I. Meeting Packet

State of Florida
Public Service Commission
INTERNAL AFFAIRS AGENDA
Thursday, September 4, 2014
Immediately Following Commission Conference
Room 105 – Gunter Building

1. Briefing on the U.S. Environmental Protection Agency's Proposals to Limit Carbon Emissions from Existing Electric Utility Generating Units. (Attachment 1).

2. Executive Director's Report. (No Attachment).

3. Other Matters.

BB/sjc

OUTSIDE PERSONS WISHING TO ADDRESS THE COMMISSION ON ANY OF THE AGENDAED ITEMS SHOULD CONTACT THE OFFICE OF THE EXECUTIVE DIRECTOR AT (850) 413-6463.

Attachment 1

State of Florida

Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: August 26, 2014

TO: Braulio L. Baez, Executive Director

FROM: Ana Ortega, Public Utility Analyst II, Division of Economics AO
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RE: Briefing on the U.S. Environmental Protection Agency's Proposals to Limit Carbon Emissions from Existing Electric Utility Generating Units.

Critical Information: Please place on the September 4, 2014 Internal Affairs. Commissioner Briefing Only.

On June 18, 2014, the U.S. Environmental Protection Agency (EPA) published two proposed rules to reduce carbon emissions from existing electric generating units in the *Federal Register*: (1) Carbon Pollution Emission Guidelines for Existing Electric Utility Generating Units (Clean Power Plan) and (2) Carbon Pollution Emission Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units (Modified/Reconstructed rule). The EPA will take comments on both proposed rules until October 16, 2014.

The attachments to this memorandum provide background information for briefing purposes on the proposed rules. Attachment A provides background on the Clean Air Act and a summary of the proposed Modified/Reconstructed rule. Attachment B provides a summary of the Clean Power Plan. Attachment C includes a summary of utility responses to a staff data request. Finally, Attachment D includes general topics that are under further review for purposes of developing draft rule comments for future consideration.

Subsequent to the publication of the proposed rules, Commission staff has maintained an ongoing dialogue with affected state agencies including the Florida Department of Environmental Protection and the Office of Energy, and stakeholders. Comments and information on the proposed rules were solicited from interested persons and a detailed data request was submitted to Florida's electric generating utilities. Commission staff continues to review and assess the proposed rules, comments, and related information.

Attachments

cc: Lisa Harvey
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Background - The Clean Air Act and Regulation of Carbon Emissions

In the absence of a preexisting national ambient air quality standard for carbon dioxide (CO_2) pollution, EPA is relying on section 111 of the Clean Air Act (CAA)[1] to regulate CO_2 emissions from the electric generation industry. The proposed rules for CO_2 emissions from modified and reconstructed electric generating units (EGU) are being issued pursuant to section 111(b) of the CAA, which directs EPA to establish the applicable *emission standards*. The performance standards established under section 111(b) of the CAA are to be implemented on a unit-specific basis.

In contrast, EPA's proposal to regulate CO_2 emissions from existing electric utility generating units (the Clean Power Plan) is developed under section 111(d) of the CAA. Under this section, EPA is required to issue *guidelines* for emission reductions or best system of emission reduction (BSER). EPA's guidelines indicate the degree of emission reduction it believes is technically feasible and cost-effectively achievable through application of the BSER. EPA's guidelines must also permit a state to consider the remaining useful life of the existing source in applying a standard of performance under its plan. EPA's guidelines and application of its BSER result in state specific required emission limitations or targets. States may rely on EPA's guidelines to establish the applicable performance standard and develop implementation plans to meet or exceed the required target.

These EPA actions are in addition to a separate rulemaking that establishes CO_2 emission limits from new fossil fuel-fired EGUs, or New Source Performance Standards, pursuant to section 111(b). EPA intends to complete both section 111(b) rulemakings prior to finalizing the proposed regulations associated with the Clean Power Plan.

Summary of the Proposed Modified/Reconstructed Rule

EPA is using section 111(b) of the CAA to set a performance standard that specifically applies to all modified or reconstructed EGUs. The CAA defines a modified source as an existing power plant that has undergone any physical or operational change that increased the maximum achievable hourly rate of air pollutant emissions from the plant. A reconstructed source is defined as an existing power plant that replaces components to such an extent that the capital cost of the new components exceeds 50 percent of the capital cost of an entirely new comparable facility.

Standards for Modified/Reconstructed Natural Gas EGUs

As with the proposed rules affecting new units, EPA determined that natural gas combined cycle technology is the BSER for both modified and reconstructed natural gas-fired sources. EPA is also proposing different emission rate performance standards based on the capacity of the EGU (consistent with the rules affecting new units). For smaller natural gas-fired power plants (less than approximately 100 megawatts), the proposed rule sets a performance rate of 1,100 pounds of CO_2 per megawatt-hour (lbs. CO_2/MWh). For larger natural gas-fired power plants (greater than approximately 100 megawatts), the proposed rule sets a performance rate of

[1] 42 U.S.C. § 7411

1,000 lbs. CO_2/MWh.[2] The proposed standards for modified/reconstructed natural gas-fired sources are set at the same proposed levels for new natural gas-fired sources.

Standards for Modified/Reconstructed Coal Boilers and Integrated Gasification Combined Cycle EGUs

For reconstructed coal-fired boiler and integrated gasification combined cycle (IGCC) EGUs, EPA determined the BSER to be supercritical pulverized coal or supercritical circulating fluidized bed boiler technology for larger sources and subcritical for small sources. EPA is proposing for reconstructed coal-fired boiler and IGCC EGUs an emissions standard of 1,900 lbs. CO_2/MWh for large EGUs and 2,100 lbs. CO_2/MWh for smaller EGUs.[3] This contrasts to a proposed emission standard of 1,050 or 1,100 lbs. CO_2/MWh for new coal-fired EGUs, which can only be met with carbon capture and sequestration.

EPA states that unlike reconstructed sources, modified sources do not have the same ability to rebuild their boilers, and therefore, a different BSER should be applied to modified sources. For modified coal-fired power plants, EPA determined the BSER to be based on the affected sources' "best potential performance" incorporating best operating practices and equipment upgrades, including timely replacement of worn components, equipment overhauls and the replacement of existing equipment with new equipment.

EPA is proposing that all modified utility boilers and IGCC EGUs will be required to meet a plant-specific emissions limit based on the plant's historic annual CO_2 emissions rate (from 2002 to the date of modification) plus an additional two percent emissions rate reduction. If a plant is modified after becoming subject to a state's compliance plan for 111(d), the implementing authority (Florida Department of Environmental Protection) would determine the plant-specific emissions limit after an energy efficiency improvement audit occurred.

[2] EPA is soliciting comment on a range of 950-1,000 lbs. CO_2/MWh for large natural gas-fired EGUs and 1,000-1,200 lbs. CO_2/MWh for smaller natural gas-fired EGUs.

[3] EPA is soliciting comment on a range of 1,700-2,100 lbs. CO_2/MWh-net for large EGUs and 1,900-2,300 lbs. CO_2/MWh-net for smaller EGUs.

Summary of the Clean Power Plan

Best System of Emissions Reductions

Under section 111(d) of the CAA, EPA is required to develop emissions guidelines that reflect the EPA's determination of BSER and issue guidelines on how states comply with the targets. EPA notes that because the electric generation industry is interconnected, EPA's BSER includes actions that can be taken at the affected source and outside measures from other affected entities or sources. For existing sources, EPA defines "affected electric generating unit" or "affected EGU" as a steam generating unit, an integrated gasification combined cycle (IGCC) facility, or applicable stationary combustion turbine greater than 25 MWs.

EPA's BSER proposes a compliance timeline which requires each state to meet an interim target, on average, over a 10-year period from 2020-2029, and meet the proposed final target beginning in 2030, and each year thereafter. States must maintain the final goal on a three-year rolling average beginning with 2030-2032. EPA's target calculations rely on "a combination of emission rate improvements and limitations on overall emissions at affected EGUs" referred to as the four building blocks.[4] The four building blocks consist of:

(1) 6 percent heat rate improvements at coal plants,
(2) increasing the dispatch of natural gas-fired fleet up to a 70 percent capacity factor,
(3) adding low- or zero-carbon emission generation, and
(4) reducing generation through demand-side energy efficiency.

EPA also presents an alternative timeline that assumes a less aggressive growth trend in net retail energy sales and has a final compliance date of 2025 with an abbreviated interim period of 2020-2024. EPA's alternative implements similar, but generally less aggressive building blocks by assuming:

(1) 4 percent heat rate improvements at coal plants,
(2) increasing the dispatch of natural gas-fired fleet up to a 65 percent capacity factor,
(3) the same amount of renewable energy generation over the 2022-2025 period, and
(4) a smaller reduction in electricity sales resulting from demand-side energy efficiency.[5]

For summary purposes, targets calculated using the alternative timeline and associated alternative BSER assumptions are referred to as alternative targets. Additional discussion of EPA's four building blocks is presented in a subsequent section of this summary.

Proposed State Targets and Alternative Targets in the Clean Power Plan

Once the BSER was determined, EPA applied each of the four building blocks to each state's 2012 electricity generation mix to arrive at each state's targets and alternative targets. In calculating the targets, EPA reviewed total annual CO_2 emissions, capacity information, net

[4] See *Federal Register*, Vol. 79, No. 117, pg. 34851.
[5] The alternative energy efficiency targets for Florida include a 1.75 percent cumulative megawatt-hour savings, as a percentage of retail sales, in 2020, escalating to a 4.65 percent cumulative megawatt-hour savings in 2025.

generation, and demand-side energy efficiency data reported to the Energy Information Administration (EIA) by all affected EGUs.

