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Public Service Commission

July 13, 2011

VIA ELECTRONIC MAIL

Administrator Lisa P. Jackson
U.S. Environmental Protection Agency
Water Docket
Mail Code 5203m
1200 Pennsylvania Avenue, NW
Washington, DC 20460

ATTN: Docket ID No. EPA HQ-OW-2008-0667

Dear Administrator Jackson:

The Florida Public Service Commission authorized on June 29, 2011, the filing of the attached comments on EPA's recently proposed rule imposing new requirements for cooling water intake structures pursuant to section 316(b) of the Clean Water Act.

Staff contacts on the comments are Judy Harlow at 850-413-6842 and Cindy Miller at 850-413-6082.

Sincerely,

/ s /

Cindy B. Miller
Senior Attorney

CBM:tf
cc: Art Graham, Chairman
Lisa Polak Edgar, Commissioner
Ronald A. Brisé, Commissioner
Eduardo E. Balbis, Commissioner
Julie I. Brown, Commissioner

UNITED STATES OF AMERICA
BEFORE THE
ENVIRONMENTAL PROTECTION AGENCY

Cooling Water Intake Structures Rule) Docket ID No. EPA-HQ-OW-2008-0667

COMMENTS OF THE FLORIDA PUBLIC SERVICE COMMISSION

The Florida Public Service Commission (FPSC) appreciates the opportunity to comment on this rulemaking. The 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 U. S. Environmental Protection Agency's (EPA) proposed Cooling Water Intake Structures rule has the potential for significant rate, and potentially reliability, impacts on 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 Water Act. Electric utilities should be given the flexibility to choose the most efficient, least-cost compliance options to meet environmental goals. State environmental regulators are in the best position to review the compliance plans by electric utilities within their respective states, while public utilities commissions will be responsible for reviewing these plans for reliability and cost impacts.

Background

The proposed Cooling Water Intake Structures 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 full 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 operations 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 has a total generating capacity of 58,420 MW (summer). EPA's proposed Cooling Water Intake Structures rule will affect all existing electric generators that use water for cooling with an intake velocity of at least two million gallons per day (MGD). Most power plants, including nuclear, coal, natural gas, and oil-fired generators, meet this intake threshold and will be required, at a minimum, to meet the proposed impingement standards. Transmission capability to import energy into peninsular Florida is approximately 3,600 MW. Given Florida's peninsular geography and this capacity of existing transmission interconnections to other states, the opportunity for Florida to import energy from generating units outside Florida for which compliance costs are low will be limited relative to other states.

Pursuant to Section 366.8255, F.S., 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. The FPSC has implemented this statute through an Environmental Cost Recovery Clause. Between base rate proceedings, Florida's investor-owned electric utilities will have the opportunity to recover the costs associated with the proposed Cooling Water Intake Structures rule through this cost recovery clause, subject to FPSC review. As discussed further in Appendix B, preliminary compliance cost estimates associated with the rule by Florida's investor-owned electric utilities are significant. Recovery of these compliance costs through a cost recovery clause, as required by Florida statutes, will have a near immediate rate impact on Florida's consumers.

For a reference point, the following table illustrates the expected monthly bill increase for a residential customer for each additional $100 million in environmental compliance costs that are recovered through the clause. It is assumed that the residential customer uses 1,200 kilowatt-hours per month, which is the average monthly electrical energy usage for Florida's residential consumers.

Utility	**Estimated Monthly Bill Increase per $100 Million in Compliance Costs**
Florida Power & Light Company	$1.27
Progress Energy, Florida	$3.38
Gulf Power Company	$10.90
Tampa Electric Company	$6.38

The FPSC is concerned about the impact of these substantial compliance costs on Florida's consumers, particularly in this time of economic distress and high unemployment. Increases to the cost of electricity are of particular concern in Florida due to 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. Our state's high proportion of residential customers comprises almost 89 percent of Florida's electricity customers, and includes a large portion 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 Utilities Commissioner's (NARUC) resolution, entitled "Resolution on the Role of State Regulatory Policies in the Development of Federal Environmental Regulations." The resolution was approved in February 2011, by the Board of Directors of NARUC, and is included as Appendix A. In accordance with these principles, the final rules should:

