

I. Meeting Packet



State of Florida
Public Service Commission
INTERNAL AFFAIRS AGENDA

Wednesday, April 27, 2011

9:30 a.m.

Room 140 - Betty Easley Conference Center

-
1. Approve April 6, 2011, Internal Affairs Meeting Minutes. (Attachment 1)
 2. Update on U.S. Environmental Protection Agency Rulemakings with Presentations by Investor-Owned Electric Utilities. (Attachment 2)
Presentations will be in the following order:
Florida Power & Light; Gulf Power; Progress Energy Florida; Tampa Electric
 3. Legislative Update. (No Attachment)
 4. Other matters, if any.

TD/sa

OUTSIDE PERSONS WISHING TO ADDRESS THE COMMISSION ON
ANY OF THE AGENDAED ITEMS SHOULD CONTACT THE
OFFICE OF THE EXECUTIVE DIRECTOR AT (850) 413-6068.



State of Florida
Public Service Commission
INTERNAL AFFAIRS MINUTES

Wednesday, April 6, 2011

9:30 am - 10:22 am

Room 140 - Betty Easley Conference Center

COMMISSIONERS PRESENT: Chairman Graham
Commissioner Edgar
Commissioner Brisé
Commissioner Balbis
Commissioner Brown

STAFF PARTICIPATING: Devlin, Hill, Kiser, Casey, DeMello, C. Miller, Fogleman,
J. Miller, Harlow, Cibula, Shafer, Futrell

OTHERS PARTICIPATING: Matt Feil - CompSouth
Mitch Ross - Florida Power & Light Company
Paul Lewis, Jr. - Progress Energy Florida
Charles Rehwinkel - Office of Public Counsel

1. Approve March 8, 2011, Internal Affairs Meeting Minutes.

The minutes were approved.

Commissioners participating: Graham, Edgar, Brisé, Balbis, Brown

2. Draft Comments in Response to the Federal Communications Commission Notice of Proposed Rulemaking on Lifeline and Link-Up Reform and Modernization. Critical Dates: Comments are due April 21, 2011.

The Commissioners approved the draft comments for submittal to the Federal Communications Commission.

Commissioners participating: Graham, Edgar, Brisé, Balbis, Brown

Minutes of
Internal Affairs Meeting
April 6, 2011
Page Two

3. Draft Comments to the Federal Communications Commission Regarding High-Cost Universal Service Programs and Intercarrier Compensation. Critical Dates: Comments are due April 18, 2011.

The Commissioners approved the draft comments for submittal to the Federal Communications Commission.

Commissioners participating: Graham, Edgar, Brisé, Balbis, Brown

4. Potential FPSC *Amicus* Filing in *National Association of Regulatory Utility Commissioners v. U.S. Department of Energy*, D.C. Circuit Court of Appeals (Case No. 11-1066). Commission guidance is sought.

After some discussion, the Commissioners directed staff to submit an Amicus filing with the D.C. Circuit Court of Appeals, and to coordinate with the Office of Public Counsel on making a joint filing.

Commissioners participating: Graham, Edgar, Brisé, Balbis, Brown

5. Legislative Update.

Mr. Futrell and Mr. Shafer briefed the Commissions on proposed legislative bills and other matters of interest. The Commissioners directed staff to provide Commissioners copies of suggested amendments to legislative bills.

6. Other matters, if any.

There were no other matters discussed.

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: April 19, 2011
TO: Timothy J. Devlin, Executive Director
FROM: Judy G. Harlow, Senior Analyst, Division of Regulatory Analysis
 Cindy B. Miller, Senior Attorney, Office of the General Counsel
RE: Update on U.S. Environmental Protection Agency Rulemakings with Presentations
 by the Investor-Owned Electric Utilities

Critical Information: Please place on the April 27, 2011 Internal Affairs –
Commission guidance is sought.

At the March 8, 2011 Internal Affairs meeting, the Florida Public Service Commission's (FPSC) staff provided an update on six ongoing rulemakings at the U.S. Environmental Protection Agency (EPA). The Commissioners requested that staff continue to monitor these rulemakings and pursue additional information on the potential impact on Florida's utilities and ratepayers. This item provides an update on staff's outreach activities and summaries of two recently released EPA proposed rules. Staff seeks guidance on whether to prepare draft comments on the proposed EPA rules. Finally, the investor-owned electric utilities (IOUs) will make presentations on the EPA rulemaking proceedings and the potential impacts. The IOUs' presentations are included as attachments.