EPA is proposing CO_2 rate-based targets, in the form of pounds per megawatt-hour (lbs./MWh), for each state to reach for interim and final performance periods. States also have the option to adopt a statewide total emissions, or mass-based, tons of CO_2 emissions target. However, the EPA's guidelines do not demonstrate the calculation of a mass-based approach.

EPA calculated each state's emission rate by dividing the state's total CO_2 emissions from affected fossil fuel sources (natural gas, coal, oil/gas steam, and "other") by the state's total fossil fuel generation plus renewable generation and avoided megawatt-hours from energy efficiency. The computation of each state's interim and final target and alternative target can be expressed with the following formula.

$$\frac{\text{lbs. } CO_2}{\text{MWhs (retail)}} = \frac{CO_2 \text{ emitted by affected EGUs}}{\text{MWhs from Affected EGUs + Nuclear + Renewable + Energy Efficiency}}$$

Under EPA's assumptions, Florida's interim target is 794 lbs. CO_2/MWh (averaged over 2020-2029), with a final emissions target of 740 lbs. CO_2/MWh in 2030. Using the alternative assumptions that reflect less net retail energy sales, the alternative Florida interim target is 907 lbs. CO_2/MWh with a final alternative Florida target of 884 lbs. CO_2/MWh in 2025.

State Plans

A major aspect of EPA's Clean Power Plan involves state application of the proposed guidelines in establishing the appropriate emissions performance standard and the development of a state compliance plan. The Florida Department of Environmental Protection (FDEP) is the Florida agency that is responsible for submitting the state's compliance plan. As outlined in section 111(d) of the CAA, each state is required to submit a plan to EPA that establishes standards of performance and provides for the implementation and enforcement of such standards. If a state fails to submit a satisfactory plan, the EPA is required to prescribe a plan for the state. States also have the option to submit a negative declaration and allow EPA to determine their compliance plan. Additionally, section 111(d)(2) of the CAA provides EPA with the authority to enforce provisions of state plans if the state fails to enforce its own plan.

EPA's proposed rule assumes it will finalize the proposed guidelines by June 2015, and states will file compliance plans by June 2016. States may request an extension of time if they need more than one year to complete all of the actions needed for their final state plans, including technical work, state legislative and rulemaking, or coordination with third parties, and coordination among states involved in multi-state plans. States requesting an extension must submit an abbreviated plan in 2016, which must include justification of why additional time is needed to submit a complete plan. One year extensions of time until June 2017 will be granted, except that states which decide to develop multi-state plans will be allowed a two-year extension to June 30, 2018, and will be required to submit a progress report by June 30, 2017. Once a state or multi-state plan is submitted to the EPA, the EPA will have twelve months to review and publish either approval or disapproval of the plan. Regardless of the timeframe of the state plan

approval process, states will still be required to start complying with their interim targets in 2020.

Plan Requirements for EPA Approval

EPA is required to allow states to take into consideration, among other factors, the remaining useful life of the existing source. EPA outlines four criteria that it will use in evaluating the sufficiency of state plans.

> Under the general criteria, final plans must include:
> (1) enforceable measures that result in reduced CO_2 emissions at affected EGUs,
> (2) measures projected to achieve or exceed EPA's proposed interim and final targets,
> (3) quantifiable and verifiable CO_2 emissions performance from affected EGUs, and
> (4) the state's intended reporting process and corrective measures if necessary.

Plan Approaches

In the guidelines, EPA illustrates two approaches that a state may choose in designing their plan for compliance, including direct emission limits applied to affected EGUs or a state-driven or utility-driven portfolio approach. When designing the state plan, EPA outlines four possible plan pathways: rate-based (lbs./MWh) CO_2 emission limits applied to affected EGUs, mass-based (statewide cap or CO_2 tonnage cap) CO_2 emission limits applied to affected EGUs, state-driven portfolio approach, and utility-driven portfolio approach. EPA contends that states can use the EPA building blocks to meet emission targets and/or include additional measures that were not a part of the target-setting calculations. Some of the additional measures that EPA lists as possible programs or items that can be included in a state compliance plan are building new natural gas combined cycle units, efficiency improvements in the transmission and distribution system, fuel switching at affected EGUs, and retrofitting affected EGUs with carbon capture and sequestration technology. EPA notes that all measures that are relied on to achieve the emissions performance standard in the state implementation plan are rendered federally enforceable.

Description of Clean Power Plan Building Blocks

Building Block 1: Heat rate improvement of coal facilities

The first building block of the proposed BSER consists of heat rate improvement activities at coal-fired facilities that lower CO_2 emissions. EPA states that the agency reviewed over 11 years of historical heat rate data and utilized a 2009 study conducted by an engineering firm, which found on average that after employing best practices and equipment updates a facility's heat rate could be improved by 4 to 12 percent.[6] As a result, EPA contends it is technically feasible and at a reasonable cost to include a six percent heat rate improvement at existing coal-fired facilities in the BSER. Additionally, EPA states that because of the close relationship between fuel consumption and CO_2 emissions, a six percent heat rate improvement would have a corresponding six percent reduction in CO_2 emissions. EPA is limiting the heat rate improvement to only coal-fired facilities because coal-fired facilities are dispatched at higher

[6] See *Federal Register*, Vol. 79, No. 117, pg. 34859.

rates and can achieve a larger amount of CO_2 emission reductions from heat rate improvements than natural gas-fired facilities.

With respect to the alternative timeline, EPA is also proposing a lower heat rate improvement of four percent. EPA states this level of improvement would be consistent with implementing best practices to reduce heat rate variability without making further equipment upgrades, or consistent with both best practices and equipment upgrades. EPA believes the four percent estimate is a reasonable minimum estimate of the average technical potential for heat rate improvement.

EPA estimates that the average emission rate of Florida's coal-fired fleet was 2,251 lbs. CO_2/MWh in 2012. When this building block is applied to Florida, EPA estimates that the CO_2 emissions rate from its coal-fired fleet should decrease to 2,116 lbs. CO_2/MWh.

Building Block 2: Redispatch of Florida's NGCC fleet

EPA states that building block two of the proposed BSER is focused on displacing generation from higher CO_2 emitting facilities with additional generation from the natural gas combined cycle (NGCC) fleet. EPA assumes that NGCC facilities could achieve a sustained utilization rate or capacity factor of 70 percent and that generation from higher emitting facilities (coal-fired and oil/gas-fired) could be replaced by increasing generation from the existing NGCC fleet.

To arrive at the 70 percent capacity factor, EPA reviewed the potential availability of NGCC operations and compared it to the most recent utilization rates reported in the U.S. using EPA's Emissions & Generation Resource Integrated Database. EPA determined that the NGCC fleet is capable of meeting a potential capacity factor of 87 percent, while the existing fleet in 2012 was only achieving between 44-46 percent. EPA further believes that of the existing NGCC fleet, those plants that began operation from 2000-2009 averaged net generation that was greater than or equal to a nameplate capacity factor of 70 percent. EPA asserts that more than 10 percent of the NGCC facilities were operating in 2012 at a nameplate capacity factor greater than 70 percent. EPA concluded that NGCC generation could replace other existing fossil-fueled generation by dispatching the NGCC fleet up to a 70 percent capacity factor.

With respect to the alternative timeline, EPA is also proposing a less stringent target of a 65 percent capacity factor. EPA states that in 2012, approximately 16 percent of the existing NGCC fleet had capacity factors equal to or higher than this level and NGCC utilization nationwide was already over 60 percent during some peak hours. EPA therefore views the 65 percent level as a reasonable lower-bound estimate of an achievable average NGCC fleet capacity factor.

EPA estimates that Florida's NGCC fleet capacity factor in 2012 averaged 51 percent and the state had 1,157 MW of NGCC under construction.

Building Block 3: Increase in renewable energy facilities

EPA is proposing, in building block three of the proposed BSER, that some generation from affected EGUs will be replaced by new low- or zero-carbon emitting renewable energy and nuclear generation. EPA asserts that the six percent of "at risk" nuclear generation included for each state is an effort to encourage states to keep existing nuclear resources in the generation mix. EPA determined that current renewable portfolio standards offer a "best practice" scenario that should be included in the BSER because of their wide spread adoption and their achieved levels of generation from low carbon emitting sources. To determine the level of renewable energy in each state's target emissions rate, EPA first divided the country into six regions and averaged the 2020 renewable portfolio standard requirements for that region. Finally, EPA applied an annual growth factor for a given region to individual states, which was capped at a maximum level equivalent to the region's renewable target.

Proposed Quantification of Renewable Energy Generation – Florida and the Southeast Region

EPA grouped Florida with Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee to form the Southeast region. Of that group, North Carolina is the only state that has a renewable portfolio standard requirement, which is ten percent by 2020. EPA's regional annual renewable energy growth factor was derived from the 2013 Annual Energy Outlook published by the Energy Information Administration (EIA), which is 13 percent for the Southeast region. EPA believes this annual growth factor would allow the region, as a whole, to reach the regional renewable energy target in 2029, assuming that renewable generation would increase beginning in 2017 from 2012 levels. EPA calculated Florida's renewable energy generation accounted for two percent or 4,524 GWh of Florida's total generation in 2012. Florida's interim renewable energy generation target is six percent in 2020, ramping up to ten percent of total generation in 2030.

