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September 1, 2011

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

Subject: Emissions Reductions Beyond the Clean Smokestacks Act

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

Session Law 2002-4 Section 11 (attached) instructs the Environmental Management Commission (EMC) to study the desirability of requiring and the feasibility of obtaining reductions in emissions of oxides of nitrogen (NO_x) and sulfur dioxide (SO₂) beyond those required by the Clean Smokestacks Act (CSA). The EMC is also to report its findings and recommendations biennially to the General Assembly and the Environmental Review Commission beginning Sept. 1, 2011. (Note: Session Law 2010-142 changed the reporting frequency from annual to biennial and the beginning date of the requirements of this Section to Sept. 1, 2011).

A number of federal, judicial and legislative actions have occurred that will affect the NO_x and SO₂ emissions from electric-generating facilities and other industrial sources. A few of the major actions are the promulgation of the Cross-State Air Pollution Rule (CSAPR); the proposed mercury and air toxic standards for electric-generating units; the revised national ambient air quality standards for ozone, SO₂ and nitrogen dioxide (NO₂); the Tennessee Valley Authority (TVA) settlement; and the legislative action that allows an expedited certification process when coal-fired generating units are retired and replaced by natural gas generating units. All of these actions, as well as others, are discussed in more detail below. Given that these and other actions are affecting power plant emissions, the EMC recommends delaying the study of what

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

Federal Actions

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

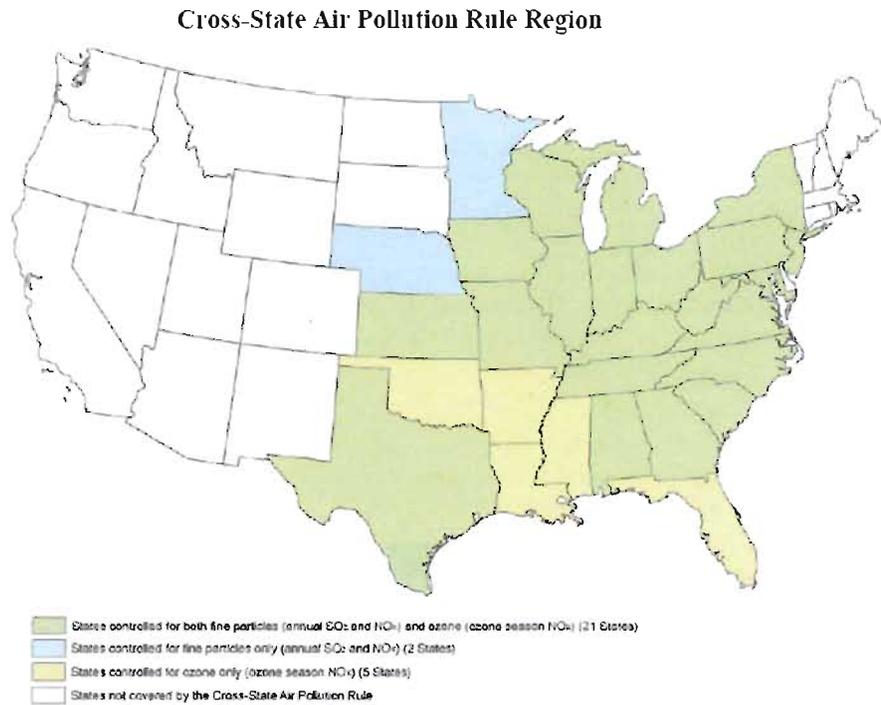


Figure 1. States impacted by the Cross-State Air Pollution Rule. (figure by the USEPA)

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

Mercury and Air Toxics Standards for Electric Generating Units: On May 3, 2011, the USEPA proposed mercury and air toxics standards for electric generating units. As proposed, the rule would limit the emissions of mercury, heavy metals (arsenic, chromium and nickel) and acid gases (hydrogen chloride), as well as set limits for particulate matter and SO₂ emissions for new and existing coal and oil-fired, electric generating sources. The USEPA is currently required to finalize this rule by November 2011.

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

NO₂ Standard: On Jan. 22, 2010, the USEPA revised the NO₂ standard by adding a 1-hour NO₂ standard to the existing annual standard. North Carolina is not expected to have any areas designated nonattainment under the 1-hour NO₂ standard. Currently, all monitors across the country are in compliance with the new 1-hour NO₂ standard. However, the USEPA does not believe that the current monitoring network is adequate to determine if areas are attaining the short term standard and has proposed new monitoring requirements. The USEPA has indicated the entire country will be designated as unclassifiable/attainment in October 2011, and that an additional designation process will occur in 2017 after the new monitoring sites have gathered 3 years of complete data. The NCDAQ will be developing a SIP to show that adequate authority and resources exist to implement the new standard (an "infrastructure SIP"), and a maintenance plan to demonstrate how the state will maintain the NO₂ standard. The infrastructure and maintenance SIPs are due to the USEPA by January 22, 2013.

SO₂ Standard: The USEPA revised the primary SO₂ standard on June 2, 2010, by setting a new 1-hour standard and revoking the previous annual and daily standards.

