STATE OF FLORIDA

ART GRAHAM
CHAIRMAN

Capital Circle Office Center
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850
(850) 413-6040

Public Service Commission

February 26, 2014

Administrator Gina McCarthy
Air and Radiation Docket and Information Center
Environmental Protection Agency
Mail Code: 2822T
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: Proposed Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units; Docket No. EPA-HQ-OAR-2013-0495

Dear Administrator McCarthy:

The Florida Public Service Commission authorized on February 18, 2014 the filing of the attached comments on EPA's recently proposed rule on Greenhouse Gas Emissions. The staff contact on these comments is Mark Futrell, who may be reached at 850-413-6692.

Sincerely,

Art Graham, Chairman

AG/ao

cc: Commissioner Lisa Polk Edgar
Commissioner Ronald A Brisé
Commissioner Eduardo E. Balbis
Commissioner Julie I. Brown
Office of General Counsel (Miller)

UNITED STATES OF AMERICA
BEFORE THE
ENVIRONMENTAL PROTECTION AGENCY

Carbon Pollution Standard for New Power Plants Rule
Docket ID No. EPA-HQ-OAR-2013-0495

COMMENTS OF THE FLORIDA PUBLIC SERVICE COMMISSION

The Florida Public Service Commission (FPSC) is charged with ensuring that Florida's electric utilities provide safe, reliable energy for Florida's consumers in a cost-effective manner. Section 366.015, Florida Statutes (F.S.), encourages the FPSC to participate in federal proceedings that impact the utilities we regulate. The FPSC appreciates the opportunity to provide comments in this rulemaking.

We recognize the necessity and role of the U.S. Environmental Protection Agency (EPA) to address public health and environmental measures. The FPSC is concerned, however, that the EPA's proposed carbon standards for new fossil-fueled power plants and its intention to regulate carbon emissions from existing plants in the future have the potential to reduce fuel diversity, adversely impact reliability, and increase costs for Florida's energy consumers. EPA's final rules should avoid compromising electric system reliability and allow the maximum compliance flexibility for electric utilities provided for under the Clean Air Act (CAA). Electric utilities should be given the flexibility to choose the most efficient, least-cost compliance options to meet public health and environmental goals. The FPSC is concerned that under the provisions of the proposed rule, electric utilities will be precluded from constructing coal-fired generation to meet future needs because the standard can be met solely with costly and unproven carbon capture and sequestration (CCS) technology. CCS at this time is costly and has not been adequately demonstrated on the scale necessary for deployment by the electric generation utility industry. Because a diversified fuel supply can enhance system reliability and significantly mitigate the effects of volatile fuel price fluctuations, extreme weather events and unplanned plant outages, it is important that utilities are afforded the greatest possible level of flexibility in determining their generation fuel source mix when seeking to comply with relevant carbon standards. In order to

provide Florida's consumers with the benefits of a diversified fuel mix, EPA should not set a standard that requires CCS until this technology is proven on the scale necessary for electric utility generators.

Background

The proposed Carbon Pollution Standard for New Power Plants rule is of direct concern to the FPSC. The FPSC has authority pursuant to Section 366.04(5), F.S., over the planning, development, and maintenance of a coordinated electric power grid throughout Florida to assure an adequate and reliable source of energy for operational and emergency purposes. The FPSC has regulatory authority under Chapter 366, F.S., over Florida's five investor-owned electric utilities, including aspects of rates, operations, and safety. The statute provides the FPSC with more limited authority over Florida's 35 municipally-owned and 18 rural electric cooperatives, which includes safety, rate structure, and planning. Pursuant to Section 403.519, F.S., the FPSC is charged with determining need for all new steam electric generating facilities over 75 megawatts (MW). Florida's investor-owned electric utilities have the opportunity to petition the FPSC for rate relief for prudently incurred costs to comply with new environmental requirements, pursuant to Section 366.8255, F.S.

Florida has a total generating capacity of 57,454 MW (summer). Florida's reliance on natural gas as a generation fuel has increased over time. Currently, more than 65 percent of the electric power in Florida is generated from natural gas, while approximately 21 percent is generated from coal and oil. Transmission capability to import energy into peninsular Florida from other states is approximately 3,800 MW.

Electricity usage in Florida is impacted by the State's unique weather, customer base, and high reliance on electricity for cooling and heating. Florida has the highest number of cooling degree days of any state in the continental U.S., indicating the greatest need for air conditioning in the summer months. Residential consumers make up almost 89 percent of Florida's electricity customers, including a large population of senior citizens on fixed incomes. Compared to other states, Florida's customers rely more heavily on electricity to meet their energy needs, rather

than the direct use of natural gas or other fuels, for cooling and heating. Approximately 85 percent of Florida's residential customers' energy needs are met with electricity.