- ***Avoid compromising system reliability*** – The final rules should allow sufficient time for utilities to evaluate and implement the best compliance options and integrate these options into their systems in order to ensure reliability of operations. Utilities need sufficient time to complete a fully integrated resource plan, and for permitting and installation of the least cost compliance options. The Clean Water Act is not prescriptive on compliance deadlines and EPA acted appropriately in allowing for relatively extended compliance periods for existing units, including: (1) eight years to meet impingement standards, (2) ten years, if fossil-fired plants require cooling towers, and (3) fifteen years, if nuclear plants require cooling towers. In addition, it appears that EPA has allowed for compliance by utilities on a rolling five year basis as water permits come up for renewal. Nevertheless, state environmental permitting authorities should have the flexibility to approve requests for additional compliance time (if justified) in cases where meeting the compliance deadlines would compromise electric system reliability or add unnecessary costs to Florida's electricity consumers. Utilities should not be placed in a position of

choosing less efficient or more costly control technologies in order to meet the proposed rule's compliance deadlines.

- ***Minimize cost impacts to consumers*** – Utilities should have the flexibility to choose compliance options to meet environmental standards that best fit each utility's unique system and customer base while incurring the least possible cost. EPA has allowed some flexibility for utilities in meeting the impingement standard through additional controls or reducing water intake velocity to less than 0.5 feet per second. Some utilities, however, have suggested that while the rule appears to provide flexibility, the lowest cost option to meet the impingement standards may be a cooling tower, because the impingement standard cannot be met with screens and intake velocity cannot be reduced enough without a closed loop cooling system. The EPA should ensure that the final rule provides compliance flexibility in order to minimize costs for Florida's consumers. In the final rule, the EPA should avoid one-size-fits-all mandates that would unnecessarily increase utility costs. The FPSC commends the EPA for including the flexibility for state environmental permitting authorities to review site-specific costs prior to requiring additional controls to reduce entrainment. It is also beneficial that the proposed rule excludes power plant efficiency upgrades and repowering of an existing plant from the requirement to install cooling towers at new units. Power plant efficiency upgrades and repowering to natural gas reduce water usage per megawatt-hour produced. Utilities should not be discouraged from making efficiency upgrades or repowering existing units due to a mandatory requirement to install a closed loop cooling system.

- ***Provide an appropriate degree of flexibility and timeframes for compliance*** – EPA should recognize the cost and potential reliability impact if the majority of steam powered electric generators nationwide are required to install control technologies to meet the impingement standard. With many utilities vying for the same equipment and specialized labor, there may be price pressure, and potentially shortages, on compliance technologies and labor. EPA should fully analyze whether there will be a sufficient supply of control technologies for U.S. utilities to meet the rule's standards within the compliance window. EPA's final rules should allow flexibility if the supply of compliance technologies or specialized labor is unavailable, or if price increases are excessive. Further, state environmental permitting authorities, with input from public utilities commissions, are in

the best position to determine if a utility merits additional time due to insufficient supply or excessive price increases of compliance options.

- ***Recognize the needs of each state and region to deploy a portfolio of cost-effective supply and demand-side resources based on unique circumstances*** – The proposed rules currently allow state environmental permitting authorities to review entrainment studies for units that meet the entrainment threshold, and to determine if additional controls are necessary. The impingement standard does not appear to provide this discretion to state environmental permitting authorities. The proposed impingement standard should be revised to allow state environmental regulators to take unique circumstances at generating units into account when reviewing utility impingement compliance plans. For example, the final rules should allow some discretion for state environmental permitting authorities in cases where land limitations at existing plants prevent the installation of cooling towers. According to Florida's investor-owned utilities, several power plants in the state appear to have such land limitations. State environmental permitting authorities are also in the best position to determine if additional controls, in particular, closed loop cooling, will negatively impact Florida's manatee population by reducing thermal water discharge.