Alternative Approach to Quantification of Renewable Energy Generation

EPA also described an alternate approach to calculating the amount of renewable generation that could be included in each state's interim and final targets in the BSER. EPA stated that each state's estimations of possible renewable energy generation were developed using a two-part methodology that estimates the technical and market potential of renewable energy generation. EPA utilized a 2012 National Renewable Energy Laboratory (NREL) study that examined each state's technical potential for renewable energy by technology type and compared it to the 2012 renewable energy generation reported by EIA to arrive at a rate of development for each state. Averaging the top third of the state's renewable development rates, EPA estimated a benchmark for the rate of renewable energy development and applied this rate to each state's technical potential as outlined by the NREL study. In recognition of the limitations of technical potential studies, EPA then utilized its Integrated Planning Model (IPM) to run scenarios to arrive at a cost it attributes to new renewable facilities. EPA asserts that under the alternative approach, EPA would set each state's renewable generation target as the lesser of either the technical potential or the constrained market potential derived using the IPM at a cost of up to $30/MWh.[7] The estimated cost represents the avoided cost of other actions that

[7] See EPA TSD Alternative RE Approach.

could be taken instead to reduce CO_2 emissions. Using the alternative approach, Florida would be required to achieve one percent (as a percentage of 2012 generation) of its generation from renewable sources for both the interim and final performance periods.

Nuclear Generation for Interim and Final Targets

The second technology that was included in building block three is nuclear generation. EPA states that nuclear generation has the benefits of low variable costs and no carbon emissions, but because of the high capital costs, adding nuclear capacity is currently constrained. According to the 2013 Annual Energy Outlook, EIA estimated the retirement of 5.7 gigawatts (GW) of nuclear capacity nationwide. Therefore, in an effort to encourage the preservation of nuclear capacity, EPA included in the proposed BSER approximately six percent of each state's historical nuclear capacity into the state interim and final targets. For the purpose of calculating state interim and final targets, nuclear generation was estimated as the amount of under-construction and preserved nuclear capacity for each state at a capacity factor of 90 percent. For Florida, EPA identified 3,514 MW of nuclear generation in 2012, with capacity that produced 1,623 GWh at risk for retirement.

Building Block 4: Increase in energy efficiency programs and performance

The fourth building block of the proposed BSER, aims to reduce CO_2 emissions from affected EGUs by the use of demand-side energy efficiency from electricity end-users to offset generation requirements. In developing the energy efficiency portion of the BSER determination, EPA developed a "best practice" scenario for reducing energy sales, established a proxy of achievable megawatt-hour savings, and incorporated the corresponding megawatt-hours into the dominator of each state's interim and final target computation. Since there are no emissions associated with these megawatt-hours, adding the avoided megawatt-hours in the dominator has the effect of lowering each state's targets. EPA's best practice scenario was determined by using information reported to the EIA and an analysis of current energy efficiency policies from the American Council for an Energy-Efficient Economy (ACEEE).[8] EPA contends this best practice scenario reflects a level of performance that has been demonstrated, considers each state's current level of performance, and allows states adequate time to increase energy efficiency programs.

Energy efficiency performance is represented as cumulative megawatt-hour savings, as a percentage of retail sales, by year for each state for both the proposed interim and final targets and the alternative interim and final targets. EPA employed a six-step methodology that included, for each state: (1) forecasting a business as usual case for electric sales, (2) determination of the incremental energy efficiency savings as a percentage of sales, (3) determination of the annual expiring savings, and (4) determining the net cumulative energy efficiency savings as a percentage of sales. EPA assumed that each state's historic energy efficiency savings would increase beginning in 2017 to achieve an annual 1.5 percent megawatt-hour savings by 2029. EPA estimated that Florida's incremental megawatt-hour savings as a percent of retail sales was 0.25 percent in 2012.

[8] The ACEEE report estimates that by 2020, 12 states will have or will be required by state policy to achieve a level of incremental savings of 1.5 percent annually.

With respect to the EPA's alternative timeline, the proposal includes a less aggressive demand-side energy efficiency requirement that uses a 1.0 percent (rather than 1.5 percent) annual incremental megawatt-hour savings as representative of the best-practices level of performance. In this alternative, EPA also decreases the rate at which incremental megawatt-hour savings are increased from their historical levels to 0.15 percent per year (rather than 0.2 percent). EPA contends the 1.0 percent level of performance has been achieved or that established state requirements will cause this level to be achieved by 20 states.

EPA also adjusted its estimate of each state's achievable megawatt-hour savings for those states that are net importers of electricity in an effort to avoid double counting of energy efficiency performance. Additionally, EPA included a gross up factor of 7.5 percent to account for line losses.

Summary of Utility Responses to Staff Data Request

On July 11, 2014, staff issued a detailed data request to the electric generating utilities. Seven utilities and one association have responded as of August 22, 2014. An overview of those responses appears below.

General Comments

- One company believes EPA will be given great deference in establishing its proposed rule and is generally supportive of most aspects of the rule.
- Seven respondents believe EPA may have exceeded its authority under the Clean Air Act.
- Multiple companies expressed concerns about grid stability and reliability resulting from certain aspects of the proposal.
- All but one respondent believe that the CO_2 emission target established for Florida is not achievable within the timeframe required.
- Multiple companies believe that individual compliance tools (EPA proposed Building Blocks) are not technically or practically feasible.
- Multiple companies expressed concern about potential stranded investment resulting from specific aspects of the proposal.
- All but one utility expressed concern about the ultimate cost of compliance with the proposed rule.
- Several utilities noted that the proposed rule will result in substituting environmental dispatch protocols for traditional economic dispatch.
- One company noted that multiple state agencies will have a role in fostering compliance with the ultimate state implementation program and questioned whether existing statutory authority was sufficient.
- Several respondents noted that the retirement of coal or the lower capacity factors envisioned under the proposed plan would eliminate the value of coal plants to provide ancillary services.

Table 1 on the following page provides the baseline 2012 CO_2 emission rates and total emissions using EPA's Clean Power Plan methodology provided by the eight utilities that responded to staff's data request. Statewide 2012 CO_2 rate and total emissions data were obtained from EPA.

Table 1 - 2012 Florida Electric Utility CO_2 Emissions

Responding Utilities	2012 Rate (lbs. CO_2/MWh)	2012 Total (Tons CO_2)	% of Total 2012 Florida Utility CO_2 Emissions
DEF	1,282	22,702,000	19.1
FPL	919	37,780,000	31.9
Gulf Power	1,641	6,140,929	5.2
TECO	1,760	15,966,000	13.5
FMPA	954	2,722,000	2.3
JEA	1,630	8,874,000	7.5
OUC	1,540	6,416,218	5.4
Seminole	1,693	8,983,840	7.6
Statewide (EPA)	1,200	118,608,556	

Technical Concerns

- Several utilities noted inconsistencies in EPA's assumptions regarding their respective fleets.
- All but one company expressed concern about the selection of 2012 as a single baseline year.
- Baseline year concerns noted that natural gas prices were at an all-time low in 2012 making it an atypical year to use as a baseline.
- Two companies proposed the use of a rolling average baseline of three to seven years.
- All companies expressed concern regarding the impact of the proposed rule on fuel diversity, especially the heavy reliance on natural gas as the projected primary fuel source.
- Several utilities expressed concern that the proposed compliance timeframe is too aggressive and will likely result in premature retirements of certain generating units leading to stranded investments.
- Several companies expressed concern that existing transmission capability may not be able to effectively handle the heavy redispatch of natural gas combined cycle generation contemplated by the proposal.
- Multiple utilities expressed concern that because the prior environmental compliance actions taken in response to other EPA air quality rules there are less cost-effective actions that can be taken to meet the targets by using the 2012 performance baseline.
- Several utilities noted that the treatment of interstate purchases and sales is unclear.
- Several utilities noted that interstate transmission capacity is limited and may be an obstacle to obtaining needed low- or zero-emission generation from outside the state.
- Two respondents expressed concerns over EPA's use of nameplate capacity in arriving at the goals and suggested the use of net summer capacity for establishing the targets.
- One utility explained that fuel diversity risk would be mitigated by adding new nuclear generation, completion of the proposed natural gas pipelines, and keeping oil-fired units in operation.
- Several utilities identified inconsistencies in EPA's assumptions regarding their generating facilities.

- All companies expressed concern about the achievability of various Building Block assumptions.

Building Block 1: Heat rate improvement of coal facilities

- Several of the utilities responded that EPA's target of a six percent heat rate improvement is not technically feasible for coal facilities.
- Two utilities specifically noted that efficiency improvements since 2005 at coal facilities make the target of an additional six percent heat rate improvement unattainable.
- Multiple utilities noted that it would be redundant to make heat rate improvements in building block one on plants that will be retired based on the increase in NGCC dispatch contemplated in building block two.
- Some of the utilities sited investments ranging from $60 million to over $230 million for heat rate improvements since 2005.

Building Block 2: Redispatch of Florida's NGCC fleet

- Seven of the respondents note that although it may be technically feasible to average a 70 percent capacity factor for NGCC, the replacement of 90 percent of Florida's coal fleet is not feasible with existing natural gas generating capacity.
- Several utilities commented that it is not operationally feasible to operate coal plants at low capacity factors anticipated by the proposal.
- Multiple utilities stated that the early retirement of coal-fired facilities would leave stranded assets.
- All of the respondents agree that the increased reliance on natural gas is a concern because of the current limited natural gas infrastructure in Florida.
- Some of the companies noted that because of the low natural gas prices in 2012, the NGCC fleet were dispatched economically in excess of 70 percent capacity factor.
- Two utilities stated that the redispatch of natural gas capacity would change the energy flow in Florida and would require significant transmission projects.
- Multiple respondents raised concern that a major shift toward building new natural gas generation may cause a shortage of necessary labor and equipment supply that may cause increased costs and delay in meeting the interim targets.
- Some of the respondents also raised concern that the increased natural gas capacity would place upward pressure on both natural gas supply and prices.

Building Block 3: Increase in renewable energy facilities

- One utility commented that although the target for increased renewable generation was aggressive, there are no impediments to reaching the target in the timeframe.
- Multiple respondents noted that Florida has a limited number of renewable resources to choose from when looking to comply with the renewable energy generation targets.
- Three companies stated that wind generation is not a viable resource option in Florida.
- Five of the utilities also commented that wind and solar resource requires back-up generation because of their intermittency.
- Several utilities expressed concern over grid stability issues including voltage concerns with the increase in renewable energy generation.

