

Testimony of Lonnie N. Carter
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House Energy and Commerce Committee
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Chairman Whitfield, Ranking Member Rush, and members of the Subcommittee, my name is Lonnie Carter and I am the President and Chief Executive Officer of Santee Cooper, the South Carolina Public Service Authority. I have been in the electric utility business for 28 years and while I am currently serving as Chairman of the Board of Directors for the American Public Power Association, my comments and presence here today solely represent that of Santee Cooper. Thank you for the opportunity to address the subcommittee on the important issues surrounding regulation of greenhouse gases.

I. Our History and Mission Statement

Since our founding in 1934, Santee Cooper has been a resource for improving the health, welfare and material success of the residents of South Carolina. Now 75 years later, Santee Cooper is still guided by our mission of improving the quality of life for the people of South Carolina by providing low-cost and reliable power and water to our customers while being a steward of the environment.

As South Carolina's state-owned electric and water utility, Santee Cooper is the state's largest power producer, supplying electricity to more than 163,000 retail customers in Berkeley, Georgetown, and Horry counties, as well as to 31 large industrial facilities, the cities of Bamberg and Georgetown, and the Charleston Air Force Base. Santee Cooper also generates the power distributed by the state's 20 electric cooperatives to more than 700,000 customers in all 46 counties. Approximately 2 million South Carolinians receive their power directly or indirectly

from Santee Cooper. The utility also provides water to 137,000 consumers in Berkeley and Dorchester counties, and the town of Santee.

These are not just numbers on a sheet of paper to Santee Cooper. Every number is a customer and every customer is a person with a family, a small business, or a large industry that employs hundreds of people and so on. As a utility executive, it is my job to make sure that every day, every hour and every minute there is electricity going to our customers so they can be productive members of our community. Our industry is at a crossroads. For the first time in our company's history, I can tell you that, if the Federal government continues on its present regulatory course, our founding promise to our customers may be at risk. That is why your consideration of the Energy Tax Prevention Act of 2011 is so important to Santee Cooper. As a public power entity, we have no stockholders to bear the cost of regulations. Every cost imposed on a public power utility is imposed directly onto our customer...from the families we serve, to the business on main street and to the industries that provide jobs in our communities that must compete in a worldwide marketplace.

II. Environmental Stewardship: A Commitment to Our Community

In 1990, the Santee Cooper Board of Directors passed a resolution that formalized what we had already been practicing for years. It stated that protection and improvement of our environment are equal in importance to providing affordable energy. For Santee Cooper, environmental stewardship is a core part of our founding principles and not simply an issue of meeting regulatory requirements. Our company plays a significant role as a neighbor and an employer in our community and a key part of that is balancing the cost to the customer with ensuring a clean environment for the future.

a. State of the Art Pollution Reduction

As an industry, the U.S. electric power sector has reduced air emissions substantially under existing programs. The industry cut sulfur dioxide (SO₂) and nitrogen oxides (NO_X) emissions by 57 percent between 1980 and 2008. The power sector also has cut emissions of mercury by about 40 percent in the same time period through efforts to reduce other pollutants. To make these totals more impressive, electricity generated by coal increased 70 percent during this time period.

Environmental impacts continue to decline thanks to emissions-reducing programs enacted by electric companies. At Santee Cooper, we started out with electrostatic precipitators (ESPs) that removed the fine particulates. Then, we became an industry leader in the use of SO₂ scrubbers, becoming the longest-running operator of the technology and owner of eight out of the twelve scrubbers in our state. Santee Cooper has been a leader in installing environmental control technology and, in fact, already reduces NO_x by over 90 percent and SO₂ by as much as 98 percent through SCRs and scrubbing at our largest generation stations.

These facts demonstrate the great successes Santee Cooper has achieved in controlling the emissions of non-greenhouse gases. While we continue to explore alternative ways of generating electricity, according to the Energy Information Administration (EIA), annual electricity demand is expected to increase 30 percent by 2035. We are confident that we can meet this need while maintaining our environmental commitment, but appropriate regulation and policy will be a critical ingredient for success.

b. Clean Energy Generation

There is no doubt that Santee Cooper is committed to being an industry leader in clean power generation. Currently, we are South Carolina's renewable energy leader with 197 megawatts of renewable generation already online or under contract to come online in the next couple of years. Our electricity includes power generated from landfill biogas, forest-waste biomass, solar and wind, and now we can add agricultural biogas to that lineup. These investments were not made under a renewable energy mandate from our state or the federal government. We made them because they were solid business decisions for customers and would help in leading the way forward with the latest clean technology developments.

