons of Emissions and Tons of CAIR NOx Allowances)					
	Actual Emissions	NC NOx Emissions Cap	2013 CAIR NOx Allocation	2013 CAIR NOx Reallocation	Total CAIR NOx Allocation	To Surrender – CAIR NOx Allocation Above Cap
Duke Energy Progress	16,966	25,000	23,619	787	24,406	0

	NC Clean Air SO2 Surrender (Tons of Emissions and Tons of CAIR SO2 Allowances)			
	Actual Emissions	NC SO2 Emissions Cap	2013 CAIR SO2 Allocation	To Surrender – CAIR SO2 Allocation Above Cap
Duke Energy Progress	28,511	50,000	128,050	78,050

VERIFICATION

I, Mitchell C. Griggs, 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 Progress, Inc. d/b/a Duke Energy Progress.

I have reviewed these annual updates 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.

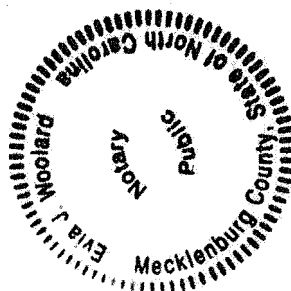
Mitchell C. Griggs
Mitchell C. Griggs,
Vice President, Environmental Services
Duke Energy

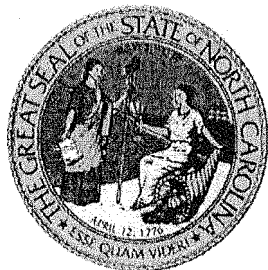
3/26/2014
Date

Subscribed and sworn to before me,
This 26th day of March, 2014.

Emi J. Sholard
NOTARY PUBLIC

My commission expires: August 14, 2016





ENVIRONMENTAL MANAGEMENT COMMISSION

Benne C. Hutson
Chairman

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

Pat McCrory, Governor
John Skvarla, Secretary

David W. Anderson
Gerard P. Carroll
Charles Carter
Tommy Craven
E. O. Ferrell
Steve P. Keen

Kevin Martin
Manning Puette
Dr. Albert R. Rubin
Clyde E. Smith, Jr.
Steve W. Tedder
Julie A. Wilsey

November 14, 2013

The Honorable Mike Hager (Co-Chair)
The Honorable Ruth Samuelson (Co-Chair)
The Honorable Brent Jackson (Co-Chair)
Environmental Review Commission

Subject: Emissions Reductions Beyond the Clean Smokestacks Act

Dear Rep. Hager, Rep. Samuelson, Sen. Jackson:

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 (SO₂) beyond those required by the Clean Smokestacks Act (CSA). The EMC is to report its findings and recommendations biennially to the General Assembly and the Environmental Review Commission beginning September 1, 2011 (attached). (Note: Session Law 2010-142 changed the reporting frequency from annual to biennial and the beginning date of the requirements of this Section to September 1, 2011).

In the September 1, 2011 report, the EMC concluded that recent actions by the state, the federal government, the United States District Court for the Eastern District of Tennessee and the U.S. Court of Appeals for the D.C. Circuit will affect power plant emissions and NO_x and SO₂ regulation. The EMC recommended that the study of further state action to achieve additional reduction of these air contaminants be presented on September 1, 2013. The reporting date would: (1) allow the affected public utilities in North Carolina time to implement their control strategies to meet the compliance deadline under CSA, (2) give the Department of Environment and Natural Resources (DENR) time to quantify air quality impacts from CSA compliance and evaluate necessary additional reductions needed to meet the new ambient air quality standards, and (3) give industry and DENR time to implement new federal rules and court actions.

