D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
Promoting and protecting the health of the public and the environment

December 1, 2014

United States Environmental Protection Agency
EPA Docket Center
Mail Code 2882T
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Attention: Docket ID No. EPA-HQ-OAR-2013-0602

Re: Federal Register/Vol. 79, No. 117/Wednesday, June 18, 2014/Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Proposed Rule (Clean Power Plan)

To Whom It May Concern:

Thank you for the opportunity to provide comments on the notice entitled **"**Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units."[1] The South Carolina Department of Health and Environmental Control (Department) is the regulatory agency responsible for promoting and protecting the health of the public and the environment for the State of South Carolina.

The Department would like to commend the Environmental Protection Agency (EPA) on the extraordinary outreach process its staff undertook to gather input from the various stakeholders. Following President Obama's Climate Change remarks made on June 25, 2013, at Georgetown University, the EPA has welcomed interaction with interested organizations in an unprecedented fashion, including a six month comment period. The Department applauds this level of public engagement, especially with such a challenging complex issue involving environmental and energy policy.

The Department provides comments which in part, are reflective of issues resulting from the outreach efforts taken with key stakeholders, as well as technical issues identified by the Department's staff. Utilizing a similar process as the EPA, the Department started to bring stakeholders together in August 2013 to begin fact finding discussions, especially related to the operational aspects of the state's electrical grid system and specific local, state, and national regulatory responsibilities. The stakeholders, (referenced as the "Energy Coalition") who include representatives from the utilities, the electric cooperatives, conservation groups, forestry, environmental justice advocates, state agencies (South Carolina Energy Office and South Carolina Office of Regulatory Staff) and clean energy alliances, have maintained a very robust dialogue in regards to reviewing the EPA's proposed Clean Power Plan.

[1] 79 FR 34830 (June 18, 2014).

The Clean Air Act and Reducing CO_2 Emissions

The Clean Air Act (CAA) continues to deliver significant benefits in protection of public health and the environment. However, the last amendments made to the CAA were 24 years ago, and were the best response to the environmental challenges as it was scientifically understood in 1990. Unfortunately, states have the difficult task of attempting to address today's challenges with an outdated statutory framework which may prevent opportunities for the most efficient cost-effective solutions or "greater reduction of emissions at lower cost." Updating the regulatory toolbox is needed and will provide states a way to do a better job and avoid overwhelming complexity, inefficiency, delay, and litigation. During this proposed rule comment period, numerous questions have arisen as to the legality/uncertainty of using Section 111(d) of the CAA to regulate greenhouse gases (GHG) such as carbon dioxide (CO_2). Previous use of Section 111(d) by the EPA over the past 40 years has been limited to four pollutants (not including CO_2/GHGs) from five source categories.[2] The legal questions are wide ranging, from whether Section 111 can even be used to regulate utility GHGs to the attempt of regulating CO_2 emissions "outside-the-fence." The legal and scientific challenges of regulating greenhouse gases are once again highlighting the need for modernizing the CAA and moving from a single pollutant to an integrated multi-pollutant approach to managing air quality. A more holistic approach will facilitate smarter air quality protection. Until the CAA transitions to a multi-pollutant approach, the regulation of criteria pollutants and air toxics may impair the flexibility and efficiency of GHG reduction measures/programs. In addition, regulating GHG in a "silo" may slow the progress of reductions in criteria pollutants and air toxics.

Steps Already Taken by South Carolina to Reduce CO_2 Emissions

1. New Investment in "Under Construction" Nuclear Generation

A major, proactive step taken by South Carolina has been the investment in new zero carbon emitting nuclear power. Significant incentives for nuclear power were included in the Energy Policy Act of 2005. Together with volatile fossil fuel prices and the possibility of greenhouse gas regulation, these federal incentives helped drive a renewed interest in nuclear energy, as was the case in South Carolina. South Carolina Electric and Gas Company (SCE&G) and Santee Cooper signed a contract to build two new nuclear units at the V.C. Summer Nuclear Station on May 23, 2008.[3] In testimony provided before the South Carolina Public Service Commission (PSC) on March 2009, SCE&G's President stated that adding these two units might allow his company to reduce its reliance on an aging fleet of coal-fired plants. Included in the testimony were statements suggesting these new units could not only allow for the retirement of some of the less efficient plants but also insulate customers from future CO_2 regulation and other environmental compliance costs associated with fossil fuels.[4]