Outreach Activities

On Thursday, March 10, 2011, FPSC staff met with staff members of the Florida Department of Environmental Protection's (FDEP) Division of Air Resource Management to discuss EPA's air emission-related rulemakings. FDEP provided background information on the functions of the Division of Air Resource Management. We then discussed three of EPA's rulemakings and the potential impact on Florida's electric utilities, including: (1) the Interstate Transport Rule, (2) National Emissions Standards for Hazardous Pollutants, and (3) greenhouse gas regulations. FDEP provided contacts for future questions from the FPSC on the EPA rulemakings. FPSC and FDEP staff committed to keep the lines of communication open as EPA issues its draft rules. FDEP staff also committed to letting FPSC staff know if they intend to file comments on upcoming EPA draft rules.

EPA's Proposed Rules

Subsequent to the Internal Affairs meeting, EPA released two of its proposed rules. On March 16, 2011, EPA issued a proposed rule that sets national emission standards for mercury and air

toxics for electric generators that burn coal or oil. On March 28, 2011, EPA released its proposed Cooling Water Intake Structure rule. Summaries of the proposed rules are included below.

I. EPA's Proposed National Emission Standards for Mercury and Air Toxics

The Clean Air Act requires EPA to set emission standards for all hazardous air pollutants. The standards must be at least as stringent as the emission reductions achieved by the average of the top 12 percent best controlled sources. This is referred to as the “maximum achievable standard” or MACT standard.

EPA's existing Clean Air Mercury rule (CAMR), established in 2005, was litigated and remanded to EPA by the U.S. Court of Appeals. The Court established a schedule for EPA to issue a proposed rule implementing Title I of the Clean Air Act, which obligates EPA to develop an emission control program for listed hazardous air emissions, including metals, acid gases, and particulate matter. Consequently, EPA issued its proposed rule to replace CAMR on March 16, 2011. In addition to setting standards for air toxics, EPA proposes to revise its existing new source performance standards (NSPS) for coal- and oil-fired electric generators.

Mercury and Air Toxics Standards (MACT Standards)

The proposed MACT standards apply to all existing and new coal- and oil-fired electric generating units. EPA estimates approximately 1,350 generating units will be affected nationwide. As shown in Attachment A, in 2009, coal was used to generate 24.2 percent of Florida's energy, while oil-fired generation provided 2.6 percent.

EPA forecasts the health benefits associated with reduced exposure to fine particulates at \$59 billion to \$140 billion per year, beginning in 2016. EPA estimates the total national annual cost of the proposed MACT standards at \$10.9 billion in 2016, the first year of compliance. This translates into residential electricity bill increases of approximately \$3 to \$4 per month and a 1.3 percent increase in residential natural gas prices. Major provisions of the proposed MACT standards include:

- EPA proposes to set specific air toxics standards for: (1) two subcategories of coal-fired generators, (2) two categories of oil-fired generators, and (3) a subcategory for integrated coal gasification units.
- The standards would place limits on emissions of: (1) metals, including mercury, arsenic, chromium, and nickel; (2) acid gases, including hydrogen chloride and hydrogen fluoride; and (3) particulate matter.
- EPA has allowed for utilities to meet the standards based on the average emissions from existing units within the same subcategory, rather than requiring utilities to meet the standards for each generating unit. This will provide some flexibility for utilities to reduce compliance costs.

- EPA proposes to establish operational practices, rather than specific numerical emission standards, to limit emissions of organic air toxics, including dioxin/furan. An annual performance test program will be required at each generator to identify needed maintenance and ensure reduced air toxic emissions through optimal combustion.

EPA states that a wide range of compliance technologies and strategies are available, including wet and dry scrubbers, dry sorbent injection systems, activated carbon injection systems, and baghouses¹. Utilities can also reduce emissions by installing generation efficiency measures and encouraging consumer energy efficiency measures.

The Clean Air Act provides for a three-year compliance period. Utilities may request one additional year to meet the standards from the state's environmental regulator. The Act also provides the authority to the President to extend compliance deadlines if costs are deemed prohibitive or a sufficient supply of compliance technologies is not available.

New Source Performance Standards (NSPS)

The proposed rule also contains revised NSPS for coal- and oil-fired generators. NSPS apply to new, modified, and reconstructed affected facilities. The revised standards address emissions of particulate matter, sulfur dioxide, and nitrogen oxide.

Status of the National Emission Standards Proceeding – Comment Period

EPA is soliciting comments on its March 16, 2011, proposed National Emission Standards rule. The comment period will be open for 60 days following publication in the Federal Register. As of this date, the proposed rule has not been published. EPA also intends to hold public hearings in Atlanta, Chicago, and Philadelphia. The dates for these hearings have not been released. After considering public comments, EPA is required by the Court's order to issue a final rule by November 16, 2011.