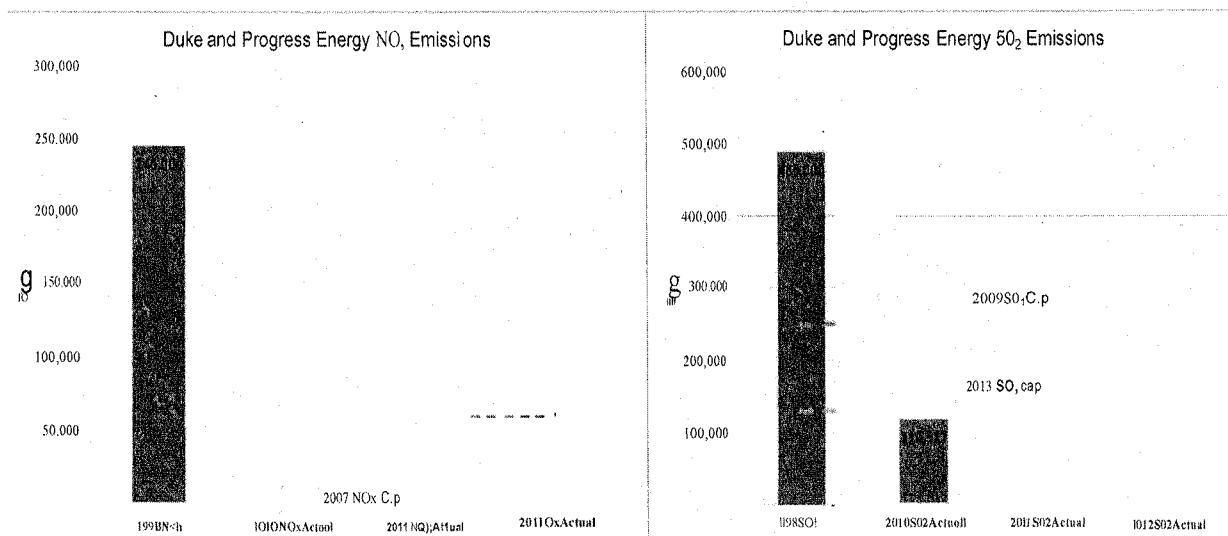
In this 2013 report, the EMC presents the status of key federal judicial and legislative actions for which the outcomes are still undetermined. For example, the Cross-State Air Pollution Rule (CSAPR) which regulated interstate pollution transport from electric generating units (EGUs), was vacated by the Court of Appeals for the D.C. Circuit in August 2012, and is

currently on the Supreme Court docket for review based on petitions filed by the U.S. Environmental Protection Agency (USEPA) and others. Additionally, USEPA is delaying the revisions of the National Ambient Air Quality Standards (NAAQS) for ozone until 2015. Given that these and other pending actions are affecting future EGU emissions, the EMC recommends that DENR continue to evaluate the need for reductions beyond CSA from the utilities based on what additional emission reductions are needed to attain and maintain the NAAQS. If additional controls are necessary, DENR will then initiate necessary rule changes, or open the permits for the respective power plant to include the new emissions limitation, or both. The evaluation of the need for additional controls occurs upon EPA issuing a new NAAQS. The EMC believes that a report every two years is no longer necessary.

Background on Compliance with the Clean Smokestack Act

In the June 1, 2013 Implementation of the Clean Smokestack Act report to the Environmental Review Commission and the Joint Legislative Commission on Governmental Operations submitted by DENR and the North Carolina Utilities Commission, the Executive Summary reads as follows:

"For calendar year 2012, 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 NO_x and SO₂ emissions as a result of control measures implemented by Progress Energy and Duke Energy on a combined basis:



The reduction in SO₂ 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 USEPA a redesignation demonstration and maintenance plan for these areas and then supplemented the maintenance plan in December 2010. As part of the redesignation demonstration and maintenance plan, DENR relied on the CSA SO₂ reductions as permanent and enforceable measures that demonstrate continued maintenance of the PM_{2.5} standard. On September 26, 2011, the EPA adopted the CSA emission caps into the State Implementation Plan (76 FR 59250). On November 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 December 19, 2011. The approval of the North Carolina PM_{2.5} redesignation demonstration was made possible due to compliance with the CSA SO₂ emission caps.

The next milestone in emission reductions occurs in 2013, when Duke Energy and Progress Energy must reduce their annual SO₂ emissions to 80,000 tons and 50,000 tons, respectively (combined cap of 130,000 tons SO₂). Duke Energy's calendar year 2012 SO₂ emissions (12,640 tons SO₂) are well below the 2013 cap. Progress Energy's calendar year 2012 SO₂ emissions (40,803 tons SO₂) are also below the 2013 cap.

Collectively, the two utilities have reduced NO_x emissions by 83 percent and SO₂ emissions by 89 percent relative to 1998 emission levels."