The EPA's Clean Power Plan proposal invited comment on whether new nuclear capacity should be reflected in setting the state goals. The EPA further noted that reflecting the completion of the new under construction units would have a significant impact on the calculated goals for the three states in which these units were located: Tennessee, Georgia and South Carolina. The EPA states in the preamble, "The EPA believes that since the decisions to construct these units were made prior to this proposal, it is reasonable to view the **incremental** cost associated with the

[2] Ibid., p. 34844.
[3] See: http://www.scana.com/en/news-room/archives/2008/scana-sceg-file-form-8k.htm
[4] See: http://dms.psc.sc.gov/pdf/orders/5E3440FB-FC31-8115-18C5057D060BF8EF.pdf, p.25 and p. 56.

CO_2 emission reductions available from completion of these units as zero…"[5] It is important for the EPA to understand that, to date, less than one half of the costs of the new nuclear units in South Carolina has been incurred, so a **significant** cost remains to support the completion of these units. Further, only the financing costs are currently being paid and the principal will be paid off over the estimated 60 year lifetime of the new nuclear units. There is clearly an incremental cost for these new units that will be added to customer bills to pay for the zero carbon emitting units once they come online.

The EPA's proposal specifically adds the under construction nuclear generation into the denominator of the goal equation which has the effect of increasing the stringency of the emission rate goals for states with under construction nuclear units. Although states can use the under construction nuclear units in their compliance demonstration, inclusion of it in setting the state goal removes appropriate credit, or in reality "becomes a wash." In addition, these states with under construction nuclear units continue to have an equivalent amount of renewable energy and energy efficiency capacity included in their goal calculation. As a result of this, and as the EPA correctly noted in the proposal, the goals for Tennessee, Georgia and South Carolina are significantly more stringent. The Department recommends a more appropriate application of under construction nuclear generation in the final rule that will treat this generation in a manner consistent with other states planned or under construction renewable fuel generation. Specifically, the EPA does not add existing or under-construction renewable energy into a state's final goal calculation and allows it to fully count towards compliance.

If the EPA revises its approach for under-construction nuclear generation in the final rule as requested above, it is important for the EPA to recognize that South Carolina will still have to find additional CO_2 emission reductions to achieve its revised goal. Additionally, South Carolina's revised goal would be 991 lbs CO_2/MWh which would bring South Carolina's goal closer to the proposed emission rate required for new sources under Section 111(b). This would be more consistent with previous application of Section 111 which allowed less stringent standards for existing sources.

The President's remarks announcing the Climate Action Plan identified the importance of nuclear power in securing the country's energy future. Recognition was given to Georgia and South Carolina for leading the way in a renaissance of nuclear power. The Climate Action Plan also identified the commitment to develop safe and secure use of nuclear power, including the management of nuclear wastes that are a byproduct of nuclear energy. It is critical that these waste issues be adequately addressed including consideration of impacts to environmental justice communities. As noted in a September 9, 2014 letter,[6] to President Obama from 15 State Governors, including Governor Haley, support for both current, under-construction and future planned nuclear plants must have a viable, long-term solution for nuclear waste disposal. Otherwise, this zero carbon emitting resource cannot be considered a viable tool for reducing GHGs.

2. Existing Nuclear and Hydroelectric Generation

The EPA fails to recognize the significance of all zero carbon emitting generation sources including existing nuclear and hydroelectric generation in the proposed rule. As a result, many

[5] *Federal Register* / Vol. 79, No. 117 / Pages 34870-34871/Wednesday, June 18, 2014/ *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units.*
[6] See: http://governor.alabama.gov/assets/2014/09/RGA-Letter-to-POTUS.pdf

states that have historically invested in zero or low carbon emitting generation sources have to meet goals that are lower than those for states that have not made these investments. In fact, South Carolina, the only state in the U.S. that generated the majority of the electricity used within its borders from nuclear power, has to meet the third largest percent reduction in CO_2 emissions (51%). Because the Best System of Emissions Reduction (BSER) approach used by the EPA is intended to look outside-the-fence, it should allow states to consider all generation in demonstrating compliance.