II. EPA's Proposed Cooling Water Intake Structure Rule

Portions of EPA's existing Cooling Water Intake Structures rules were litigated and remanded to EPA by the U.S. Circuit Court. Pursuant to the Court's order and an agreement by the parties, on March 28, 2011, EPA proposed new rules that would impose cooling water intake requirements under Section 316(b) of the Clean Water Act. The rules apply to existing power generating facilities and existing manufacturing and industrial facilities that meet a specified water withdrawal threshold. Section 316(b) requires that National Pollutant Discharge Elimination System (NPDES) permits for facilities with cooling water intake structures ensure that the location, design, construction, and capacity of the structures reflect the best technology available

¹ A baghouse is an emission-control device that uses heat-resistant, fiberglass mesh to trap fly ash to prevent it from exiting the generating plant's stack.

to minimize harmful impacts to aquatic wildlife. In Florida, the FDEP acts as the permitting authority to issue NPDES permits on EPA's behalf.

The rule sets a water withdrawal threshold for affected facilities of at least 2 million gallons of water per day from U.S. waterways, with at least 25 percent used for cooling purposes. The industries most likely to be subject to the rule include power generation and the manufacturers of aluminum, iron, steel, petroleum, paper, chemicals, and food processors. EPA estimates that 1,260 existing facilities nationwide will be subject to the proposed rule, including 670 power plants. Approximately half of the total facilities subject to the rule are estimated by EPA to be in compliance with the proposed impingement standards. According to FDEP staff, the proposed rule is expected to impact all of Florida's electric generators that use surface water for once-through cooling water systems. Because the proposed rule applies to both salt and fresh water resources, Florida generators that withdraw cooling water from the Atlantic Ocean, Gulf of Mexico, and inland waterways could be affected.

There are three major components to the proposed rule:

- *National Impingement Standards* – Existing facilities that meet the water withdrawal threshold would be subject to an upper limit on how many fish can be damaged or killed by being pinned against a cooling water structure, such as a screen. Utilities would have two means to comply. First, the facility could establish monitoring systems to ensure that the standard is met. Utilities would have the flexibility to determine the appropriate technologies necessary to meet the standard. Second, the facility could reduce water intake to a velocity of 0.5 feet per second. The staff of the National Association of Regulatory Utility Commissioners (NARUC) believes that meeting this velocity standard would require a closed loop cooling system.
- *Entrapment Studies* – Existing facilities with very large water withdrawals of at least 125 million gallons per day would be required to conduct site specific studies on the damage to aquatic wildlife due to entrapment in the cooling water system. These studies would be used by permitting authorities in determining on a case-by-case basis whether further controls are needed to reduce entrapment damage. Permitting authorities would be required to allow for public input in this decision process.
- *Closed Loop Cooling for New Facilities* – New units that add generation capacity at existing facilities would be required to reduce the water intake flow to a level similar to a closed-loop cycle cooling system. Unlike the current rule, the proposed rule removes the flexibility for new facilities to deploy restoration efforts to meet this standard. EPA has interpreted the Court's order to state that restoration efforts are inconsistent with the Clean Water Act.

Existing facilities would have up to eight years to comply with the proposed rule. New units must be in compliance when placed in service.

Status of the Cooling Water Intake Proceeding – Comment Period

EPA is soliciting comments on its March 28, 2011, proposed Cooling Water Intake Structure rule. The comment period will be open for 90 days following publication in the Federal Register, which is anticipated on April 20, 2011. After considering public comments, EPA is required by the Court's order to take final action by July 27, 2012.

III. Next Steps

NARUC has established a coordinating committee on the EPA rulemakings to coordinate NARUC's response to the rulemakings. The committee will also provide educational opportunities for Commissions and their staff members. FPSC staff will participate in any educational opportunities, if possible.

NARUC staff stated that a final determination has not been made about the extent of written comments that will be provided to EPA on the two rulemakings. At a minimum, NARUC will file as its comments the resolution passed by NARUC at its 2011 Winter Meetings, entitled "Resolution on the Role of State Regulatory Policies in the Development of Federal Environmental Regulations." The resolution urges the EPA to ensure that, as it develops public health and environmental programs, it will:

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

- Engage in timely and meaningful dialog with State energy regulators in pursuit of these objectives.
- Recognize and account for, where possible, State or regional efforts already undertaken to address environmental challenges.