Federal **Regulatory** Actions

Clean Air Interstate Rule and Cross State Air Pollution Rule: In March 2005, USEPA issued the Clean Air Interstate Rule (CAIR) intended to be a solution to the problem of EGU interstate pollution drifting from one state to another in 27 eastern states. The CAIR is designed to reduce emissions of SO₂ and NO_x from power plants that cause particulate matter (PM) and ozone pollution across the eastern United States. The rule uses a cap and trade system to reduce SO₂ and NO_x emissions by 70 percent. However, in December 2008 the U.S. Court of Appeals for the D.C. Circuit struck down CAIR but allowed it to remain in effect until replaced by a rule consistent with the court's opinion. CAIR was found to have several legal flaws concerning "good neighbor" considerations identified in the lawsuit brought by the State of North Carolina. The courts directed the USEPA to rewrite the rule.

On July 6, 2010, the USEPA released a revised rule, the Cross State Air Pollution Rule (CSAPR), as a second attempt to address interstate transport issues. This rule would also require 27 eastern states to reduce NO_x and SO₂ emissions from EGUs but with a more limited cap and trade system than with CAIR. North Carolina utilities would be required to reduce emissions beyond the levels necessary to comply with the CSA and utilities in neighboring states would have to reduce their emissions as well. Compliance with CSAPR would result in reductions of largely NO_x emissions beyond CSA for the North Carolina utilities. Full compliance with CSAPR throughout the covered states was expected to result in lower ozone and fine PM levels throughout the eastern United States. The first phase of the CSAPR reductions was scheduled to begin in January 2012 with the second phase scheduled to begin in 2014. 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 support of CSAPR.

On August 21, 2012, the U.S. Court of Appeals for the D.C. Circuit vacated and remanded CSAPR. The Court held that CSAPR was unlawful because (i) the USEPA sought to impose a Federal Implementation Plan on states before providing adequate guidance for states to develop their own implementation plans and (ii) USEPA improperly calculated states' contributions to other states' attainment problems. On January 24, 2013, the D.C. Circuit Court denied USEPA's petition for *en banc* review. But on June 24, 2013, the U.S. Supreme Court

granted the U.S. Solicitor General's petition to review the decision to vacate CSAPR. Oral arguments and a decision are due in the Supreme Court's next term, which starts in October and ends in June 2014. In the meantime, USEPA has reinstated CAIR, and has begun the process to develop a replacement rule to address interstate ozone and PM pollution. Duke Energy Progress is currently meeting the CAIR emission allowances for NO_x and SO₂ and appears to be in position to meet the more restrictive CAIR allowances for 2015. USEPA held meetings to facilitate discussion and collaboration among USEPA and states on what approach should be used to identify upwind states' emission reduction obligations. In the coming years, the path forward will be defined by the U.S. Supreme Court's decision.

Mercury and Air Toxics Standards (MATS) for EGUs: On February 16, 2012, USEPA promulgated the MATS rule for coal- and oil-fired EGUs. The rule sets emission limits for hazardous air pollutants including mercury, PM, heavy metals (e.g., arsenic, cadmium), and acid gases (SO₂ and hydrochloric acid), but not for the criteria pollutants such as NO_x. It requires continuous monitoring for mercury, acid gases (SO₂), and PM emissions with a compliance date in March 2015. There are 26 smaller coal-fired EGUs in North Carolina with a combined capacity of 3.5 gigawatts that have or will be shut down by 2014. The 20 larger North Carolina coal-fired EGUs with a combined capacity of 10.5 gigawatts are equipped with state-of-the-art NO_x, SO₂, mercury, and PM emission controls in response to the CSA. The larger EGUs are currently well positioned to comply with the MATS emission limits by the compliance date. Similarly, utilities in nearby states will be significantly reducing their NO_x and SO₂ emissions from EGUs by installing controls on their larger units and are planning to retire several of their smaller units in order to meet the requirements of the MATS rule by March 2015.

Ozone NAAQS: USEPA planned to propose revisions to the ozone NAAQS in December 2013; however, the agency recently announced that additional time was needed to develop second drafts of the Health and Welfare Risk and Exposure Assessments. The agency expects to release the supporting analysis and assessment in December 2013. Concerning scheduling, USEPA has not offered dates when it expects to propose and promulgate the revised ozone NAAQS which would set a time schedule for USEPA to designate ozone non attainment areas and for states to submit State Implementation Plans (SIPs). An attainment demonstration SIP identifies 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 new ozone standard.