3. Early Shutdown of Older Coal Units

South Carolina utilities have made significant changes to their generating fleet to comply with other regulatory requirements. These changes have reduced emissions and have allowed utilities to continue to diversify their generation mixes. In preparation of expected requirements to reduce criteria and air toxic pollutants, as well as anticipated CO_2 regulations, all of the older, less efficient coal units (fourteen units in all) are to be shut down or switched to natural gas and operated as backup units by 2018. Almost all of these units' physical changes were completed before 2012. Further, all remaining units (thirteen newer and more efficient ones) have complete suites of emission controls installed, reducing criteria and air toxic emissions to meet existing and expected regulations. These changes have ensured that there is far less impact to their neighbors, including many nearby low income or minority communities. These changes will help South Carolina in addressing environmental justice concerns which have been expressed regarding the proposed Clean Power Plan.

4. Solar Legislation

At a time when some states are pushing back on renewable energy, South Carolina, through a spirit of stakeholder collaboration and compromise, has recognized the economic and environmental benefits of clean energy and is moving forward. On June 2, 2014, Governor Haley signed a landmark bill, the Distributed Energy Resource Program Act, designed to lessen restrictions on solar energy. As a result of this new Act, solar leasing will be allowed statewide through investor-owned utilities, including the electric cooperatives and Santee Cooper. The removal of barriers and the anticipated growth in solar energy supports South Carolina's commitment to renewable energy and will result in further reduction of South Carolina's CO_2 emissions.

5. Other Legislative Actions

In 1997, the South Carolina legislature began the process to adopt procedures to encourage both private and public utilities to invest in cost effective energy efficiency and energy conservation programs. In May 2007, the Legislature passed the Base Load Review Act, which requires oversight by the Office of Regulatory Staff (ORS) and the PSC of requests for customer rate increases utilized to support the financing of power infrastructure. Without this Act, the construction of two nuclear units at the SCE&G V.C. Summer site would have been unlikely. In 2009, the South Carolina Energy Efficiency Act was revised to promote energy planning that included nuclear and non-carbon emitting sources.[7]

Although South Carolina does not have a renewable portfolio standard (RPS) in place, and is not currently a member of a GHG trading program, the state has taken just as many other significant steps resulting in a measurable reduction of CO_2 emissions. South Carolina is ranked high among states for clean energy use (5th) and Leadership in Energy and Environmental Design (LEED)

[7] See: Senate Bill 0232 (Ratified #0045, Act #0019), at http://www.scstatehouse.gov/billsearch.php?billnumbers=232&session=118&summary=B

for building space per capita (top 10).[8] The state legislature updated, by Act 143, the South Carolina Energy Standard to the 2009 International Energy Conservation Code (IECC) for all commercial and residential building with an effective date of January 1, 2013.[9] South Carolina also ranks highly among states regarding its use of nuclear power generation as a component of a diverse fuel portfolio.

In 2010, the State Regulation of Public Utilities Review Committee (PURC) created an Energy Advisory Council (EAC) to identify critical energy issues in South Carolina. The EAC was charged with researching opportunities and barriers for expanding renewable energy and energy efficiency in South Carolina while maintaining a modern, affordable and reliable grid and providing recommendations to the PURC for consideration in reviewing and developing state energy policy. In January 2014, the EAC released a report to educate policymakers on the state's capacity to develop, invest, and expand on energy efficiency and renewable energy in South Carolina.[10] Additionally, during this past legislative session a Clean Energy Industry Manufacturing Market Development Commission was established under the helms of the Department of Commerce to assist with the development of clean energy technology, materials, and products manufactured in South Carolina.

Accuracy of Data and Key EPA Assumptions

Assumptions by the EPA in its BSER building blocks have been major topics of discussion within the Energy Coalition. The Department anticipates other stakeholder members will provide the EPA with the technical details related to the feasibility of the building blocks. However, the Department would like to point out two major issues related to heat rate and natural gas re-dispatch. It is uncertain if a six percent heat rate improvement (fleet-wide average) could even be achieved[11] and maintained at a coal-fired unit in South Carolina. If this level of improvement was achievable, it likely would have already been done for economic reasons. Several utility stakeholders have also stated that without significant physical plant modification it would be impossible to achieve this improved rate. In relation to increasing the natural gas re-dispatch rate to 70%, industry stakeholders have raised doubt of achieving this as well due to many issues, including the rate limiting factor of current gas availability in the state. Again, the Department anticipates that these specific technical issues will be addressed in separate comments from South Carolina utilities to the Docket.