Key Principles

The FPSC supports the general principles for federal environmental regulations as established in the National Association of Regulatory Utility Commissioners' (NARUC) resolution, entitled "Resolution on the Role of State Regulatory Policies in the Development of Federal Environmental Regulations." The resolution was approved by the Board of Directors of NARUC at its 2011 Winter Committee Meetings in February 2011, and is included as Appendix A. In accordance with the resolution's principles, the final rule should:

- ***Avoid compromising system reliability*** – Section 111 of the CAA requires EPA to issue standards of performance for emissions from each category or subcategories of new and modified stationary sources that "cause or contribute significantly to air pollution that may reasonably be anticipated to endanger public health or welfare." Section 111(a)(1) of the CAA defines the term "standard of performance" as "a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated." EPA has the authority to determine the categories of stationary sources for which each emission standard is set, and then sets the standard based on that category's best system of emission reduction. Thus, EPA's designation of the categories of generating units that must meet a new carbon standard is essential in defining the emission limitation each type of generating technology must meet and the technologies necessary to meet this standard.

  The FPSC supports EPA's decision to revise its previously proposed rule by establishing separate categories for electric utility steam generating units (boilers and integrated gasification combined cycle (IGCC) units) and combined cycle units. The difference,

however, in the CO_2 emissions standards proposed in the revised proposed rule between coal-fired generating units and natural gas-fired combined cycle units is negligible. EPA's decision to set the proposed standard for all new boilers and IGCC generating units, has major implications for new coal- and oil-fired power plants. EPA states that "new coal-, coal refuse-, oil- and petroleum coke-fired boilers and IGCC units should be able to meet this standard by employing partial carbon capture and storage (CCS) technology." The FPSC is unaware of any proven, cost-effective commercially available CCS system that would meet the proposed standard. This proposed standard will significantly increase the cost of new coal capacity. As a result, coal-fired generating units will most likely not be constructed in Florida. Therefore, the FPSC is concerned about the potential impact on fuel diversity and compliance costs.

The FPSC commends EPA for excluding modified power plants from the proposed New Source Performance standards and including these units in the rulemaking process for existing electric generating units. Section 111(b) of the CAA requires the EPA to set emission standards for affected new, modified, and reconstructed sources. The FPSC maintains, however, that modified plants should be treated like existing sources under the guidelines of Section 111(d) since modified plants have the same limited options to reduce emissions as existing sources. Requiring modified plants to meet the proposed standards for new sources would necessitate the requirement of CCS installations at existing coal, oil, and some natural gas-fired plants. As a result, these plants would incur costly modifications, placing some units at risk of early retirement, thus potentially impacting reliability and adding upward pressure on rates. The FPSC notes that many of Florida's existing plants will require modification to meet the requirements of other EPA rules, including the Cross-State Air Pollution rule, the Mercury and Air Toxics rule, the Cooling Water Intake Structures rule, and the Coal Residuals rule. Electric generators and their consumers should not be placed in the position where investments to meet one EPA rule trigger an unobtainable CO_2 standard for existing coal- and oil-fired generators.

The FPSC agrees with EPA that there should be a separation in how EPA addresses CO_2 from new and existing power plants. Florida has improved its average CO_2 emissions

profile from 1,835 pounds per megawatt-hour (lbs./MWh) in 2000, to 1,291 lbs./MWh in 2013, largely due to repowerings and efficiency improvements at existing generating units. Utilities should not be discouraged from improving the efficiency at existing units, which has the added benefit of reducing CO_2.

- ***Minimize cost impacts to consumers and provide an appropriate degree of flexibility for compliance*** – In order to minimize costs, each utility should have the flexibility to choose compliance options to meet air emissions standards that best fit the utility's unique system and varying load profile. EPA has, in effect, required partial CCS for all new coal- and oil-fueled generators. In the final rule, the EPA should avoid one-size-fits-all mandates that would unnecessarily increase utility costs. Section 111(a)(1) of the CAA requires EPA to set a standard of performance based on the emissions limitation achievable through the best system of emission reduction EPA determines has "been adequately demonstrated," while taking into account the cost of achieving the reduction. CCS at this time is costly and has not been adequately demonstrated on the scale necessary for deployment by the electric generation utility industry. Currently, there is one experimental project underway in Florida to evaluate the feasibility of incorporating carbon capture technology on an integrated gasification combined cycle power plant. Even if this technology proves to be a viable option for electric utilities, it is still unknown if geologic sequestration is a viable storage option in Florida.