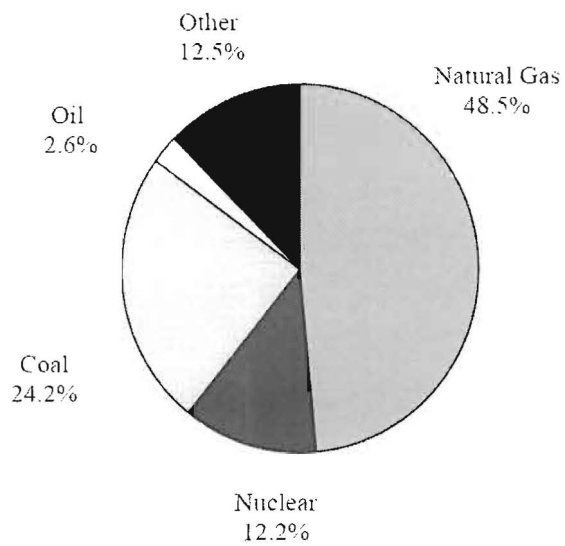
The resolution can be found at <http://www.naruc.org/meetingresolutions.cfm?2011-02-16>.

FDEP is the lead agency responsible for environmental issues and for reviewing EPA rules. FDEP is analyzing the expected impact to Florida of the proposed rules and is tentatively planning to file comments with EPA on both proposed rules.

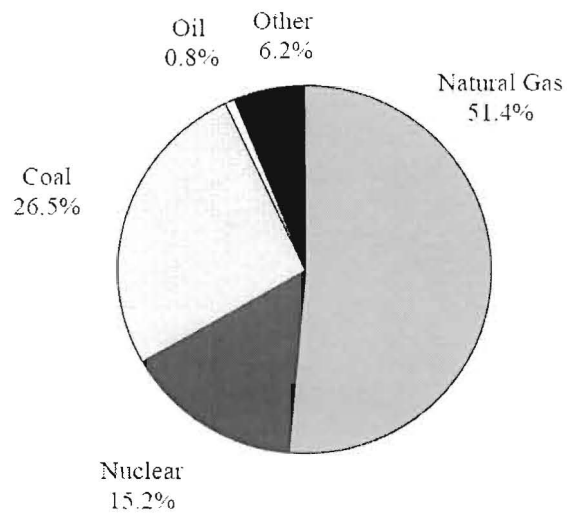
Staff seeks Commission guidance on whether to file written comments in one or both EPA rulemakings. The proposed MACT rule is a more immediate concern due to the tighter timeframe for comments. If the Commission wishes, staff could provide draft comments on the proposed MACT rule at the May 25, 2011 Internal Affairs meeting. Draft comments on the proposed Cooling Water Intake Structure rule could be provided at a later date. Draft comments could discuss: (1) expected cost and reliability impact information provided by Florida's IOUs, (2) any available information on the expected impact on Florida's ratepayers, (3) the FPSC's cost recovery mechanism for environmental compliance costs, and (4) the general principles in the NARUC resolution. In concert with EPA comments, staff could provide Commissioners with a draft letter to the Florida delegation summarizing key points in the EPA comments.

Florida Energy Generation by Fuel Type

2009
(Actual)



2019
(Forecast)