Energy Coalition stakeholders, as well as Department staff, reviewed the data for South Carolina and found the following **errors** in the EPA's data and key assumptions:

1. Santee Cooper Power Utility's Jefferies Plant, which is closed, was included in the EPA computations for South Carolina. The final rule should reflect this change in the data.
2. For Building Block 2, the EPA used the boiler nameplate data, which is not the actual capacity that these units can achieve. The actual capacity for a natural gas combined cycle (NGCC) unit can be affected by ambient temperature, humidity and availability of fuel. The Department suggests that the EPA consider defining a unit's CO_2 emissions based on the appropriate actual generation. Potential alternate sources for this data are the Institute of Electrical and Electronics Engineers, Inc. (IEEE) standard term "Dependable

[8] South Carolina Chamber of Commerce, Fact Sheet-Energy. April 6, 2012.
[9] South Carolina Budget and Control Board Certification Letter, July 5, 2013.
[10] See: http://www.scstatehouse.gov/committeeinfo/EnergyAdvisoryCouncil/EAC%20Report%201-14-14.pdf
[11] See: Retrofits may increase efficiency by 2-3 percentage points. International Energy Agency, Upgrading and efficiency improvement in coal-fired power plants, No. 13/9, August 2013, http://www.iea-coal.org.uk/documents/83185/8784/Upgrading-and-efficiency-improvement-in-coal-firedpower-plants,-CCC/221.

Capacity" number for a unit,[12] or US Energy Information Administration 860 data.[13] These data are based on figures a unit can actually deliver in terms of generation during a certain time of year, which accounts for variances in temperature, air pressure, etc. The Department also suggests the EPA consider the use of the National Emissions Inventory (NEI) data for more accurate CO_2 emissions for units subject to this proposed rule. Data accuracy is a concern for the Department and is the foundation of developing an achievable and approvable state compliance plan.

3. Building Block 3 as proposed sets an inaccurate renewable portfolio standard (RPS) target.
   A recently published document by The North American Electric Reliability Corporation (NERC)[14] identified an inaccuracy pertaining to the Southeast region's RPS target. The EPA should look to the State of North Carolina to better understand their existing RPS. Further, The Department agrees that the EPA's assignment of this RPS target, based on a single state's RPS, is not the best mechanism for setting a target for multiple states grouped into a region.
4. Energy Coalition members have indicated that the EPA's computation involves many long-term assumptions made by the EPA. The ability to achieve the state reduction goals can be influenced by many outside factors, including the status of the national and state economy and even weather. While the interim phase time period of ten years may provide some flexibility, the load growth assumptions made by the EPA are very critical. Utility IRPs provide some long-term projections. However, South Carolina stakeholders have indicated that for critical issues such as load growth projections may be reliably calculated for only 2-3 years into the future, even when taking into account many of the same assumptions the EPA used.

Stringency of Goals

For many states, including South Carolina, the goals under the proposed Section 111(d) rule are more stringent than those in the Section 111(b) rule for new sources. South Carolina's goal in the proposed rule is 772 lbs CO_2/MWh and the EPA has proposed an emissions rate of 1,000 lbs CO_2/MWh for new large NGCC units in its new source review standards (NSPS) for fossil fuel-fired electric generating units under Section 111(b).[15] The Department believes that the intent of Section 111 of the CAA is to allow existing sources to achieve less stringent standards than new sources. In addition, because of this discrepancy, the replacement of the South Carolina's current generating capacity with new fossil fueled capacity would result in an allowance for higher CO_2 emissions.

Baseline Year

Determining the baseline or starting point for application of the BSER building blocks and calculation is significant since this affects state emission rates and reduction goals. Using a single year as this starting point can result in emissions and generation that are not typical or representative of a state's emissions and generation. In other rules, such as the Clean Air Interstate Rule and the Cross-State Air Pollution Rule, the EPA has considered a range of years and has used an average instead of a single year. The Department recommends that to represent a

---

[12] See Capacity Terms, *IEEE Standard Definitions for Use in Reporting Electric Generating Unit Reliability, Availability and Productivity, March 15, 2007.*

[13] See: http://www.eia.gov/electricity/data/eia860/.

[14] See: *Potential Reliability Impacts of EPA's Proposed Clean Power Plan, Initial Reliability Review, November 2014*. North American Electric Reliability Corporation.