On July 23, 2013 the U.S. Court of Appeals for the D.C. Circuit issued its opinion in which the Court considered several petitions challenging USEPA's 2008 revisions to the primary and secondary NAAQSs for ozone- with some petitioners alleging the standards were not protective enough and others alleging they were too protective. The Court denied the petitions for review of the 75-parts-per-billion (ppb) *primary* ozone standard thus upholding it- but remanded the *secondary* ozone standard, set at the identical level as the primary one. In June 2013, a group of environmental and public health organizations filed a complaint in a U.S. District Court in California asking the court to order USEPA to take final action on the review of the ozone NAAQS by September 30, 2014.

PM NAAQS: On January 15, 2013, USEPA published a final rule revising the NAAQS for PM. The primary *annual* standard for *fine* particles (*i.e.*, PM with a particle diameter less than 2.5 microns, known as PM_{2.5}) was lowered from 15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 12 $\mu\text{g}/\text{m}^3$. USEPA retained the secondary *annual* standard at 15 $\mu\text{g}/\text{m}^3$ as well as the primary and secondary *24-hour* standards at 35 $\mu\text{g}/\text{m}^3$ for *fine* particles. USEPA also retained the primary and secondary *24-hour* standards for *coarse* particles (*i.e.*, PM with a diameter less than 10 microns, known as PM₁₀) at 150 $\mu\text{g}/\text{m}^3$. Several North Carolina counties are currently designated attainment/maintenance for the previous PM_{2.5} NAAQS, and all counties are meeting the revised PM_{2.5} NAAQS.

NO₂ NAAQS: On January 22, 2010, USEPA strengthened the NO₂ standard by adding a 1-hour NO₂ standard of 100 ppb to the existing unchanged annual standard of 53 ppb. All of North Carolina is designated unclassifiable/attainment. Currently, all monitors in the state are in compliance with the new 1-hour NO₂ standard. However, USEPA does not believe that the current monitoring network is adequate to determine if all areas are attaining the 1-hour standard. Given this belief, on March 7, 2013, USEPA finalized a rule to establish a series of four deadlines that require states to begin operating the near-road component of the NO₂ monitoring network in phases each year between January 2014 and January 2017. Near road monitoring is required in the Charlotte-Concord-Gastonia Metropolitan Statistical Area (MSA) and Raleigh MSA by January 2014 and Greensboro-High Point MSA and Durham-Chapel Hill MSA by January 2017. USEPA has indicated that an additional designation process will occur in 2017 after the new monitoring sites in Charlotte and Raleigh have gathered 3 years of complete data.

S₀₂ NAAQS: USEPA revised the primary S₀₂ standard on June 2, 2010, by setting a 1-hour standard of 75 ppb and revoking the previous annual and daily standards. On July 25, 2013, USEPA issued its first round of nonattainment designations for areas with violating monitors. For North Carolina and other states with no violating monitors, USEPA deferred designations for the entire state pending additional data collection. Recognizing that USEPA failed to designate areas according to the Clean Air Act and its amendments, the North Carolina Attorney General's office filed a Notice of intent to Sue on August 2, 2013. Other states and groups have also filed similar notices.

Meanwhile, USEPA is moving forward with plans to collect data for areas with no designations. The strengthening of the S₀₂ NAAQS has created technical and legal challenges for undesignated areas due to the novelty of the 1-hour standard. USEPA's initial plan was to base attainment status on dispersion modeling results; however, in response to comments from states concerned about this attainment status strategy based only on such modeling, USEPA adopted a strategy based on either modeling or enhanced monitoring. The details of the strategy are still being developed and a proposed rule outlining states' requirements is expected in late 2013. Coal-fired EGUs and certain industries are the largest sources of S₀₂ emissions, and will most likely be affected by the future S₀₂ implementation rule.