  The EPA points to four currently planned power plants to serve as examples of the CCS technology being adequately demonstrated: Southern Company's Kemper, SaskPower's Boundary Dam (Canada), Texas Clean Energy Project, and Hydrogen Energy California. These projects are at various stages of development, of various sizes, and all intend to utilize enhanced oil recovery as the storage method for the captured carbon. Adding the commercialization of enhanced oil recovery provides revenue and enhances the economic viability of these power plants. EPA states "the EPA wishes to encourage EOR [enhanced oil recovery] using captured CO_2, since the practice makes CCS itself more economical." However, to our knowledge, Florida has insufficient ability to utilize enhanced oil recovery for the captured carbon from the CCS process due to the minimal

oil and gas production currently within the State. Moving the captured CO_2 to other areas within the Southeast with greater oil and gas resources will require the construction of a pipeline and additional associated costs. Until CCS is feasible and cost-effective, EPA should set a standard for coal-fired generators that could be achievable through supercritical or IGCC technology.

The FPSC notes that, in an effort to provide flexibility, EPA's previous proposal contained a 30-year emissions averaging option for coal-fired plants. Under this emissions averaging option, EPA asserted that a new coal unit could delay the installation of CCS for 11 years and still meet the standard. The FPSC is concerned that the current proposal has reduced this option to 7 years. The FPSC contends that having a longer-term averaging option, much like the previously proposed 30-year option, is more appropriate. The CAA requires EPA to review New Source Performance Standards at least every eight years. After eight years, EPA will have more information on the operations and costs of CCS. While long-term averaging of emissions can provide some flexibility, the FPSC questions whether utilities would be able to obtain financing for large projects given the continued uncertainty surrounding CCS development. If EPA finalizes standards that can be met solely with CCS, EPA should provide a longer-term emissions averaging option to allow time for CCS technology to develop, rather than the seven-year averaging option contained in the proposal.

The FPSC also supports the addition of the three-year rolling average methodology for determining the applicability of the proposed rule for simple cycle combustion turbines. Simple cycle combustion turbines are primarily used to service peak periods of demand or in an emergency, due to their higher marginal cost of operation relative to baseload generation. Given Florida's large number of cooling degree days, and its vulnerability to extreme weather events such as hurricanes, there may be instances where simple cycle combustion turbines may be used for a longer period than is typical. As a result, including the averaging methodology allows for flexibility in deploying a utility's resources.

- ***Recognize the needs of each state and region to deploy a portfolio of cost-effective supply- and demand-side resources based on unique circumstances*** – Over the past twenty years, the vast majority of new capacity additions in Florida have been natural gas-fired. EPA's proposed carbon standard, Cross-State Air Pollution rule, Mercury and Air Toxics rule, and currently low gas prices may further encourage utilities to install natural gas-fired generation as a compliance strategy. EPA contends that the proposed rule will have little or no economic cost because utilities are not currently planning to install additional coal capacity. Florida's utilities have not identified the need for new coal- or oil-fired generating capacity in their current Ten-Year Site Plans. Adding the significant costs of CCS will make it less likely that a coal-fired plant will ever be constructed. In the event a coal plant is chosen, and if the FPSC finds these costs to be reasonable and prudent, Florida's ratepayers will bear the incremental costs associated with CCS. EPA states, "even if requiring CCS adds sufficient costs to prevent a new coal-fired plant from constructing in a particular part of the country due to lack of available EOR [enhanced oil recovery] to defray the costs, or, in fact, from constructing at all, a new NGCC [natural gas combined cycle] plant can be built to serve the electricity demand that the coal-fired plant would otherwise serve." The FPSC believes, however, that utilities should not be precluded from considering coal for future projects due to EPA's decision to set a standard for CO_2 based on costly and unproven CCS technology. Furthermore, history has demonstrated that fuel costs can be volatile and the most cost-effective generating option can change over time.

  In order to provide Florida's consumers with the benefits of a diversified fuel mix, EPA should not set a standard that requires CCS until this technology is proven on the scale necessary for electric utility generators. The CAA requires EPA to review New Source Performance Standards at least every eight years. After eight years, EPA will have more information on the operations and costs of the four CCS projects discussed above. The FPSC contends that there is nothing that prevents the EPA from setting initial emission standards based on currently demonstrated fuel efficient coal generating technology and revisiting the development of CCS when the EPA reviews these standards.