[15] 79 Fed. Reg. 1430 (January 8, 2014)

true starting point for the goal calculation, the EPA should use the average of the emissions and generation from the three year period of 2010 – 2012.

Biomass

In reference to Building Block 3 and renewable energy, the Department requests that the EPA make a final determination on the status of biogenic CO_2 emissions from bioenergy sources and other biogenic stationary sources. The final rule (FR 76 43490)[16] published on July 20, 2011, deferred for a period of three years the application of the Prevention of Significant Deterioration (PSD) and Title V permitting requirements for these sources. South Carolina has approximately 510 MW from existing generation capacity and a total technical potential for woody biomass of approximately 960 MW. As stated in this rule's preamble, the EPA understands the use of certain types of biomass may be part of the nation's strategy to reduce dependence on foreign sources of fossil fuels. In the proposed rule, the EPA recognizes the use of biomass-derived fuels may be considered in state plans. To assist states, the EPA should expedite its biogenic CO_2 accounting framework to assess the potential impact of the use of biomass fuels in reaching the final reduction goal. Once this issue is determined, the Department recommends that the EPA re-calculate the renewable energy numbers used for each state in the goal computation process.

Rate to Mass Conversion

Many reviewers of the proposed rule have asked how states could convert an emissions rate to a mass based rate as an alternative goal. Although the EPA recently released a notice of data availability (NODA) entitled *Additional Information Regarding The Translation of Emissions Rate Based CO_2 Goals To Mass Based Equivalents* on November 13, 2014, the Department has not had adequate time to determine the usefulness of this information prior to the comment deadline. However, from the Department's preliminary review, the proposed mass-based targets for South Carolina (two were provided) appear to be inconsistent with the very calculation that was used by EPA in setting the rate-base goal. The EPA should continue evaluating this approach since a mass based alternative compliance scenario may be very useful to states and possible regional compacts.

Federal Implementation Plan

There may be states that significantly miss the compliance plan deadline or are not able to gain regulatory authority to implement this rule. In these circumstances, the EPA needs to provide assistance to these states. Additionally, states may submit compliance plans that are ultimately not approved by the EPA. In these cases, a federal plan is inevitable. In lieu of a state compliance plan, it is crucial that EPA indicate the specifics of a federal plan in the final rule.

Building Blocks 1 & 2, and Source Permitting

The EPA needs to further evaluate the state specific targets for Building Blocks 1 and 2, the coal heat rate improvement, and the re-dispatch of NGCC units. Energy Coalition members have evaluated the Sargent Lundy report, along with their current work practices and have indicated that a heat rate improvement greater than 1-2% can not be achieved. To achieve heat rate improvements beyond this would require the installation of new equipment at a facility to increase efficiency. Most unit modifications to meet the proposals in Building Blocks 1 and 2 would trigger new source review (NSR), specifically related to efficiency improvement measures

[16] See: *Federal Register*/Vol. 76, No. 139/pages 43490-43508/Wednesday, July 20, 2011/*Deferral for CO2 Emissions From Bioenergy and Other Biogenic Sources Under the Prevention of Significant Deterioration (PSD) and Title V Programs.*

and operational limitations placed in previously issued permits. Reduced loading under Building Block 1 as proposed does not account for reduced load. The application of Building Block 2 and the likely impact of Building Blocks 3 and 4 will result in reduced utilization of coal units. Because these plants are designed to operate most efficiently at close to full load, reducing the load will result in reduced efficiency. This reduced efficiency corresponds to a higher heat rate which is not consistent with the improvements required by Building Block 1. Because of this, the EPA should consider the impact of reduced load on achieving a more efficient heat rate and adjust Building Block 1 to account for this. Also, much of the pollution control equipment (e.g., selective catalytic reduction (SCR)) needed to meet emission limits for other pollutants cannot be operated below a certain load. South Carolina does not support taking pollution control equipment offline to allow units to operate at reduced load since this would result in increasing other emissions (e.g., criteria air pollutants). These two examples point to the potentially conflicting building blocks used to calculate the state final reduction goals. The results of which will likely cause states to gravitate towards the other building blocks in the BSER to achieve the goals outlined in the EPA's proposed regulation. This negates some of the potential flexibility offered to states in the EPA proposal to reduce CO_2 emissions.