- Multiple utilities noted a concern over the large amount of land that would be required to build solar to comply with the renewable energy target.
- Several utilities raised concerns about the ambiguity regarding what renewable resources would be eligible, specifically biomass, to use towards compliance.
- One utility believes that EPA's assumed six percent at risk nuclear is appropriate.

Building Block 4: Increase in energy efficiency programs and performance

- Four of the utilities responded that EPA's assumed ten percent of avoided electricity sales from energy efficiency is not technically feasible.
- Three utilities also noted that achieving the almost ten percent target was increasingly difficult because of federal and state standards coupled with the long history of utility sponsored demand-side management programs in Florida.
- Two of the utilities expressed concern that the ability to meet this target is uncertain because compliance is dependent on customer adoption, which is outside of utility control.
- Three utilities also noted that a substantial increase in energy efficiency programs may result in increased costs to ratepayers.

Modified and Reconstructed Rule

- Seven of the responses indicated that there were no currently planned modification or reconstruction projects that would trigger the application of the standard.
- One respondent noted that EPA appears to be regulating sources under both sections 111(b) and 111(d), which is inconsistent with the Clean Air Act.
- One utility noted that in lieu of making modifications to its fleet, it would replace the generation with cleaner, more efficient generation.
- One utility believes that even if modified its coal plant could not meet the standard for coal-fired sources.
- Multiple respondents noted that it would not be economical to modify their fleet because of the interaction between the rule and the proposed targets in the Clean Power Plan.

EPA's Solicitation of Comments

On July 10, 2014, Commission staff issued an open-ended public request for comments and information from interested persons on both the proposed Clean Power Plan and the proposed rule on Carbon Pollution Emission Standards for Modified and Reconstructed Stationary Sources. Staff additionally made inquiries for information from Florida's electric generating utilities. The primary objective for the solicitation was to gather Florida-specific information regarding aspects of both rules that may pertain to matters under the jurisdiction of the Commission.

The Commission received responses from 22 interested persons, including representatives from groups such as Earth Justice, Sierra Club, The Natural Resources Defense Council, American Coalition for Clean Coal Electricity, Southern Alliance for Clean Energy, Organizing For Action, Advanced Energy Economy, Algenol Biofuels Inc., NextGen Climate America, Florida Electric Cooperatives Association, and Florida Mayors. Comments submitted by interested persons can be viewed on the Commission's website.[9]

Staff is continuing to review and assess the proposed rules, comments, and related information. At this time, staff has not identified any likely comment topics in response to EPA's proposed rule for modified and reconstructed stationary sources. This is because the potential applicable scope of the proposed modified and reconstructed rule is site specific, on an as-needed basis, excludes a requirement for carbon capture and sequestration, and is otherwise similar to EPA's proposed New Source Performance Standards rule. In contrast, the proposed Clean Power Plan could affect the entire retail electric service industry. The list below presents a draft list of topics that are under further review for purposes of developing draft rule comments for future consideration on the proposed Clean Power Plan. The general topics address overlapping areas of potential interest in one or more of the four building blocks.

1. General Topics:
    - Existing programs that should qualify toward meeting state targets
    - Florida's characteristics
    - National and regional assumptions applied to Florida
    - Compliance timeline
    - Magnitude of stranded assets

2. Building Block 1: Heat rate improvement of coal facilities
    - Florida's long history of efficiency improvements at baseload facilities
    - Reasonableness/prudence of additional CO_2 related improvements due to Block 2

3. Building Block 2: Redispatch of Florida's NGCC fleet
    - Ongoing fuel diversity strategic concern
    - Electric transmission reliability/stability and new construction
    - Natural gas pipeline capacity

[9] http://www.floridapsc.com/utilities/electricgas/EPAcarbonrules/index.aspx

4. Building Block 3: Increase in renewable energy facilities
    - Reliability/stability requirements due to increased intermittent resources
    - Florida's current renewable energy options

5. Building Block 4: Increase in energy efficiency programs and performance
    - Florida's long history of deploying energy efficiency programs
    - Feasibility/reasonableness of EPA's assumptions

II. Outside Persons Who Wish to Address the Commission at Internal Affairs

Note: The records reflect that no outside persons addressed the Commission at this Internal Affairs meeting.

III. Supplemental Materials for Internal Affairs

Note: The following material pertains to Item 1 of this agenda.

State of Florida

Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD
TALLAHASSEE, FLORIDA 32399-0850

-M-E-M-O-R-A-N-D-U-M-

DATE: September 3, 2014

TO: Art Graham, Chairman

FROM: Eduardo E. Balbis, Commissioner

RE: Comments regarding the EPA's Proposed Rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units

On June 18, 2014, the EPA published the proposed rule for Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units. The comment period for the Proposed Rule ends October 16, 2014. After reviewing the Proposed Rule, I have concerns with the Final Goal of 740 lbs/MWh of CO_2 and the methods and data the EPA used to reach the Final Goal.

Attached is a document drafted in comment format containing the minimum issues I believe the FPSC needs to address. As a brief summary, the Proposed Rule fails to take into account the unique geographic features of Florida and our limited interconnection with other states in the region. Furthermore, the Proposed Rule's assumptions for heat rate improvements (Block 1) and DSM reductions (Block 4) are not supported by the historic data from our review of our GPIF and DSM programs. The Proposed Rule's baseline assumption of the 2012 capacity factor for NGCC plants is incorrect, which creates a drastically inflated available reduction. Finally, the Proposed Rule's cost assumption for increasing renewable energy sources severely underestimates the installed cost of renewable energy sources according to the EPA's own numbers.

Based on the EPA's estimated costs and available data, the following are the estimated costs for the Building Blocks:

- Block 1 - $1.15 billion
- Block 2 – unknown
- Block 3 - $16.8 billion using the EIA's estimated installed costs for PV
- Block 4 - $8.6 billion using the historical DSM data for avoided capacity versus cost
- Total – at least $26.55 billion

Cc: Lisa Polack Edgar, Commissioner
Ronald A. Brisé, Commissioner
Julie I. Brown, Commissioner
Mark Futrell, Director, IDM

Parties/Staff Handout
Internal Affairs/Agenda
on 9/4/14
Item No. 1

The Florida Public Service Commission (FPSC) ensures that Florida's electric utilities provide safe, reliable energy for Florida's consumers in a cost-effective manner. The Environmental Protection Agency's proposed rule entitled "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units" (Proposed GHG Rule) directly affects Florida's electric utilities. Section 366.015, Florida Statutes (2013), encourages the FPSC to participate in this type of agency rulemaking. Therefore, the FPSC appreciates the opportunity to provide comments to the Proposed GHG Rule.

The FPSC's jurisdiction covers the planning, development, and maintenance of a coordinated electric power grid throughout Florida.[1] Furthermore, the FPSC regulates the rates, operations, and safety of Florida's five investor-owned utilities, as well as the safety, rate-structure, and planning of Florida's municipally-owned and rural electric cooperatives.[2] The FPSC also determines rate relief for prudently incurred costs to comply with new environmental requirements.[3] Although the Proposed GHG Rule is clear in that the EPA is not mandating the method an individual state must use to reach the proposed CO_2 goals, it is clear that the proposed State target of a 38% reduction in CO_2 emissions, regardless of the method or combination of methods chosen by Florida, will impact the cost recovery/rate impact and reliability matters that are within the FPSC's jurisdiction. Of note, comments by EPA officials during press conferences indicate that, once a State incorporates the Final Goals into an EPA approved State Plan, the resulting targets will be inflexible.

The following comments will provide a basic background of the utility portfolio present in Florida, which will act as the basis for the specific comments that follow. After the

[1] § 366.04(5), Fla. Stat. (2013).
[2] § 366.04, Fla. Stat. (2013).
[3] § 366.8255, Fla. Stat. (2013).

background, the comments will address each of the EPA's building blocks. The comments for each building block will compare the actual Florida utility data with the assumptions used by the EPA in determining the reduction for each building block. The conclusion will then combine the individual building block analyses to address Florida's Final Goal contained in the Proposed GHG Rule.

Background

Florida's unique weather, customer base, and high reliance on electricity for cooling and heating dictate Florida's electricity usage. Florida has the highest number of cooling degree days of any state in the continental U.S. Residential customers comprise 89 percent of Florida's electricity consumers. Florida also has a large population of senior citizens on fixed incomes. Only 7 percent of Florida customers have access to natural gas service, and the vast majority relies on electricity to meet residential needs. This, combined with Florida's unique geography and climate, requires Florida to carefully examine all factors related to electricity generation to ensure cost-effective, reliable, electricity for all Floridians.

Florida is unique in its geographical location. As a peninsular state, Florida's interconnections and transmission capabilities are limited. As noted in our prior comments regarding the Proposed GHG Rule, transmission capability to import energy is limited to 3,800 megawatts (MW), or just 6.6 percent of Florida's summer capacity. This limited transmission capability forecloses many of the proposed regional options in the Proposed GHG Rule.

In 2012, the benchmark year chosen by the EPA, Florida ended the year with 57,454 MW of total generating capacity (summer).[4] Renewable energy sources comprised 1,400 MW, or 2

[4] Florida Public Service Commission, Facts and Figures of the Florida Utility Industry, 1 (Mar. 2014).

percent, of Florida's total generating capacity.[5] Natural gas fueled 65 percent of Florida's electricity generation, while coal supplied only 20 percent of Florida's generation.[6] For 2012, CO_2 emissions from electric generation in Florida were 1,199 pounds per megawatt hour (lbs/MWh) of CO_2.[7] The Proposed GHG Rule establishes a Final Goal for Florida of 740 lbs/MWh of CO_2.[8]

Building Blocks

Although the Proposed GHG Rule expresses that states are free to choose the method or methods they will use to reach the proposed Final Goals,[9] the Proposed GHG Rule reached the proposed Final Goal by using a building block analysis to reach a 38% reduction. Therefore, the following block by block analysis will address each block individually using data from the 2012 benchmark year as well as historical data to illustrate trends.