- ***Employ rigorous cost/benefit analysis consistent with federal law, in order to ensure sound public policy outcomes*** – Before requiring additional controls to reduce entrainment damage, state permitting authorities must compare the costs of additional controls to the potential benefits. Many more generating units in Florida will be subject to meeting the impingement standards than the entrainment standards, due to the much lower daily water intake threshold for the impingement standard. Yet the proposed rule does not appear to provide for a cost-benefit analysis for the impingement standard. On April 1, 2009, the U.S. Supreme Court, in *Entergy Corp. v. Riverkeeper, Inc.*, expressly held that EPA has the authority under the Clean Water Act to rely on a cost-benefit analysis in setting national performance standards for cooling water intake structures. The EPA should exercise this authority to rely on a cost-benefit analysis in the impingement standards, as well as in the entrainment standards. Similar to the entrainment standards, EPA should provide state environmental permitting authorities with the authority to allow some compliance discretion in meeting the impingement standards based on a cost-benefit analysis.

Conclusion

The EPA's proposed Cooling Water Intake Structures rule has the potential for significant rate, and potentially reliability, impacts on 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 Water Act. Electric utilities should be given the flexibility to choose the most efficient, least-cost compliance options to meet environmental goals.

One of the FPSC's primary concerns about the proposed rule is that EPA does not provide for a cost-benefit analysis for utilities subject to the impingement standard. In some instances, Florida's utilities have suggested that the lowest cost option to meet the impingement standards may be a cooling tower because the standard cannot be met with screens and intake velocity cannot be reduced sufficiently without a closed loop cooling system. Some generating facilities in Florida appear not to have sufficient land to install such systems and this could have reliability implications. For this reason, the FPSC supports a cost-benefit analysis on the impingement standards. State environmental regulators are in the best position to review these cost-benefit studies and the compliance plans by electric utilities within their respective states, while public utility commissions will be responsible for reviewing these plans for reliability and cost impacts.

Attachments: Appendix A - NARUC Resolution

Appendix B – Preliminary Investor-Owned Utility Cost and Reliability Estimates

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*

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[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

Florida's Investor-Owned Utilities' Preliminary Cost and Reliability Impact Estimates Associated with the Proposed Cooling Water Intake Structures Rule

On April 27, 2011, four of Florida's five investor-owned utilities made presentations to the FPSC on the estimated impact of complying with EPA's current rulemaking proceedings, including the proposed Cooling Water Intake Structures rule. These estimates are preliminary in nature, as more certain cost and reliability impacts cannot be projected until EPA finalizes the Cooling Water Intake Structures rule, and the utilities perform an integrated system analysis to determine the compliance strategy for each unit. The FPSC has also requested more detailed information on the costs and needed control technologies from the investor-owned utilities. The following is a brief summary of the preliminary estimates provided to the FPSC by the utilities. The four largest investor-owned utilities intend to file written comments with EPA on the proposed rule.

Gulf Power Company (Gulf) – Gulf performed a preliminary unit viability analysis to determine which units are at risk of retirement if additional controls are necessary to comply with several proposed EPA rules, including rules on Air Toxics, Cooling Water Intake Structures, Coal Ash Disposal, and Ozone. Gulf also projected the specific controls needed to comply with each of these rules. Gulf contends that four units, with a total capacity of 495 MW, are at high risk of early retirement if the rules are finalized as proposed, including Scholz 1 and 2, and Smith 1 and 2. Gulf is also considering the need for additional transmission facilities if any of these units are retired. If these units are retired, Gulf would have costs associated with installing additional capacity sooner than anticipated in Gulf's current long-term plan. Gulf is also considering the possibility of repowering some coal units to natural gas. Compliance with the proposed Cooling Water Intake Structures rule would require extensive impingement and entrainment studies, as well as a combination of intake structure screens or other intake structure modifications and closed-cycle cooling.

Gulf did not break out the estimated costs per proposed rule. Based on Gulf's initial review, the combined compliance costs for the proposed Cooling Water Intake Structures rule and Utility Air Toxics rule are expected to be within the following ranges:

- Plant Crist - $280 million to $350 million.
- Plant Scholz - $110 million to $170 million.

- Plant Smith - $300 million to $450 million.

- Plant Daniel - $510 million to $570 million. (Gulf owns 50 percent of Plant Daniel and would incur 50 percent of these costs.)