Environmental Justice

The Department values public participation and seeks out opportunities to ensure that the needs of environmental justice (EJ) communities are addressed. In fact, the EPA has repeatedly recognized South Carolina as a leader in using collaborative problem-solving approaches for EJ issues. The Energy Coalition, which includes an EJ advocate, has discussed the unique issues that affect South Carolina's EJ communities presented by the proposed Clean Power Plan.

South Carolinians are 50 percent more likely to live below the poverty line.[17] South Carolina ranks 7th in cooling degree days per year; in some months, many state residents can spend 60-80 percent of income on energy.[18] Most of the proposed "outside the fence" measures in Building Block 3 will require participation of end-users (i.e., customers) to voluntarily participate in utility-offered programs. South Carolina stakeholders have expressed concern that elective participation in energy efficient options often requires consumers to pay additional costs and have a thorough understanding of the mechanics of the programs. The results of small-scale energy efficiency programs already in place in South Carolina have demonstrated that citizens need guidance and assistance throughout the entire process in order to reap the cost savings and other benefits promised by such programs. While the Department and the Energy Coalition have already begun this important work, more time and resources are needed to help develop better outreach methods to increase participation among the state's families, including those with limited discretionary money. The Department recommends that states be given more time and resources to provide more outreach in order to increase participation among the state's families, including and especially those within EJ communities, who have the potential to be more financially impacted.

Another EJ issue has been identified concerning the option of a regional trading program. Should a regional approach become a consideration for South Carolina, some EJ communities are concerned that dirtier plants, such as older, coal-fired units, may "trade" their way out of (i.e., purchase credits to avoid) installing new controls, which could result in local areas of higher

[17] U.S. Census Data, 2011.
[18] Central Electric Power Cooperative, Inc., "Appliance Saturation Survey, 2008."

pollution levels in poorer communities.[19] The Department recommends that the EPA utilize the staff and resources of its own Office of Environmental Justice to respond to the concerns that result from regional trading on the national level, including the additional impacts of increased emissions of co-pollutants, prior to publishing its final regulation.

During several of the webinars and conference calls discussing the proposed Clean Power Plan, many critics expressed concern that an EJ Analysis had not be completed as part of this rule's development. During EPA's Clean Power Plan workshop for EJ Communities held on October 30, 2014, an extensive 360 page EJ Analysis that was conducted for the development of the Definition of Solid Waste rule[20] was described as the "gold star" standard for ensuring that a proposed rule does not disproportionately impact low-income and minority communities. The Department recommends that the EPA conduct an EJ Analysis of the same standard on this rule prior to its promulgation. While the Department contends that all rulemaking should involve an analysis of the impacts on EJ communities, this requirement should not be mandated on the states, which do not have the appropriate staff and financial resources to conduct such analyses. Instead, the Department recommends that the EPA should evaluate the impacts a proposed rule would have on low-income and minority communities as a standard element of the rulemaking process and should work closely with the states to thoroughly and meaningfully address EJ issues during development of a rule.

The proposed Clean Power Plan states, "… The EPA has concluded that it is not practicable to determine whether there would be disproportionately high and adverse human health or environmental effects on minority, low income, or indigenous populations from this proposed rule."[21] The Department believes that the EPA should serve as the leader in determining if there will be any human health or environmental impacts caused by implementing this rule, especially within EJ communities. The Department recommends that the EPA work with all applicable federal public health partners to thoroughly consider all pollutants and their environmental and health impacts before a rule is proposed.

Aggressive Timeline

1. Statutory Authority and Legislative Approval

The Department does not believe it currently has the authority to implement this rule as proposed. For example, the Department does not have authority to dictate which units or fuels are dispatched by the utility companies. This authority resides with the PSC and ORS and is based on economic dispatch. The Department does not have authority to manage or regulate renewable energy programs or demand-side efficiency programs. The regulatory authority that exists for these programs resides with the PSC, ORS and the State Energy Office. Based on the Department's discussions with these agencies, the Department believes that legislation will be needed to enhance the regulatory authority needed to accommodate enforceable components for

[19] See: Clean Power, Clean Air, Cleaner Communities, "Suggested Environmental Justice Talking Points on the Clean Power Plan at: http://www.weact.org/ejcleanair/downloads/resources/how%20to%20testify/Suggested%20EJ%20Talking%20Points%20for%20Clean%20Power%20Plan.pdf

[20] Draft Environmental Justice Methodology for the Definition of Solid Waste Final Rule: Proposed Methodology for Assessing Potential Disproportionate Impacts From the Hazardous Secondary Material Recycling Regulations On Minority, Low-Income, and Tribal Populations, January 13, 2009 (http://www.epa.gov/osw/hazard/dsw/ej-meth.pdf).