Block 1

Block 1 addresses CO_2 reductions through heat rate improvements of coal-fired generating plants.[10] The Proposed GHG Rule claims implementation of best practices should result in a 4 percent improvement and additional technical potentials should result in another 2 percent gain, totaling in an overall heat rate improvement of 6 percent.[11] Should the improvements in Block 1 prove attainable, the EPA estimates a 30 lbs/MWh reduction in Florida's CO_2 emissions.[12]

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[5] Florida Public Service Commission, Review of the 2012 Ten-Year Site Plans for Florida's Electric Utilities, 27 (Dec. 2012).
[6] Florida Public Service Commission, *supra* note 4, at 2.
[7] U.S. Environmental Protection Agency, Goal Computation Technical Support Document, 25 (June 2014).
[8] *Id.*
[9] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 79 Fed. Reg. 34,830, at 34,837 (proposed June 18, 2014) [hereinafter Proposed GHG Rule].
[10] *Id.* at 34,859.
[11] *Id.* at 34,860-61.
[12] U.S. Environmental Protection Agency, *supra* note 7.

The EPA estimates the cost of implementing heat rate improvements at "relatively modest capital costs" of $100 per kilowatt (kW).[13] Using Florida's 2012 coal capacity of 11,491 MW, Florida consumers would pay $1.15 billion for these heat rate improvements. Although some of these costs may be offset by lower fuel costs per MWh, a fluctuation of fuel prices could also eliminate any savings. Moreover, Florida's investor owned utilities are incentivized to improve heat rate performance, and historical data shows sustained heat rate improvements are not easily achieved.

In 1980, the FPSC developed a generating performance incentive factor program (GPIF) for investor-owned utilities, which encourages utilities to maximize unit heat rate efficiency. Targets are set annually through a formal hearing procedure, and investor-owned utilities either gain rewards or suffer penalties based on the prior year's performance compared to the previously set annual targets. The GPIF program creates multi-million dollar incentives for utilities to maximize efficiencies at their fossil-fired units. In over 30 years of offering incentives, Florida has not seen consistent heat-rate improvements in the 6 percent range as suggested in the Proposed GHG Rule. In the last 5 years alone, heat rate efficiencies ranged from negative 8 percent to positive 4 percent, even with the GPIF program incentives.

Rather than relying on an across the board assumption of a 6 percent improvement to calculate a Final Goal, we propose a more state-specific analysis, which will take into account, not only potential for heat rate improvements (as verified through historical data under incentive programs like the GPIF program), but also steps already taken to increase efficiencies in the state's fleet. A state-specific fleet analysis is more reasonable in determining a state's Final Goal.

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[13] Proposed GHG Rule, *supra* note 9, at 34,905.

Block 2

Block 2 addresses CO_2 emission reductions by increasing natural gas combined cycle (NGCC) plants to a 70 percent utilization rate.[14] Currently, Florida utilities use an economic model for dispatching their generation fleet. Daily and hourly fluctuations in fuel prices and other factors are included in their models to ensure that the demands are met with the most cost-effective generation. These cost savings are passed directly to the customers.

In the EPA's calculation of the Block 2 emission reduction for Florida, the EPA states that Florida's NGCC plants operated at a capacity factor of 51 percent.[15] Based on the EPA's calculations of a re-dispatch change from 51 percent to 70 percent of capacity, the EPA calculates a CO_2 emissions reduction of 287 lbs/MWh, or approximately 15.1 lbs/MWh per percent increase in re-dispatch where the re-dispatch to NGCC replaces coal-fired generation.[16]

The EPA's characterization that Florida's NGCC fleet operated at a "51 percent capacity factor" in 2012 is incorrect. While the EPA uses the phrase "utilization rate" in the Proposed GHG Rule,[17] the EPA uses the phrase capacity factor in describing the calculations used to reach the Block 2 reductions.[18] Furthermore, the EPA calculates the Block 2 reductions using 70 percent of the generating unit's nameplate capacity.[19] The EPA errs in using a generator's nameplate capacity in the capacity factor Block 2 calculations.

When discussing generator capacity, system planners and regulators distinguish capacity from nameplate capacity for important reasons that are ignored by the EPA's use of nameplate

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[14] Proposed GHG Rule, *supra* note 9, at 34,864.
[15] U.S. Environmental Protection Agency, Data File: Goal Computation – Appendix 1 and 2, http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule-technical-documents (last updated June 26, 2014).
[16] The EPA fails to adequately address the inconsistency in using heat rate improvements in coal-fired units to calculate Block 1 savings, and then partially negating those saving by re-dispatching from those improved coal-fired units to NGCC units for the savings presented in Block 2.
[17] Proposed GHG Rule, *supra* note 9, at 34,864.
[18] U.S. Environmental Protection Agency, *supra* note 7, at 10-11.
[19] *Id.*

capacity. A generator's nameplate capacity is "the maximum rated output of a generator, prime mover, or other electric power production equipment under specific conditions designated by the manufacturer."[20] By contrast, the generator capacity is "the maximum output, commonly expressed in megawatts (MW), that generating equipment can supply to system load, adjusted for ambient conditions."[21] Effectively, nameplate capacity refers to a generator's maximum output under optimal design conditions; whereas, capacity is a generator's maximum output supplied to load under actual, real-world conditions, which is often referred to as net capacity when referencing both types to avoid confusion. When referring to capacity, system planners and regulators refer to the real-world, actually available capacity, not the theoretical, under perfect design conditions nameplate capacity used by the EPA. The EPA even states it wanted to use net generating capacity but asserts, incorrectly, that net capacity data was not readily available.[22] Therefore, the EPA chose to use nameplate capacity.[23]

Although the EPA errs in the use of nameplate capacity, the EPA states "we are proposing goals expressed in terms of net generation," because generators currently use net generation for reporting purposes.[24] The EPA should use the actually measurable net capacity instead of the theoretical nameplate capacity in calculating reductions under Block 2. Additionally, state regulators use net capacity incorporating summer and winter capacity ratings when determining reserve margins for planning purposes. For Block 2 calculation purposes, the

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[20] U.S. Energy Information Administration, Glossary: Generator nameplate capacity, http://www.eia.gov/tools/glossary/index.cfm?id=G (last visited July 18, 2014).
[21] U.S. Energy Information Administration, Glossary: Generator capacity, http://www.eia.gov/tools/glossary/index.cfm?id=G (last visited July 18, 2014).
[22] U.S. Environmental Protection Agency, GHG Abatement Measures, 3-6 (June 2014). The U.S. Energy Information Agency's database of Forms EIA-860 contains summer and winter capacities for facilities across the U.S. The EPA even refers to Form EIA-860 elsewhere in the GHG Abatement Measures; therefore, it is inexplicable that the EPA chose to use the theoretical nameplate capacity over the known and modeled summer/winter capacities reported in the documents the EPA used to perform the Block 2 analysis.
[23] *Id.*
[24] Proposed GHG Rule, *supra* note 9, at 34,894.

EPA should use 70 percent of net capacity, because that accurately represents an achievable percentage as proven by real world testing as well as allows a reasonable reserve margin. An increase above 70 percent of net capacity decreases available reserve margins and could require additional capital expenditures to ensure system reliability.

By using the measureable and achievable net capacity of Florida's NGCC fleet as listed in Form EIA-860 for 2012[25] and the EPA's generation numbers from the Data File: 2012 Unit-Level Data Using the eGRID Methodology,[26] Florida's NGCC fleet operated at a 61 percent capacity factor for 2012, not 51 percent as used in the calculations for the Block 2 reductions. This difference in the benchmark data results in a reduction of 135.9 lbs/MWh under Block 2 instead of 287 lbs/MWh. A reduction of 135.9 lbs/MWh under Block 2 for Florida is more reasonable since it is based on the correct benchmark data and maintains a reasonable reserve margin to ensure system reliability without incurring additional capital expenditures. However, due to the volatility in fuel prices, the costs associated with maintaining this rate need to be calculated to properly estimate the compliance costs.

Geographic Re-Dispatching Issues

The Proposed GHG Rule limits re-dispatching to within a region's existing fleet.[27] The Proposed GHG Rule places Florida in a southeast region with Kentucky, North Carolina, South Carolina, Tennessee, Mississippi, Alabama, and Georgia. As discussed in the Background section above, Florida's import transmission capability is limited to approximately 3,800 MW, or 6.6% of total capacity. Florida's geographical location and corresponding energy import

[25] U.S. Energy Information Administration, Form EIA-860 for 2012, *available at* http://www.eia.gov/electricity/data/eia860/index.html (last visited July 18, 2014).
[26] U.S. Environmental Protection Agency, Data File: 2012 Unit-Level Data Using the eGRID Methodology, http://www2.epa.gov/carbon-pollution-standards/clean-power-plan-proposed-rule-technical-documents (last visited July 18, 2014).
[27] Proposed GHG Rule, *supra* note 9, at 34,865.

limitations should minimize reliance on regional dispatch hypotheticals and confine Florida's re-dispatch increases (for Final Goal computation) to those within the State going from 61 to 70 percent as discussed above.