An integral part of our clean energy future is our investment in two new nuclear power plants. Offering safe and reliable base-load power, nuclear power generates no GHG emissions. Recognizing this, Santee Cooper, already generating 10 percent of our electricity from nuclear power, is on track to be one of the first utilities, in partnership with SCANA, to add two new 1,117 MW nuclear units to our existing plant. These two units, coming online in 2016 and 2019, bring with it \$10 billion in investment to South Carolina and thousands of construction and permanent jobs. While the future of nuclear power still faces some hurdles, the incentives offered in the Energy Policy Act of 2005 allow new nuclear plants to serve as clean and reliable sources of base-load electricity in South Carolina for decades to come.

c. Energy Efficiency

Recognizing that environmental stewardship involves a partnership with our customers, in February 2009, our board of directors charted a new course by approving a \$113-million energy efficiency blueprint to significantly reduce our customers' energy consumption. Over the next several months our staff began framing the program, which we named Reduce the Use South

Carolina. Through a series of rebates and initiatives, Santee Cooper is financially motivating customers to reduce their use of electricity; by 2020, we estimate our customers can save 209 million kilowatt hours a year through these programs. As a non-profit public power entity, it is in everyone's best interest to have customers use less of our product, and we are financially incentivizing customers to do so.

In September 2009, Santee Cooper launched Reduce the Use with a Refrigerator Rebate Program, offering customers a rebate for purchasing ENERGY STAR® refrigerators and an additional rebate for letting us pick up and recycle their old refrigerators. We doubled our goal for the first phase and actively promoted the rebates and recycling components throughout 2010. We launched Smart Energy Homes in November 2010; it includes rebates to homeowners for improving the efficiency of their homes, and rebates to builders for building new homes to certain efficiency standards, including a larger rebate for meeting ENERGY STAR® standards. Conservation means more than just encouraging our customers to reduce the use. We have to practice what we preach, and in January 2009, Santee Cooper formally launched a commuter benefits program that offers incentives to employees who commute via mass transit or carpool. The program, called iRide, already has participation from about 25 percent of our employee base in its first year, and express bus riders and carpoolers have avoided about 800,000 pounds of carbon dioxide emissions.

III. Consequences of Cumulative Regulatory Impacts

In his Executive Order issued on January 18, 2011, President Obama insisted that Executive Agencies "consider costs and how best to reduce burdens for American businesses and consumers." Nowhere is this instruction more needed than in the realm of Federal environmental

regulations already enacted or currently contemplated by the U.S. Environmental Protection Agency (EPA). To that end, it is vital that this Committee understand what we in the utility sector are facing as we strive to serve our customers and businesses with reliable and affordable electricity. We are where the rubber meets the road, we as utility leaders must balance the implementation of environmental regulations with cost concerns for our customers.

In the past year EPA has been working on many rulemakings that affect the electric utility sector. These regulations address conventional air pollutants (NO_x, SO₂, particulate matter, ozone), mercury and other hazardous air pollutants (HAPs), coal combustion residuals, use of cooling water [316(b)] and GHGs. To date, EPA has failed to provide a cumulative impact analysis of these changes or any cost or environmental benefit analysis of GHG regulation.

Whether intended or not, these proposed changes will competitively disadvantage coal as an energy resource in a manner that will lead to greater and faster retirements of coal plants. In the case of GHG regulation, this will have negative implications for all fossil fuel use including natural gas. The potential cumulative impacts of these regulatory changes include premature shutdown of significant amounts of the existing U.S. coal fleet; increases in electricity prices; risks to electric reliability; job losses; and harm to the U.S. economy.