The USEPA will require a maintenance plan, under Section 110(a) of the Clean Air Act, demonstrating that sources of SO₂ comply with the 1-hour SO₂ standard. The NCDAQ has started reviewing the potential effects of this new standard on emission sources and believes this standard may require additional SO₂ controls or emission limits on some facilities. The NCDAQ will be developing an infrastructure SIP to show that adequate authority and resources exist to implement the new standard, and a maintenance plan to demonstrate how the state will maintain the SO₂ standard. The infrastructure and maintenance SIPs are due to the USEPA by June 2, 2013.

Judicial Actions

Section 10 of the CSA directed the state to take actions to achieve emissions reductions in NO_x and SO₂ from other states and entities contributing to air pollution in North Carolina. On Jan. 20, 2006, the North Carolina Attorney General filed suit alleging that NO_x and SO₂ emissions from TVA coal-fired power plants were inadequately controlled and created a public nuisance. On Jan. 13, 2009, the federal district court in Asheville found that the four TVA coal-fired generating facilities that are within 100 miles of North Carolina were creating a public nuisance in the state. The court ordered that each unit at each of these facilities meet emission limits for NO_x and SO₂ consistent with the installation and continuous operation of modern pollution controls no later than Dec. 2013. The U.S. Court of Appeals for the Fourth Circuit reversed the district court's ruling and North Carolina sought review in the United States Supreme Court.

On April 14, 2011, North Carolina announced a settlement with TVA to resolve alleged Clean Air Act violations at coal-fired power plants in Alabama, Kentucky and Tennessee. The settlement (which also involved USEPA, three other states and three environmental organizations) requires TVA to install state-of-the-art pollution controls at nearly all its 59 coal-fired units at its 11 plants by the end of 2018. Alternatively, TVA may retire units or repower units to combust biomass. The settlement also requires the annual surrender by TVA of any excess NO_x and SO₂ allowances resulting from actions taken under the settlement. A consent decree implementing the agreement was signed by Judge Thomas Varlan of the U.S. District Court for the Eastern District of Tennessee on June 30, 2011 and is now final. Since the decree satisfies North Carolina's need for reductions of emissions of SO₂ and NO_x from TVA's facilities, North Carolina dismissed its petition for the Supreme Court to review the public nuisance case.

In a separate action, the North Carolina Attorney General filed a petition under Section 126 of the Clean Air Act requesting that the USEPA impose NO_x and SO₂ controls on large coal-fired utility boilers in 13 upwind states that impact air quality in North Carolina. As a result of the TVA settlement, North Carolina has dismissed the Section 126 petition as it pertains to TVA's facilities. The State has also dropped its request for additional controls on facilities in the state of Maryland due to intervening actions that have resulted in substantial, permanent reductions of pollutants from Maryland that impact North Carolina.

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

Legislative Actions

Session Law 2009-390 has the potential to further reduce power plant emissions of NO_x and SO₂ from Progress Energy. Session Law 2009-390 amended G.S. § 62-110.1 by allowing an expedited certification process through the Utilities Commission when coal-fired generating units are retired and replaced by natural gas generating units. As compared to coal-fired units, natural gas units produce lower levels of NO_x, SO₂ and other air pollutants, promoting cleaner air. Progress Energy has formally announced that three coal-fired boilers at its Lee Plant in Wayne County will be replaced by gas-fired turbines by 2013 as will three additional coal-fired boilers at its Sutton facility in New Hanover County by 2014. It is anticipated that federal climate change legislation may also result in further reductions of NO_x and SO₂ emissions as utility companies decide how to most economically address future required reductions of carbon dioxide emissions.

Recommendation

Given the recent actions by the state, the federal government, the Eastern Tennessee federal District Court and the U.S. Circuit Court affecting power plant emissions and NO_x and SO₂ regulation, it is recommended that the study of further state action to achieve additional reduction of these air contaminants be presented on Sept. 1, 2013. That reporting date will:

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

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

Sincerely,

A handwritten signature in black ink that reads "Stephen T. Smith". The signature is written in a cursive, slightly slanted style.

Stephen T. Smith, Chairman
Environmental Management Commission

Attachment

STS/lab

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

GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2001

SESSION LAW 2002-4
SENATE BILL 1078

SECTION 11. The Environmental Management Commission shall study the desirability of requiring and the feasibility of obtaining reductions in emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO2) beyond those required by G.S. 143-215.107D, as enacted by Section 1 of this act. The Environmental Management Commission shall consider the availability of emissions reduction technologies, increased cost to consumers of electric power, reliability of electric power supply, actions to reduce emissions of oxides of nitrogen (NOx) and sulfur dioxide (SO2) taken by states and other entities whose emissions negatively impact air quality in North Carolina or whose failure to achieve comparable reductions would place the economy of North Carolina at a competitive disadvantage, and the effects that these reductions would have on public health, the environment, and natural resources, including visibility. In its conduct of this study, the Environmental Management Commission may consult with the Utilities Commission and the Public Staff. The Environmental Management Commission shall report its findings and recommendations to the General Assembly and the Environmental Review Commission annually beginning 1 September 2005.