Block 3

Block 3 addresses CO_2 emission reductions by using less carbon intensive generating capacity. The EPA accurately states Florida's renewable energy generation capacity in 2012 was 2 percent of total generating capacity.[28] The Proposed GHG Rule bases the Final Goal on Florida increasing its renewable generation levels to 10 percent,[29] which results in emission reductions of 70 lbs/MWh for Block 3.[30]

The Proposed GHG Rule is unclear as to the measurement of renewable energy used to calculate the Block 3 portion of the Final Goal. First, the EPA references the renewable energy capacity in a state,[31] but then the EPA states that the 10 percent figure applies to total annual generation.[32] Given the difference in capacity factor for renewables, which are accepted to have a capacity factor significantly lower than the fossil-fuel fired generation they will replace, versus the total annual generation in MWh, the EPA should clarify that the 10 percent level equals 10 percent of a state's generating capacity. Therefore, using 2012 benchmark figures for determining the Block 3 portion of the Final Goal, renewable energy must account for 5,745 MW of generating capacity. In 2012, Florida had 1,400 MW of renewable energy generating capacity, so Florida would need a 4,345 MW increase of renewable generating capacity to reach the figures the EPA used to calculate the CO_2 emission reductions in Block 3.

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[28] *Id.* at 34,868.
[29] *Id.*
[30] U.S. Environmental Protection Agency, *supra* note 7.
[31] Proposed GHG Rule, *supra* note 9, at 34,866.
[32] *Id.* at 34,868.

Using the U.S. Energy Information Agency's most recent installed costs for utility scale photovoltaic (PV) of $3,873 per kW,[33] the installed cost of 4,345 MW of PV is $16.8 billion. When determining the need for new electric generating facilities, the FPSC always considers the utilization of renewable energy resources, but, by law, the FPSC must also consider cost-effectiveness.[34] As cost-effectiveness is a mandate under State law, the FPSC is concerned about the reasonableness of the cost of renewable energy technologies used to develop the Block 3 component of the Final Goal. The cost of achieving the CO_2 emissions reductions using a proposed 10 percent renewable energy component for calculating the Final Goal does not appear reasonable.

Reliability

Reliability is a very real and very significant concern due to Florida's limited interstate transmission capability. Furthermore, Florida's annual cooling degree days is the highest in the continental U.S. Due to these factors, Florida must rely on intrastate generating facilities capable of continuously meeting high levels of demand reliably. Thus, Florida relies heavily on a robust and dispatchable generating fleet. Many of the low carbon/zero carbon technologies the EPA uses to justify the 10 percent Block 3 calculation are intermittent, non-dispatchable, non-base load technologies. For example, in 2013, PV's capacity factor ranged from 13 to 22 pecent.[35] The low capacity factors of many low carbon/zero carbon technologies (excepting nuclear) combined with Florida's need for dispatchable generation means Florida would need to build additional natural gas-fired facilities and related infrastructure for use as stand-by units for

[33] U.S. Energy Information Agency, Updated Capital Cost Estimates for Utility Scale Electricity Generating Plants, at 6 (Apr. 2013).
[34] § 403.519(3), Fla. Stat. (2013).
[35] U.S. Energy Information Agency, Electric Power Monthly (July 28, 2014), *available at* http://www.eia.gov/electricity/monthly/.

reliability purposes. The EPA errs in failing to account for these additional capital expenditures needed to ensure system reliability.

Block 4

Block 4 calculates CO_2 emission reductions based on a proposed increase in demand side energy efficiency. The Proposed GHG Rule suggests a final demand-side energy efficiency savings of 10 percent for calculating the Final Goal.[36] As with Block 3, the Proposed GHG Rule Block 4 analysis states both a 10 percent avoided capacity and 10 percent of annual sales.[37] The EPA should clarify whether the 10 percent applies to avoided capacity or the percentage of annual sales. The EPA used generalized historical data and EPA analysis to propose that an annual 1.5 percent reduction in capacity demand, culminating in a 10 percent reduction, is reasonable. Florida's historical demand-side energy management (DSM) data proves otherwise.

Florida's DSM program began in 1981. The Florida Energy Efficiency and Conservation Act (FEECA) declares the use of DSM programs to be critical and directs the FPSC to adopt goals and approve plans to implement DSM programs in Florida.[38] Since 1981, Florida consumers have paid more than $5.7 billion for DSM programs.[39] Florida Statutes require that the FPSC establish conservation goals at least every 5 years after a careful analysis of technical potential, cost-effectiveness, and other factors.[40] FEECA utilities then submit compliance plans that are reviewed and considered by the FPSC to ensure they do not result in an undue rate impact. Additionally, Florida has been aggressive in developing building codes and other methods to achieve cost-effective conservation. In the benchmark year of 2012, DSM programs

[36] Proposed GHG Rule, *supra* note 9, at 34,873.
[37] *Id.*
[38] § 366.81, Fla. Stat. (2013).
[39] Florida Public Service Commission, Annual Report on Activities Pursuant to the Florida Energy and Conservation Act, 11 (February 2014).
[40] § 366.82, Fla. Stat. (2013).

achieved a reduction of 259.7 MW (0.45 percent of total capacity) at a cost of $388 million, or $1.49 million per MW of capacity need avoided by DSM. The Proposed GHG Rule's use of 10 percent DSM avoided capacity, which equals 5,745 MW for the 2012 benchmark year, will cost an estimated $8.6 billion each year. Although DSM programs remain critical to the Florida energy mix, the FPSC suggests the EPA's proposal of a 10 percent reduction for purposes of calculating the Final Goal as unreasonable both in terms of proposed cost and achievability based on Florida's actual historic data. Setting an arbitrary goal without considering the technical potential or the cost-effectiveness of the programs to achieve the goal is contrary to Florida Statutes.

Conclusion

The Proposed GHG Rule has the potential for significant rate and reliability impacts on Florida's consumers. The capital expenditures totaling almost $27 billion to reach the reductions proposed under Blocks 1, 3, and 4 are unreasonable. Furthermore, Florida's unique peninsular geography and limited import transmission capabilities isolate Florida in such a manner that a reasonable Final Goal for Florida must be determined using Florida-specific data rather than national or regional data.

Fortunately, Florida implemented programs to incentivize heat rate improvements and demand-side energy efficiency more than 30 years ago. Thus, there is a lengthy historical record for both the cost/benefits analysis and reasonableness of Blocks 1 and 4. The historical data does not confirm the reasonableness of a 6 percent heat rate improvement nor a 10 percent demand-side energy efficiency capacity avoided. Furthermore, using the U.S. Energy Information Agency's current capital cost estimates, the cost of increasing renewable energy capacity by the amount presented in Block 3 for Final Goal calculations for Florida is not reasonable. Also, the

lack of clarity as to whether the Proposed GHG Rule addresses percentage of capacity or percentage of annual generation for determining the Final Goal numbers for Blocks 3 and 4 creates confusion. Finally, the capacity factor used to calculate the emission reductions under Block 2 is inaccurate, resulting in an unreasonable Block 2 calculation for purposes of the Final Goal. The EPA should use net capacity based on reported summer and winter capacity factors to ensure adequate reserve margins and system reliability.

The issues listed above result in an unreasonable proposed Final Goal for the State of Florida. Alternatively, the EPA should establish achievable state goals based on a state-specific analysis conducted by the relevant state agencies using best system of emission reduction methods achievable at the source. Additionally, all data inputs for the analyses should use accurate and historical state-specific data when available.

IV. Transcript

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

PROCEEDINGS:	INTERNAL AFFAIRS
COMMISSIONERS PARTICIPATING:	CHAIRMAN ART GRAHAM COMMISSIONER LISA POLAK EDGAR COMMISSIONER RONALD A. BRISÉ COMMISSIONER EDUARDO E. BALBIS COMMISSIONER JULIE I. BROWN
DATE:	Thursday, September 4, 2014
TIME:	Commenced at 10:36 a.m. Concluded at 11:10 a.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	LINDA BOLES, CRR, RPR Official FPSC Reporter (850) 413-6734

P R O C E E D I N G S

CHAIRMAN GRAHAM: Okay. I think it's time to start the meeting. Let the record show it is still Thursday, September the 4th. It's about 10:35, and this is the Internal Affairs meeting.

I want to welcome everyone for being here today. I'm going to take a little time of personal privilege for Commissioner Balbis.

COMMISSIONER BALBIS: Thank you, Mr. Chairman. And I want to thank my fellow Commissioners for this moment.

My advisor, John Truitt, has been with me for over a year now, and today is his last day unfortunately. But he is going to move on from the Public Service Commission. I just want to recognize him for all the hard work that he has done and the sound legal advice and other advice that he's given me over the past year. And I did enjoy working with him, and I just wanted to recognize him and thank him. And for all of you that are out there, you have one day left to blame him for things that I do, and then after that I'm on my own. But I just wanted to say that, so thank you.

(Applause.)

CHAIRMAN GRAHAM: John, it was good having you around, and good luck on your future endeavors.

MR. TRUITT: Thank you, Mr. Chairman.

CHAIRMAN GRAHAM: Okay. Staff, item number 1. Take it away.

MS. ORTEGA: Good morning, Commissioners. Anna Ortega with staff, with Jim Breman and Kathryn Cowdery.

Item number 1 contains information on two recent EPA proposals which would regulate CO2 emissions from existing sources: First, the proposed rule for modified and reconstructed sources; and, second, the Clean Power Plan, which establishes state-specific CO2 emission limits.

Staff is here today to provide you with a briefing on the two rules and answer any questions that you may have; also to provide you with a little background information on where we are with the process. To help inform staff and the Commission on the various aspects of the EPA proposals, staff solicited comments on both of the actions from interested persons. Those responses can be found on the Commission's web page.

Additionally, staff sent out information requests to Florida electric generating units to get some specific technical aspects of both proposals. Attachment C of the item has a high level summary of those responses.

Staff continues to analyze the very complex rules summarized in this packet and also go through the voluminous technical support documents. In addition, we have met several times with DEP, also with the Florida Electric Power Coordinating Group, and will continue to participate in relevant meetings, webinars, and otherwise track the EPA developments. EPA is soliciting comment and will take comment on both proposals, which are due October 16th of this year.