New Greenhouse Gas Regulations

As I have said on numerous occasions, policy to limit GHG emissions should be set by Congress and today is an opportunity to communicate the impact EPA's proposed regulations would have on our customers. But, while the Congress and the public remain engaged in thoughtful and complex debates about how best to address the challenges posed by a changing climate, EPA continues on a path toward regulating GHG emissions from all sectors of our economy and our society.

On June 3, 2010, EPA finalized the "Tailoring Rule" that outlines the applicability criteria and sets the dates on which newly constructed stationary sources and modifications of stationary sources will be subject to the Clean Air Act (CAA) pre-construction permitting requirement for GHG emissions. What this means is that any effort to (1) build a new coal- or gas-fired power plant or other industrial facility or (2) make a modification of an existing plant that will increase CO2 emissions by more than 75,000 tons per year will need to obtain a "prevention of significant deterioration" (PSD) permit. If a proposed project will need such a permit, it is illegal to begin construction on the project until such a permit has been issued.

Questions about "best available control technology or "BACT" for CO2 have been (and will continue to be) very controversial. There is a strong argument, based on past EPA practice, that BACT for controlling CO2 emissions from a coal-fired boiler is simply the use of a high efficiency boiler. Not surprisingly, however, there are some that have generally taken the position that BACT for CO2 is the use of natural gas rather than coal. Others argue that carbon capture and storage (CCS) should be required as BACT – at least for coal-fired power plants. Under the CAA, BACT must be determined on a case-by-case basis in each individual permit, and the permitting authority (in most cases, the state environmental agency) has discretion to consider cost and other factors in determining BACT in each case.

With state agencies wrestling with the question of how to handle this new regulatory burden, EPA guidance on BACT was eagerly anticipated. EPA promised timely information and guidance that when "applied in a practical manner" would "reduce time and resource needs when evaluating BACT for newly regulated pollutants." 75 Fed.Reg. 31514, 31588. EPA also promised technical information on emissions factors, control technologies, measurement and monitoring for GHG sources. 75 Fed. Reg. 31514, 31588. However, the BACT guidance that

EPA issued was months overdue, left many key issues unresolved, and exposes permit applicants to legal challenges. In effect, the guidance has failed to establish the promised predictable basis for implementation and to provide our state permitting agency with adequate support to perform their permitting obligations with respect to GHG emissions.

As a result of the substantial expansion of traditional BACT and the confusion this has created, it's clear that the country is heading into a period where new construction projects will be significantly delayed because there is no certainty in how to address GHG in PSD permits. Based on EPA's past practices, and assuming that EPA works around-the-clock, it will likely take several years for permit writers in the States and industry to know what is expected of them in the permitting of GHGs. EPA's failure to provide the necessary tools, information, and direction will make it very difficult, if not impossible, to get a new construction permits over the next couple of years. Some advocates have claimed the states are largely ready to implement, failing to take into account the narrow time lines and the plain statements of many states that they will be unable to meet obligations without relying on the extraordinary and uncertain pathway of federal implementation plans - a pathway that runs counter to the federalism intended as a basic framework of the CAA.

EPA's failure to adequately address these topics calls into question the ability of the regulatory system to meet these obligations and confirms what many of us in industry – and here on this Committee – have been saying for months: the CAA was simply not designed to address GHG emissions in the context of climate policy. In the meantime, even though State and local permitting authorities may have the legal obligation to permit GHGs under delegated or approved PSD programs, the permit writers and consultants that draft permit applications are not trained on the technical, legal and policy implications of GHG permitting. Permit writers will

need to develop legally defensible emissions limits and justify control technologies through the comprehensive 5-step BACT process without any assistance from EPA. It would be very difficult for State and local authorities to issue GHG permits without such direction from EPA, and if a permit is issued, the legal challenges to follow will further delay construction of large energy and industrial projects at a time when the country needs those projects the most.

Remarkably, when EPA had the opportunity to provide favorable near term clarity on the issue of GHG emissions from biomass projects – they chose to delay. Santee Cooper is actively engaged in developing our renewable biomass energy resources within the state. Yet the EPA has complicated investment analysis by choosing to delay providing guidance for utilities regarding the potential determination of GHG emissions from biomass projects. Now, as we make long term commitments to renewable energy we are uncertain how to assess the potential GHG profile for these resources.