Florida Power and Light Company (FPL) – FPL expects that the proposed rule would require significant physical changes to its plants, as well as other financial implications. FPL estimates that 13 of their 14 plant locations will be affected to various degrees if the rule is made final in its current form. Compliance costs would depend on the requirements of the final rule, ranging from tens of millions of dollars per facility for additional screens and fish return systems, to hundreds of millions of dollars per facility if cooling towers are necessary. Most facilities would be required to conduct studies addressing impingement and to install impingement controls or reduce intake velocity. Several of FPL's facilities would also meet the intake thresholds that would trigger an entrainment study with the possibility of additional controls. FPL noted several unique concerns associated with compliance at its generating units. According to FPL, the proposed rule will potentially require cooling towers at some of FPL's coastal facilities; however, there are land limitations at its Canaveral and Riviera plants that would restrict the feasibility of installing cooling towers. In addition, closed loop cooling at the Canaveral, Riviera, Port Everglades, Fort Lauderdale, and Fort Myers facilities would reduce the thermal water discharge that FPL is obligated to maintain for the benefit of manatees. FPL notes that the additional requirement to add barrier nets at coastal locations to prevent shellfish damage may add costs with little benefit at several of its coastal locations that have few shellfish.

FPL's preliminary cost estimates for compliance with the proposed Cooling Water Intake Structures rule include:

- Cape Canaveral - $44 million to reduce velocity, or $88 million to $228 million if closed loop is required.

- Ft. Myers - $27 million to reduce velocity, or $81 million to $210 million if closed loop is required.

- Fort Lauderdale - $22 million to reduce velocity, or $41 million to $106 million if closed loop is required.

- Port Everglades - $40 million to reduce velocity, or $139 million to $361 million if closed loop is required.

- Riviera Beach - $35 million to reduce velocity, or $63 million to $163 million if closed loop is required.

- St. Lucie - $156 million to $404 million if closed loop is required. (Note: St. Lucie already has velocity caps on its intake structures, which are located well off-shore and help control cooling water intake flow to reduce the impact on marine organisms.)

Progress Energy, Florida, Inc. (PEF) – PEF expects a significant impact from complying with the proposed rules. An entrainment characterization study will be required at four PEF sites because these sites meet the entrainment daily water intake threshold, including Anclote, Bartow, Crystal River, and Suwannee. PEF also believes a closed loop cooling system may be needed at the coal-fired Crystal River Units 1 and 2, and nuclear unit 3. Although PEF has installed closed loop cooling at Crystal River Units 4, and 5, PEF believes this system may not meet the definition of closed loop cooling in the proposed rule, and additional controls may be required. PEF will also be required to install additional shellfish protection at the Anclote, Bartow, and Crystal River facilities. PEF expressed a concern about barge access to the sites if additional shellfish screening is required. PEF recently renewed its National Pollutant Discharge Elimination System (NPDES) permits for the next five years through the Florida Department of Environmental Protection (FDEP). Prior to the release of the proposed rule, the FDEP required PEF to add an organism return system as a part of the permitting proceeding. It is unclear how the requirements for PEF to add organism return systems under its NPDES permits will mesh with the requirements of the proposed rule. PEF also expects FDEP to require an organism return system at the Crystal River and Suwannee facilities when PEF renews its NPDES permits for these facilities.

PEF's preliminary cost estimates for compliance with the proposed Cooling Water Intake Structures rule include:

- Anclote - $131 million to $160 million.

- Bartow - $170 million to $182 million.

- Crystal River Units 1, 2, and 3 - $828 million to $845 million.

- Crystal River Units 4 and 5 - $1 million to $3 million, with a potential for added costs to retrofit to closed loop cooling.

- Suwannee - $77 million to $83 million.

Tampa Electric Company (TECO) – TECO is still developing strategies to comply with the proposed rule. TECO's Big Bend and Bayside facilities are both located on the coast and use once-through cooling systems that would potentially require significant modifications to meet the proposed standards. Big Bend Units 3 and 4 have fine mesh screens and an organism return system installed; however, it appears that these systems will not be sufficient to meet the proposed rule's requirements. Big Bend Units 1 and 2 do not have a fish return system or fine mesh screens. TECO expressed a concern that the rule language in its current form could require TECO to install a cooling tower or closed-loop cooling at the Big Bend and Bayside facilities; however, there are land limitations at both facilities.

Preliminary cost estimates for TECO's compliance with the proposed Cooling Water Intake Structures rule include:

- Big Bend - $300 million to $400 million for cooling towers.
- Bayside Station - $200 million to $300 million for cooling towers.