If you'll allow, I'll go in just a high level summary of the two proposals that we have in the packet. Attachment A is a summary of the modified and reconstructed rule, and it also provides background on the specific areas of the Clean Air Act that the EPA looked to in developing the two proposals.

As you are aware, these proposals were both issued on June 18th of this year. The modified and reconstructed rule sets specific unit base standards on the units. EPA has proposed setting the same standards for the modified and reconstructed natural gas plants as it has in the new source performance standards, but they set a less stringent standard on modified and reconstructed coal plants.

Secondly, the Clean Power Plan, which was also published on June 18th, has emission standards that are

proposed in the rate base form, which is the form of a pound of CO2 per megawatt hour for each state.

The clean air -- Clean Power Plan has two parts: First is the state-specific CO2 emission standards and, second, our guidelines for states to develop plans to submit to the EPA.

EPA determined the best system of emission reductions and then imposed those national and/or regional assumptions for the building blocks which are the best system of emissions performance on the states. Attachment B goes into the details of the Clean Power Plan, and it also includes a description of how EPA set the targets for Florida.

Finally, in the packet you'll find Attachment D, which contains general topics that staff has identified as important considerations for Florida in meeting those EPA standards. If directed by the Commission, these are the areas that staff would use to prepare comments for the Commission to consider at the next Internal Affairs meeting.

Staff is here to answer any specific questions you have on the proposed rules.

CHAIRMAN GRAHAM: Commissioner Balbis.

COMMISSIONER BALBIS: Thank you, Mr. Chairman. And I want to thank staff for the overview of the

proposed EPA rules. And I wanted to focus primarily on EPA's 111(d), or the Clean Power Plan.

As we all know, Florida has a very unique geography and we do not have the interconnections with other states that other states may have. In developing the 740 pounds per megawatt goal, the EPA used four building blocks that I have significant concerns that they had incorrect assumptions and mistakes, technical mistakes in developing those blocks.

In block one, the EPA assumes that we can easily and cost-effectively achieve a 6 percent improvement in heat rate. As we all know, we've had GPIF in place for decades, and I cannot find a single investor-owned utility that has achieved a 6 percent improvement consistently.

In block two, the EPA assumes that we can easily and cost-effectively achieve 70 percent utilization rate for our gas power plants. Unfortunately they use nameplate capacity, which grossly overestimates how much generation we can actually achieve.

In block three, the EPA assumes that we can cost-effectively have 10 percent of our electricity generated with renewable energy. By statute we're required to look at the cost-effectiveness of

generation, and just having an arbitrary 10 percent goal may result in significant impacts to ratepayers.

And finally in block 4, the EPA estimates and assumes that we can cost-effectively achieve a 10 percent conservation goal. Once again, we're required by statute to look at the technical potential and cost-effectiveness of conservation measures before we implement those goals. And with all these four measures and with the technical issues and incorrect assumptions that have been made, and staff have mentioned several of these, the sum total of these using the EPA's own numbers is over a $26.5 billion impact.

So given those impacts and the mistakes that are made, I've put together just some general comments that I'd like to have staff to consider when they go back and prepare the formal comments for our full consideration.

Given the statewide impacts, I feel that this is the single most important issue facing Florida ratepayers today, and I want to make sure that the Public Service Commission has an active role in this process. So I've put together some comments for, you know, the Commission and staff. Since I'm kind of shorthanded, I'm not sure who's going to hand those out, but -- I see Ms. Stauffer is going to do that.

(Document handed out.)

Mr. Chairman, that's all I had.

CHAIRMAN GRAHAM: Okay. Other Commissioners. Commissioner Edgar.

COMMISSIONER EDGAR: Thank you, Mr. Chairman.

Just very generally first as we kind of kick off our discussion today, first I want -- or second I want to commend our staff who have put a lot of time into this issue. I know I've had many discussions and many meetings with them over the time since this proposal has come out and also the months leading up to it as the EPA was gathering data and was going on, as they called it, their listening tour. And I think the background information that has been provided is very good. I found it very, very concise, which I appreciate, and very well covered a number of very complicated and very technical issues. So thank you for the work that you've done to get us to this point, and thank you in advance for the work that you will be continuing to do for quite a while, I hope, as we continue to look at this issue.

Commissioner Balbis, also thank you for your attention to this issue. Obviously -- this is kind of heavy. Commissioner Balbis has given us a handout of approximately 12 pages. Clearly I'm going to need a

little bit of time to absorb it, so I'm not sure where you want us to go with this from here, but I'll come back to that.

So from then, just again to kick off, I know that our staff has also been coordinating with staff at our sister agency, Department of Environmental Protection, and I want to thank you for taking that initiative and also thank them for the work that they've done. We, you know, all represent the same people and the same interests but, of course, have different statutory jurisdictions and different areas of technical expertise. And it's wonderful to have a good example of that type of cooperation and sharing, and I know that will continue as well.

Commissioner Balbis touched on what I think are the two most central issues from our authority and our jurisdiction, which is potential impacts on reliability and the potential cost impacts and how those will or may flow through to the ratepayers, and what our ability is to discern the value and the appropriateness of those steps and of those costs. I know that with the proposal I believe there are a number of legal issues that are raised and are questions that I have and I think that many, many people have. Many who are experts on the Clean Air Act have a number of questions. And so

I think as we go forward at drafting potential more specific comments, that some of those legal issues should be raised. And we can talk about that more now or we can all continue to coordinate with staff.

But the reliability issue and the potential cost impact are the two key areas that I would ask that we highlight. And I would, Mr. Chairman, and to my fellow Commissioners, say that I do support our staff working to put together draft specific comments for our consideration based on our comments and input and that that then come back to us and that we seriously consider the option as an agency of filing officially comments with the EPA and take advantage of this comment opportunity.

I recognize, as does Commissioner Balbis or as he pointed out, that because of our geography and some other factors that we are uniquely situated, and therefore there will be many comments, I think, from other states and stakeholders in other states that we will probably share and have in common. But I think there are some factors that are specific to Florida, and it is our responsibility to raise those and to make them clear so that the EPA can at least have that information from us and hopefully factor it in as they go on to their next steps.

I also have some, a few more specific comments on a few of the specific building blocks and how they are supposed to or may or may not interact as we, as we get to that -- give me just a second to look at my notes -- one of which is the potential impact on fuel diversity or lack of fuel diversity. I'd like to touch on that a little bit more. And then also the reality of what I believe is inherent in the structure of the rule, which is to push states and operators from what we have always termed as economic dispatch for efficiency and cost-effectiveness to what has been termed environmental dispatch and a number of issues practically and from a cost standpoint that could be raised from that.

So that's just kind of generally to help us go from this point, Mr. Chairman, and I'm very interested in hearing from my colleagues.

CHAIRMAN GRAHAM: Thank you, Commissioner Edgar. I think you touched on, well, the two things that I think are most important in this, and it's going back to what our mission is on the Public Service Commission is, number one, there's a financial impact. I think, you know, the, how that, how this is all going to financially impact the individual ratepayers and the utility industry as a whole here for the State of Florida, and the other thing is going to be grid

reliability. You know, we can get down into a lot of the other details that probably other agencies probably should get into, and just remind everybody that we are not, we are not writing the comments for the entire State of Florida individually how this is going to affect you. It needs to be comments on what our job mission is here at the Public Service Commission.

That being said, let's move on to Commissioner Brisé.

COMMISSIONER BRISÉ: Thank you, Mr. Chairman. I think many of the comments -- I join in many of the comments that have been made by my colleagues in addressing the fact that within our role and mission we have to look at reliability and the cost. And at the end of the day, I think the -- those are the two factors that are most important.

But I'm very interested -- and I'll leave it at interested at this point -- in the implementation aspects of it and getting clarity on how this could be enforced. And I think our comments need to reflect that we need clarity on some of those, on some of those key factors.

The other thing that I think, and recognizing that there are other agencies that may be addressing some of these issues, but I think we as a Commission

need to also look at what legal authority that we have as a Commission to regulate what we regulate per our statutes and where the delineation is between the federal powers and the state powers as it relates to federalism or cooperative federalism and so forth. So those are things that I think our comments should also address.

And recognizing that there is a traditional way of doing this through the traditional state regulatory powers that currently exist and that is the current regime, and so any movement from that regime, we have to get full clarity as to how that is going to be addressed and delineated. So outside of what the numbers will bear out, I think it's important to establish the baseline as to how this will work, and then I think our comments need to reflect our concern about that.

CHAIRMAN GRAHAM: Commissioner Brown.

COMMISSIONER BROWN: Thank you. And I would agree four times over and am very supportive as well with regard to preparing concise comments.

I do want to thank our staff for their continued work on it, for your role at the NARUC level and monitoring this, and your future continued work on it as well. So thank you for that.

And I know that we talked about possibly asking questions. And as I stated, I would support all of that that has been discussed by my fellow Commissioners. But my focus really is on the cost impacts. And we've already had briefings on this and discussed it but just -- and, of course, on the reliability as a result of this federal mandate.

Various analyses I've read -- the ***Wall Street Journal***, the U.S. Chamber -- they have different cost impacts ranging from $50 billion a year for businesses to about $28 billion per year. And the southern, southeastern states, including Florida, is going to face the biggest rate impact.

Do you have an estimate, perhaps a rough estimate on what that actual impact could potentially be in Florida?

MS. ORTEGA: Thank you, Commissioner. I think what's been raised a couple of times here is the amount of uncertainty and actual implementation. And until we have certainty of how the final rule will look and also what DEP submits to EPA as their implementation plan, that's really when we can do a better or best cost estimate. But because of the uncertainty, at this point staff hasn't been able to really develop a cost estimate for you.