Bottom line: the problems and uncertainty that are evident with GHG permitting are not small "bumps in the road" or common to any startup program under the CAA. There is currently no commercially available cost effective technology available to reduce such emissions at power plants. EPA's failure to address the implementation of its mandate to permit GHG emissions will result in permits being delayed, and complex legal challenges to permits based on GHG permitting. This regulatory uncertainty is no way to help put Americans back to work and help our economy recover from the worst economic downturn since the Great Depression. South Carolina and the rest of the nation cannot afford to stall at a time when we are re-emerging from the current economic recession. We need to create jobs and economic development opportunities, and these regulations would unnecessarily delay economic recovery.

Non-Greenhouse Gas Regulations

In addition to new GHG regulations, EPA plans to adopt numerous new environmental rules over the next few years, with many compliance deadlines generally converging in 2015. While it is beyond the scope of my testimony to discuss all of the upcoming rules (including the various national ambient air quality standards for ozone, particulate matter, and SO₂) I will briefly mention several of the most important rules and their significant cumulative impact on our business. Individually, they represent sizeable cost impacts. Together, they could be enough to significantly curtail economic development, limit economic growth and prevent South Carolina from moving forward.

Utility MACT

In 2015, due to the timetables established by EPA and the court, the utility industry will face perhaps its costliest and most pressing environmental challenge - a maximum achievable control technology standard for electric generating units (Utility MACT). EPA is working to develop MACT standards aimed at requiring installation of costly emissions control equipment at all coal-fired boilers to reduce certain hazardous air pollutants (HAPs), such as mercury, other metals, and acid gases. EPA may craft the upcoming MACT standards in a way that would require additional PM control devices such as bag houses and Selective Catalytic Reduction Reactors for NO_x control – both of which can be very costly. South Carolina has been a leader in installing environmental control technology at our generating stations. New standards could require significant additional environmental control equipment at a significant price beyond what South Carolina already pays for its existing environmental controls.

A court-approved rulemaking schedule requires the Agency to propose Utility MACT standards by March of this year. Although the Agency has some discretion in the design of these standards

(such as setting MACT standards for different "subcategories" of power plants), the standards are likely to require the retrofit of major pollution control equipment on a large amount of existing plants within a short period of time (*i.e.*, 3 to 4 years). Although it is too early to know the full extent of the regulatory impact at this time, EPA adoption of these new MACT standards may force the premature shutdown of a substantial amount of existing coal-fired generation and impose very substantial retrofit costs on the electric power sector.

Coal Combustion Residuals (CCR)

CCRs are a byproduct of coal fired generation. Currently, over 40 percent of CCRs are "beneficially reused," primarily as a building material. EPA has stated that listing coal ash as a hazardous waste would not prevent it from being beneficially reused, but most industry officials believe that concerns about future liability for any company that knowingly used "hazardous waste" as a building material would essentially stop this practice. We are already seeing the impacts of this proposed classification on our efforts to beneficially reuse material.

Santee Cooper is proud of the fact we are well above the national average, and in some years, have reached as high as 90 percent utilization. In fact, our efforts have resulted in bringing American Gypsum to South Carolina, a \$150 million investment, creating about 100 jobs in which our recycled byproducts are used to produce wallboard. Their economic development and job creation is a win-win for the state and environment.

Today, CCR that is not beneficially reused is disposed of at relatively low cost in landfills or impoundments. EPA is currently considering alternatives to regulate CCR. Either would add substantial costs to utility operations and ultimately to their customers. However, if CCR is classified as a hazardous waste, huge amounts of coal ash would have to be disposed of in specially permitted hazardous waste facilities, which would dramatically increase disposal costs

(perhaps up to 100 times the current cost in some cases). The Electric Power Research Institute (EPRI) has estimated that the classification of coal ash as a hazardous waste would increase costs to such an extent that it could force the shut down of more than 100 coal-fired power plants. Although the majority of these plants are relatively small, the impact on coal demand and electricity prices could be significant.