Greenhouse Gas Regulations for Power Plants: On June 25, 2013, President Obama unveiled a Climate Action Plan, including a separate memorandum to the USEPA Administrator with a timeline and guidance for moving forward on reducing emissions of greenhouse gases (GHGs) from power plants. For new power plants, the President directed

USEPA to issue a revised proposal by September 20, 2013. (USEPA proposed carbon dioxide emissions standards under section III(b) for new power plants in April 2012.) For modified, reconstructed and existing power plants, the President directed USEPA to issue a proposal by June 1, 2014, issue final standards by June 1, 2015, and to include in the guideline requirements that states submit implementation plans required under section III(d) by no later than June 30, 2016. The memorandum also directs EPA to launch the effort on modified, reconstructed and existing power plants "through direct engagement with States, as they will play a central role in establishing and implementing standards for existing power plants." At this time, it is unclear whether future GHG rule making will impact NOx and SO₂ emissions from coal-fired EGUs.

Judicial Actions

Section 10 of the CSA directed the state to take actions to achieve emissions reductions in NOx and SO₂ from other states and entities contributing to air pollution in North Carolina. On January 20, 2006, the North Carolina Attorney General filed suit alleging that NOx and SO₂ emissions from TVA power plants were inadequately controlled and created a public nuisance. After a series of federal court decisions and reversals, on April 14, 2011, USEPA announced a settlement with TVA to resolve alleged Clean Air Act violations at coal-fired power plants in Alabama, Kentucky and Tennessee contributing to air pollution in North Carolina. The settlement requires TVA (i) to install state-of-the-art pollution controls at nearly all of its 59 coal-fired units between 2011 and 2018, (ii) subject SO₂ 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 SO₂ in 2019 and 52,000 tons of NOx in 2018, and (iii) to pay North Carolina \$11.2 million to fund mitigation projects in North Carolina. Alternatively to the installation of controls, TVA may retire units or repower units to combust biomass. A consent decree implementing the agreement was signed by the U.S. District Court Judge on June 30, 2011 and is now final. The settlement is being successfully implemented, including the provision of funds directly to North Carolina for approved projects.

Legislative Actions

Session Law 2009-390 has the potential to further reduce power plant emissions of NOx and SO₂ from Progress Energy (now part of Duke Energy Progress). 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 NOx, SO₂ and other air pollutants, promoting cleaner air. Duke Energy Progress has formally announced that coal-fired boilers at four of its smaller facilities (Buck in Davidson County, Dan River in Rockingham County, Lee in Wayne County, and Sutton in New Hanover County) were or will be replaced with larger natural gas-fired EGUs between 2011 and 2013. Three other facilities with smaller coal-fired boilers (Cape Fear in Chatham County, Riverbend in Gaston County, and Weatherspoon in Robeson County) were retired recently without any gas-fired EGU replacement.

Recommendation

In summary, North Carolina EGU emissions of SO₂ and NOx have been significantly reduced by 89 and 83 percent, respectively, in response to the CSA requirements in recent years and all of the state's EGUs are reported to be on course to meet the CAIR and MATS rules.

Utilities in nearby states with coal-fired EGUs are planning to significantly reduce their NO_x and SO₂ emissions by installing controls on their larger units and closing their smaller ones in order to meet the USEPA MATS rule by March 2015. Whether these reductions are sufficient for North Carolina to attain a more stringent ozone standard will be determined by DENR following USEPA's promulgation of such a standard, expected in 2015. Given that these and other pending actions are affecting future EGU emissions, the EMC recommends that DENR continue to evaluate the need for reductions beyond CSA from the utilities based on what additional emission reductions are needed to attain and maintain the NAAQS. If additional controls are necessary, DENR will then initiate necessary rule changes, or open the permits for the respective power plant to include the new emissions limitation, or both. The evaluation of the need for additional controls occurs upon USEPA issuing a new NAAQS. The EMC believes that a report every two years is no longer necessary.

Sincerely,



ut on, Chairman

Environmental Management Commission

Attaculnent

BCH/ss

cc: Lacy Presnell
Mitch Gillespie
Sheila Holman
Neil Robbins

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. 143-215.1070, 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.

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2010

SESSION LAW 201 42
HOUSE BILL 1802

SECTION 6. S.L. 2002-4, Section 11, as amended by S.L. 2006-79, reads as rewritten:
"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. 143-215.1070, 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 biennially beginning 1 September 2007.1 September 2011."