[21] See: 79 FR 34830, Section J (June 18, 2014).

energy efficiency and demand-side management in a State Plan. Because existing authority does not exist, significant legislative involvement would be required. The pace for legislative approval[22] of a new or revised statute or regulation is beyond the control of the Department and could take an additional two to three years to be successful. This will almost certainly cause delays for South Carolina in meeting the EPA's ambitious timeline.

The multi-state approach, as a compliance option identified in the EPA's preamble, would certainly require state legislative approval. A multi-state approach is described by the EPA as a measurable tool for two or more states meeting performance goals. The Department has limited experience with the type of planning that would be necessary to develop a multi-state approach to CO_2 emission reductions. This type of state planning would infer a singular plan covering the participating states, who would be reliant upon one another to enforce a previously agreed upon model rule, enacted through each state's regulatory process. Enforcement of a multi-state plan would be extremely challenging, if not impossible, to achieve.

The EPA discussed the Regional Greenhouse Gas Initiative (RGGI) as an example of a multi-state CO_2 emissions reduction approach in its preamble. The Department's staff has read information about RGGI and understands this concept was first discussed among several Northeastern states in 2003. A Memorandum of Understanding (MOU) was the initial action step taken by seven states in 2005, with a couple of more states signing the MOU in 2007. A model rule was then established for each state to develop for their respective states statutes. By January 1, 2009, six years after this concept was discussed, the first compliance period for this trading program began. The reality of the matter is that the EPA's overall timeframe would severely handicap this approach for states to even consider as a potential path forward due to the planning and administrative procedures required to be followed for legislative approval.

2. Interim Goal

The Department is concerned about the use of interim state goals. The interim goals, referred to as "The Cliff," are unworkable in the limited amount of time between the release of the final rule and the start of the interim averaging period. The time needed to have South Carolina's state plan approved at the Legislature (proceeding before federal approval) and to implement the components will not allow the Department enough time to meet the aggressive interim goal. A better approach would be to develop a glidepath transition process where each state will monitor expected progress until the final goal deadline.

As noted by commenters referenced in the EPA's recently published NODA, much of the expected reductions for CO_2 emissions would have to occur by 2020. South Carolina's concern is that this may not provide sufficient time for adequate implementation of the Distributed Energy Resource Program Act passed into law this year and that full operation of the under construction nuclear units at the V.C. Summer Plant may not occur before 2020. South Carolina's interim reduction goal is 840 lbs.CO_2/MWh, to be reached in the period of 2020 - 2029. This is approximately a 47 percent reduction below the 2012 benchmark (1587 lbs.CO_2/MWh). Currently, 33 percent of South Carolina's electricity generation is from coal.[23] With questions concerning the state's renewable energy hurdles outlined in this document, and the displacement of capacity from coal fired units by NGCC, there is concern that some existing coal plants could become uneconomically viable and lead to premature closures. This could impact both the

[22] See the Administrative Procedures Act. S.C. Code of Laws Section 1-23-10, *et seq.*
[23] See: DEDI Energy Database, 2012 (EIA) at http://www.sseb.org/reference/.

baseload generation and the reliability of South Carolina's grid. Another possible impact of the interim goal could be a decrease in the state's flexibility of measures to meet the final goal, perhaps leading to higher costs to consumers for electricity.
The Department recommends the EPA eliminate the interim goal, and allow states to determine the best transition phase based upon the development of its own State Plan of action. Energy Coalition members and other stakeholders have discussed the energy planning processes already in place as a foundation to develop a plan to meet the state goal. States could incorporate aspects of these processes, for example the Integrated Resource Plans (IRPs), in the progress reports that the EPA seeks in its proposed rule. Each state could monitor glidepath progress, address any delays or deficiencies encountered, and provide clear, timely progress reports to the public and the EPA. Enabling states the ability to tailor their own glide-path would lead to a better and more economically beneficial plan based on each state's needs and potential resources.