Conclusion

The EPA's proposed rule on Carbon Standards for New Power Plants and its intention to regulate carbon emissions from existing plants in the future have the potential for significant rate and reliability impacts on Florida's energy consumers. The Clean Air Act requires that performance standards be set based on demonstrated control technology, while taking cost into account. Yet, the proposed standard can be met by coal-fired generators solely through the installation of costly, undemonstrated CCS technology. Given EPA's stated intention to regulate CO_2 emissions from existing power plants, the proposed rule has introduced uncertainty for electric utilities; if a similar approach is applied to existing sources, the impact on fuel diversity may magnify our concerns for electric system reliability. The FPSC supports EPA's decision to exclude modified power plants in the revised proposed rule. Had modified plants been included, CCS could be necessary at Florida's coal- and oil-fired generating units, and some natural gas-fired units, resulting in some units facing the risk of early retirement. Although EPA's revised proposed rule provides some flexibility, the final rule should avoid limiting fuel source choices that may compromise electric system reliability, and should allow the maximum compliance flexibility for electric utilities provided for under the CAA. Electric utilities should be given the flexibility to choose the most efficient, least-cost compliance options to meet public health and environmental goals. Until CCS is proven to be feasible and cost-effective at the scale necessary for electric generation, EPA should set a standard for coal-fired generators that is achievable through supercritical or IGCC technology.

Attachment: Appendix A - NARUC Resolution

Resolution on the Role of State Regulatory Policies in the Development of Federal Environmental Regulations[1]

WHEREAS, The National Association of Regulatory Utility Commissioners (NARUC) recognizes that the U.S. Environmental Protection Agency (EPA) is engaged in the development of public health and environmental regulations that will directly affect the electric power sector; *and*

WHEREAS, EPA is expected to promulgate regulations to be implemented by State environmental regulators concerning the interstate transport of sulfur dioxide and nitrogen oxides, cooling water intake, emissions of hazardous air pollutants and greenhouse gases, release of toxic and thermal pollution into waterways, and management of coal combustion solid waste; *and*

WHEREAS, NARUC at this time takes no position regarding the merits of these EPA rulemakings; *and*

WHEREAS, Such regulations under consideration by EPA could pose significant challenges for the electric power sector, with respect to the economic burden, the feasibility of implementation by the contemplated deadlines and the maintenance of system reliability; *and*

WHEREAS, EPA is expected to provide opportunities for public comment and input with respect to forthcoming regulations; *and*

WHEREAS, Compliance with forthcoming environmental regulations will affect consumers differently depending upon each State's electricity market and the nature of the decisions made by State regulators; *and*

WHEREAS, Addressing compliance with multiple regulatory requirements at the same time may help to reduce overall compliance costs and minimize risk assuming reasonable flexibility with respect to deadlines; *and*

WHEREAS, State utility regulators are well positioned to evaluate risks and benefits of various resource options through policies that appropriately account for and mitigate the risks arising from compliance with pending regulations; *and*

WHEREAS, Cooperation between utility commissions and environmental regulators can promote greater policy coordination and integration and improve the quality and effectiveness of electricity sector regulation; *and*

WHEREAS, State utility regulators, by working with the power sector and State and federal environmental regulators, can help to facilitate least-cost compliance with public health and environmental goals; *and*

---

[1] Based upon Resolution on *Implications of Climate Policy for Ratepayers and Public Utilities*, adopted by NARUC Board of Directors on July 18, 2007.

WHEREAS, State utility regulators can help to minimize environmental risk as well as uncertainty regarding reliability and customer rate impacts by requesting regulated utilities with fossil generation to develop plans that evaluate all relevant environmental rulemakings at U.S. EPA; *now, therefore, be it*

RESOLVED, That the Board of Directors of the National Association of Regulatory Utility Commissioners, convened at its 2011 Winter Committee Meetings in Washington D.C., urges the EPA to ensure that, as it develops public health and environmental programs, it will:

- Avoid compromising energy system reliability;
- Seek ways to minimize cost impacts to consumers;
- Ensure that its actions do not impair the availability of adequate electricity and natural gas resources;
- Consider cumulative economic and reliability impacts in the process of developing multiple environmental rulemakings that impact the electricity sector;
- Recognize the needs of States and regions to deploy a diverse portfolio of cost-effective supply-side and demand-side resources based on the unique circumstances of each State and region;
- Encourage the development of innovative, multi-pollutant solutions to emissions challenges as well as collaborative research and development efforts in conjunction with the U.S. Department of Energy;
- Employ rigorous cost-benefit analyses consistent with federal law, in order to ensure sound public policy outcomes;
- Provide an appropriate degree of flexibility and timeframes for compliance that recognizes the highly localized and regional nature of the provision of electricity services in the U.S;
- Engage in timely and meaningful dialog with State energy regulators in pursuit of these objectives; *and*
- Recognize and account for, where possible, State or regional efforts already undertaken to address environmental challenges; *and be it further*

RESOLVED, That NARUC urges State utility regulators to actively engage with State and federal environmental regulators and to take other appropriate actions in furtherance of the goals of this resolution.

Sponsored by the Committees on Electricity and Energy Resources and the Environment
Adopted by the NARUC Board of Directors February 16, 2011