Cooling Water Intake Structures

As the Committee is aware, many electric generation plants use once-through cooling water systems to support the generation process. To accomplish this most efficiently, most plants are located at or nearby large bodies of water and withdraw water from the water body through intake structures for cooling water purposes. Under section 316(b) of the Clean Water Act, EPA is set to propose new regulations defining best technology available for minimizing adverse environmental impacts for large existing power plants with cooling water intake structures by requiring these facilities to retrofit once-through cooling water systems with cooling towers. Industry and outside groups expect the new regulations to have a significant impact on power plants across the country. Individual sites and costs should be considered. Instead of a one-size-fits-all approach, alternative options could be used that achieve the same environmental benefits with much lower costs. As the North American Electric Reliability Corporation's (NERC) study recently concluded:

Implementation of this rule will apply to 252 GW of coal, oil steam and gas steam generating units across the United States, as well as approximately 60 GW of nuclear capacity (approximately a third of all resources in the U.S.). Of this capacity, 33-36 GW may be economically vulnerable to retirement if the proposed EPA rule requires power suppliers to convert to recirculating cooling water

systems in order to continue operations. *2010 Special Reliability Scenario Assessment: Resource Adequacy Impacts of Potential U.S. Environmental Regulations*, North American Electric Reliability Corporation, October 2010.

Regulatory Cost and Uncertainty

Pouring over the details of statutes and regulations maybe interesting enough for lawyers, analysts, and engineers, but what I imagine this Committee is most interested in is the impact these requirements are going to have on utilities like ours and an industry that touches our communities and our way of life across the country. I can assure you my main interest in on what is best for my customers. Let me illustrate two potential impacts of how these regulations may impact my customers and South Carolina. The first example is a new project our company is helping announce in the state at this very moment.

If I were not here today, I'd be at an economic development event, just the kind of announcement our state needs more of. One of our largest industrial customers, Showa Denko Carbon, Inc, is announcing a multiple-hundred million dollar investment to expand their facility in our state. Showa Denko Carbon, Inc., Ridgeville, South Carolina, is a leading manufacturer of synthetic graphite for industrial applications. This project will create 100 new jobs for that community. Here's the point: by far their biggest concern going forward with this project is the uncertainty created by EPA's GHG and non-GHG regulations. They seriously question whether they can get a permit under the Tailoring Rule.

The second topic is one I mentioned earlier, the coal combustion residuals. Dramatically changing the way CCRs are regulated will have a significant cost impact on Santee Cooper. Santee Cooper has beneficially reused as much as 90% of our CCRs while offsetting operational

costs, deferring landfill space and creating economic development opportunities. This program has generated capital investment and created jobs, like American Gypsum's \$150 million investment and creation of 100 jobs next to our generating facility. The proposed reclassification of CCRs has the potential to curtail beneficial reuse, increase storage in landfills, and significantly increase the cost to our customers.

The Path Forward

Historically, this country has never backed down from a technological challenge. And, as we have done in the past, Santee Cooper is proud of its efforts to address the problems and challenges we face from a growing demand for energy and a changing climate. We will continue to strive to fulfill our guiding principle of providing our customers and our community with low-cost reliable power while upholding the highest environmental standards. All we can ask is for our government to help us sustain this effort.

President Obama embraced the need to closely scrutinize the cost and economic impact of new agency regulations. His January 18th Executive Order laid out the new review process for regulations, stated that an agency should "tailor its regulations to impose the least burden on society, consistent with obtaining regulatory objectives, taking into account, among other things, and to the extent practicable, the costs of cumulative regulations." I believe Congress and the EPA should honor the spirit of the President's position and address the timeframe and content of overlapping rules for the power sector. Also, EPA should conduct a cumulative cost impact analysis of the multiple regulations being put forward in order to better understand the impact on electric reliability, the U.S. economy and jobs.

I appreciate Congressman Upton's proposal that would remove regulation of GHG from the CAA. A full economic cost and environmental benefit analysis needs to be undertaken of GHG regulation so that the country understands the outcome of such regulation before it is initiated. I thank the Committee for this opportunity and for your attention to these urgent issues and I urge this Committee to closely examine whether these regulations and their associated impacts are really the best pathway forward for this Nation and its citizens.