State Agency Resource Needs
South Carolina stakeholders have already expended a large amount of resources to date reviewing and understanding this complex rule. This expenditure of staff time has primarily involved understanding the goal computation, the implications for the calculation, the interaction of the building blocks (in particular the regulatory aspects), and the science behind the proposal. The Department recognizes that a larger expenditure of resources will be required once the rule is finalized, a plan is developed, and implementation begins. The Department has many concerns related to resources including: 1) adequate staff to implement this rule; 2) the Department's limited knowledge of the integrated nature of the power grid; 3) the resources needed to effectively coordinate among other state regulatory agencies to develop new state legislation; 4) the staff and tools to conduct future modeling to ensure compliance and determine consumer rate costs; and 5) resources to analyze and address EJ issues. States have been given no indication that the EPA will assist or provide states with the necessary resources to address these issues.

The EPA should provide leadership in securing resources that would be available to the states to ensure adequate compliance measures are in place at least by the time this rule is finalized. If additional resources are secured to support the implementation of this proposed rule, existing funding should not be reduced for implementing other mandatory core programs. In discussions with utility stakeholders pertaining to anticipated modeling needs, millions of dollars are currently being spent for their respective model forecasting efforts, which includes costs for hardware, software, and staffing. Even contracting with modeling consultants for this service could require hundreds of thousands of dollars in contractual fees that states do not currently have.

Conclusion
South Carolina has made great strides in diversifying the state's energy generation mix which ultimately produced significant reductions in emissions of CO_2 and criteria pollutants and provided great air quality benefit to communities in South Carolina and state's neighbors. Much of this success has been achieved in a cost-effective way by balancing energy and environmental policy; and by proactive voluntary steps rather than mandates, such as nonattainment designations and renewable portfolio standards. South Carolina reduced carbon pollution from its fossil fueled units by approximately 31% from 2005 to 2013. As demanded by every state across the country, the EPA should recognize and give credit to states which undertook early initiatives to reduce their carbon intensity.

Compared to previous CAA regulations, the EPA's Clean Power Plan proposed rule is, by far, one of the most unique complex rules that states have yet to face. While there has been limited past applications of Section 111(d) to existing sources of air emissions, this will be the first time it has been used to regulate a "global" pollutant such as CO_2. This proposal is also a "first" in the sense that this rule integrates environmental and energy policy and will require a state compliance plan like "no other." Although the Department recognizes its responsibility for submitting a compliance plan, the development and successful implementation of South Carolina's Plan will ultimately require consensus of the state legislature, key energy stakeholders, the South Carolina Energy Office and the ORS. The ORS is the state agency charged with representing the public interest in utility regulation and will be submitting separate comments. The Department urges the EPA to strongly consider their comments which focus on areas in the proposal which may impact the affordability and reliability of electricity to South Carolina consumers.

The Energy Coalition, led by the Department and the ORS is dedicated to continuing dialogue and consensus building efforts to advance additional opportunities in renewable energy and energy efficiency in a cost effective manner. Regardless of whether the final rule withstands judicial review, additional voluntary efforts in energy efficiency and renewable energy is a key element of South Carolina's Ozone/PM Advance program and will be necessary for South Carolina to remain ahead and in compliance with future more stringent criteria pollutant standards. Beginning in January, South Carolina's Energy Coalition will begin work on maximizing and prioritizing energy efficiency efforts in EJ communities.

In closing, while the proposal has attempted to offer flexibility to states in determining their compliance path in an affordable way, the Department urges the EPA to fully understand the unintended consequences of this proposal and consider these comments along with those submitted by South Carolina's Energy Coalition stakeholders. It is critical in finalizing this rule that the EPA recognize South Carolina's unique energy mix, along with the unique challenges to South Carolina consumers, such as income/poverty levels and inefficient housing stock. South Carolina must be allowed to determine a balanced energy and environmental policy that is "right for South Carolina" and in a manner that ensures affordable reliable electricity for South Carolina consumers.

Thank you again for the opportunity to comment on the Clean Power Plan proposal. If you have questions or need additional information, please contact Robert Brown of my staff by telephone at (803) 898-4105 or e-mail at brownrj@dhec.sc.gov.

Respectfully,

Myra C. Reece, Chief
Bureau of Air Quality

ec: Beverly Banister, U.S. EPA