COMMISSIONER BROWN: And that was the answer I was expecting. I just wanted to give you an opportunity.

Also, you sent out a solicitation of comments that went out not just to the Florida Electric Power Coordinating Group but also to just the general group of stakeholders. I think there were five questions. And you've compiled them but they're not attached in our packet here.

MS. ORTEGA: They are not. Excuse me. They are not attached in the packet, but they are available, all the responses are available on the Commission website. And staff can certainly give a printout to you after this hearing.

But we did solicit information or provide an opportunity for a wide group of commenters to give us their take, if you will, on the proposals, both proposals. And as of yesterday, we were still receiving some comments, but they have all been posted on the website.

COMMISSIONER BROWN: Okay. Thank you.

And this is a question for Ms. Cowdery with regard to taking comments. The EPA extending the potential date, that's currently at October 16th. Do you have any insight into whether the EPA is inclined to

extend that date?

MS. COWDERY: I have no specific information about any action that they have taken or not taken or that they may take or may not take regarding the requests for extension of time. There are about a dozen requests for extension of time on providing comments to both rules, one or the other or one or both rules that go between 90 days, 120 days, 60 days. But thus far there's been no word that I am aware of from EPA on those requests.

COMMISSIONER BROWN: Has FCG, have they submitted a request to extend?

MS. COWDERY: Yeah. FCG has requested a 90-day extension. City of Tallahassee also, Seminole Electric Cooperative also. I have not checked in the last couple of days to see if any other Florida interests have submitted a request for extension.

COMMISSIONER BROWN: Okay. Thank you.

MR. BAEZ: Mr. Chairman?

CHAIRMAN GRAHAM: Yes, sir.

MR. BAEZ: I was going to mention at the tail end of the discussion but Commissioner Brown raised it now, discussing an extension or a request, a letter requesting an extension is completely appropriate. We've discussed it among the staff, and there's no

heartburn over putting out such a letter, if it's your pleasure to do so. It's something that you all can consider and discuss, and it's not -- you know, we're still on time to do it.

I will mention, however, I think it's been alluded to in our discussions, I don't think that there's anyone that has serious hopes that an extension might be granted. Having said that, I don't, I don't think it's inappropriate for us to at least consider it. So we're prepared to do whatever the Commission's pleasure is on that subject.

MR. KISER: Mr. Chairman, I think that the information that we've got in that staff report and accompanied by Commissioner Balbis's observations probably ought to be forwarded to our congressional delegation. And I know it's with great regret that Commissioner Balbis is leaving, but perhaps if his name were placed in the right spot, he could be called on to testify before Congress. They keep having hearings on a lot of these issues, particularly the reasonableness of how these are going to impact the states. And perhaps someone from Florida testifying, because we do set a pretty good -- we have a pretty good case to take to them compared to maybe some other states. But these issues need to get to the congressional delegation so

they too in their capacities on the various committees they serve on can weigh in on the unique characteristics of Florida and how this really treats us unfairly.

CHAIRMAN GRAHAM: Commissioner Edgar.

COMMISSIONER EDGAR: Thank you, Mr. Chairman. And I agree completely that when we have -- are at the point that we have comments finalized and approved that I would absolutely consider and encourage that we send those to our congressional delegation and others as we can discuss. I don't think we're quite at that point in our review and in our process.

As Commissioner Balbis knows, and I don't know if our General Counsel does or not, but coincidentally I was asked to testify before a congressional committee on these issues about three weeks ago. And I declined because I did not think that we were at a point yet where we had taken a position and, therefore, it felt premature to me for us to speak specifically on those issues for Florida. But I'm sure that that opportunity will come again. So when we're at that point, we'll see if we can use those avenues as well.

If this is the appropriate time, Mr. Chairman, there are a few other points that I would like to point out just generally that may have come up. But just in case they haven't, one is that I would ask our staff to

consider including in our comments that EPA better give credit for early reductions. I do believe that there are a number of states, Florida in particular, who have taken a number of steps over the years, and our ratepayers have both benefited from it but also have contributed through their rates and their dollars to taking those steps. And with some of the assumptions that are built in, I do not believe that we are given credit for that. And I would like that we consider highlighting that point and asking for a change in the rule specifically for Florida and other states that are so situated.

Commissioner Brisé raised the point of under this rule there being, if not the active purpose, but certainly the inference that through this process that a number of areas that are within the jurisdiction of the states both by state law and by the Federal Power Act and a number of other federal requirements would be somewhat shifted potentially to the federal environmental agency. That is of concern to me, and I would ask that we consider how to best raise that issue that not just that areas such as energy efficiency, conservation, and fuel diversity, and others are not just traditionally reserved to the states but are appropriately reserved to the states, and that the

unique nature of many states and many regions that that should continue to be the case and should not be co-opted through this kind of side door through the Clean Air Act and however is the best way to term that to raise that issue.

I would also ask that we consider raising the issue that the interim target is of concern; that if there are going to be interim targets, my suggestion would be that it be more of a goal or a direction rather than an enforceable requirement, primarily because I don't think the timeline is realistic.

I mentioned the issue of fuel diversity. I think that's very, very important. For as many years as I've been involved in environmental policy in the State of Florida, which I assure you is a very long time, we have had as a policy component as a state a desire for fuel diversity and the recognition that fuel -- that a diverse fuel portfolio is in the best interest of our consumers, our economy, and our environment. However, at the same time our fuel diversity or the diversity within our fuel portfolio has been diminishing for a variety of reasons. And at this point we are, you know, coming up to, not too far away, 70 percent natural gas. And under this proposal I think it really again encourages, if not forces, a continuing move in that

direction, and I think that that is a concern and something that we should raise.

I also would ask that our staff look at the point that -- my understanding is within the draft rule that the baseline is one year and that that baseline should more appropriately be the average or consideration of a several-year period, not just a one-year snapshot.

I also, and this has come up a little bit, but I recognize that under the rule that it does encourage regional cooperation and regional agreement. I certainly encourage that and support it. But I also -- just put out there for discussion and consideration -- recognize that Florida and many states in the southeast and the northwest for a variety of reasons are not in an RTO or a MISO type arrangement, making that regional approach problematic for a variety of reasons -- legally, cost wise, and implementation -- and would ask that we look very closely that because that may not be an option for us in at least the first few years, that we not be penalized somehow because of that.

The issue was raised about enforceability, and I think there are a number of points there that again I would ask our staff to look at for our consideration, including the issue of the Clean Air Act being

potentially applied here or implemented for that outside the fence rather than within the fence line is kind of the way it's been described, but a site specific requirement. And I recognize that many states, I believe ours included, did ask the EPA give flexibility in, as they were drafting the rule, and I recognize that that is in there. But I also recognize that there are many questions as to how that would actually be enforced and applied. And so, again, I would ask that we continue to look at that.

Thank you, Mr. Chairman. Again, I look forward to more discussion and will chime in if I think of anything else.

CHAIRMAN GRAHAM: Commissioner Balbis.

COMMISSIONER BALBIS: Thank you, Mr. Chairman. And I couldn't agree more with Commissioner Edgar. In fact, on the regional opportunities, I was in a conference, I believe, in Washington where there were different states discussing these opportunities, and maybe because of lack of communication I was surprised to see that Commissioner Edgar was moderating the panel. So she is certainly aware of the issues associated with the, with our lack of interconnection with other states as it pertains to Florida. So I think we are very well represented.

One additional request or direction to staff, since there are so many uncertainties on some of the costs, but I do think it's important for us to at least use the EPA's own numbers for it. And especially in building block one in their technical support documents they have a cost per kilowatt for heat rate improvements, and it's a very easy calculation to do. And in building block two there's a lot of uncertainty there, and I certainly don't expect staff to put a number to that.

But in building block three the EPA does have a cost per kilowatt of renewable generation, so that's a relatively simple calculation. And in building block four, we do know that, you know, Florida customers have paid almost $300 million per year to achieve the conservation that we do in a cost-effective manner. So that, you know, one way to estimate would be to extrapolate that to the 10 percent at least to have an idea, you know, knowing that with what is known and what EPA so helpfully provided us in their support documentation we can at least start grasping the magnitude of the potential impacts.

CHAIRMAN GRAHAM: Any other Commissioners?

Staff, do you understand your orders?

MS. ORTEGA: Loud and clear.

CHAIRMAN GRAHAM: I do thank you so very much for what you've put together so far and for putting all the comments that we received in on the website. I think that's helpful for all of us Commissioners and for the general public to see what sort of comments are coming in and what direction we see ourselves going. Seeing nothing else from the other Commissioners, I thank you very much, and do good work and come back soon.

Next on the agenda is the Executive Director's report.

MR. BAEZ: Commissioners, no report today, except to put a bow on this.

What we're anticipating is having a set of draft comments before you for the October 2nd, I believe is the date of the next IA. And at that point, you know, things will go as normal.

I know that we used a little bit more of a hybrid approach to take public comment and to kind of develop these comments before you. I'm hoping -- I trust it's working to everyone's expectations so far. But we'll be back on to a more traditional comment and draft comments and public comment structure for the next time, so you'll have some drafts before you to vote on and change as you will.

CHAIRMAN GRAHAM: Thank you.

MR. BAEZ: Thank you.

CHAIRMAN GRAHAM: Okay. Other matters? Seeing none -- I like this -- it is 10 after 11:00, and we are adjourned. Everybody please travel safely.

(Internal Affairs concluded at 11:10 a.m.)

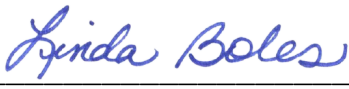
STATE OF FLORIDA)
: CERTIFICATE OF REPORTER
COUNTY OF LEON)

I, LINDA BOLES, CRR, RPR, Official Commission Reporter, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 11th day of September, 2014.



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