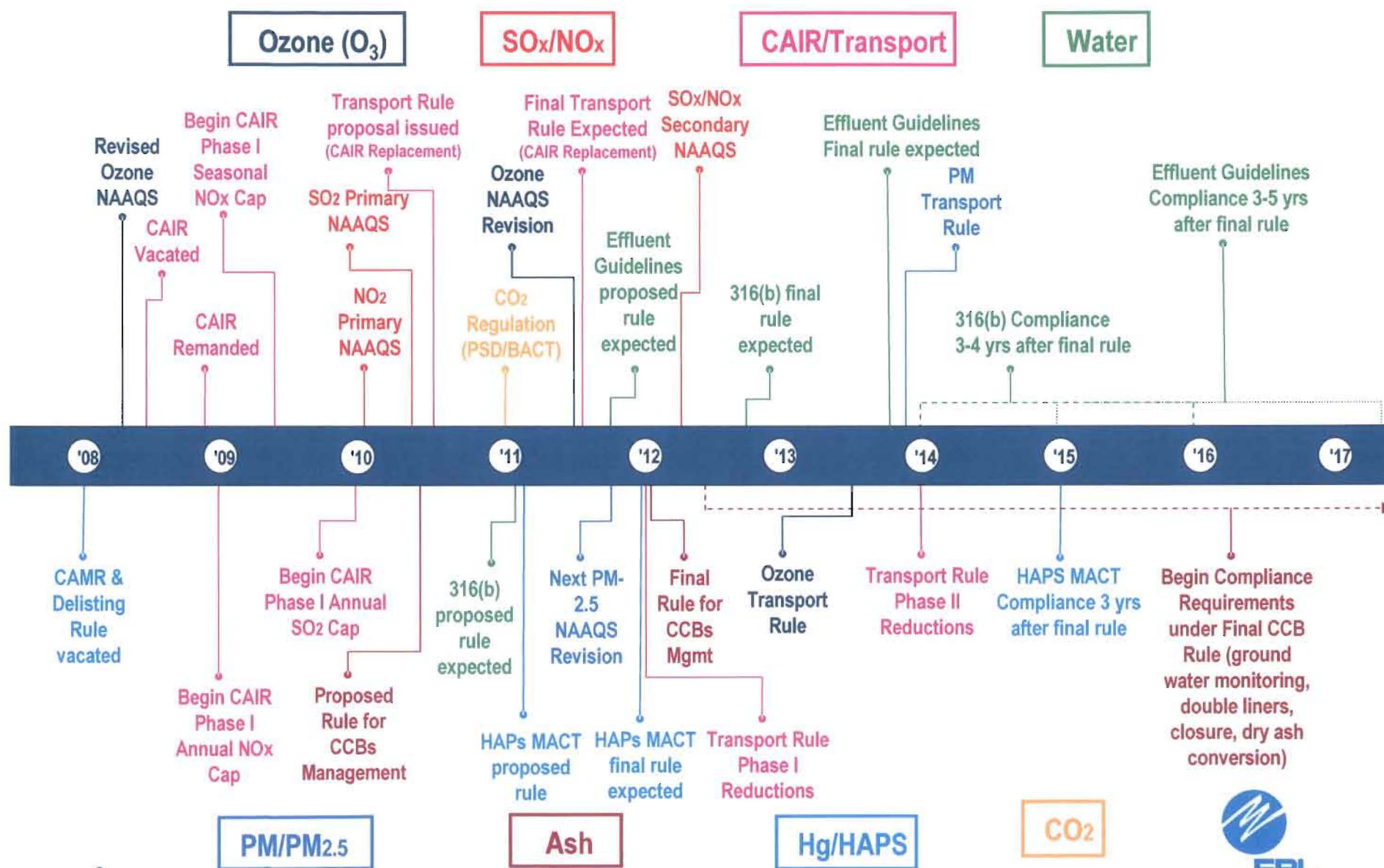
Florida Public Service Commission Internal Affairs Meeting

Review of EPA Utility-Related Rulemakings

April 27, 2011



Timeline for Environmental Regulatory Requirements for the Utility Industry

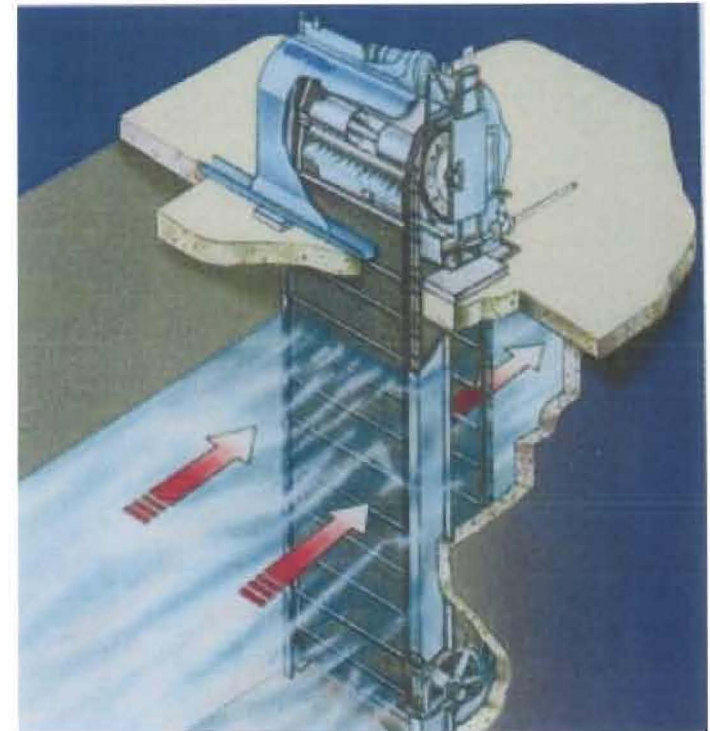


EPA Regulatory Requirements of Primary Importance to FPL

- Section 316(b) of the Clean Water Act (power plant intake structures)
- Air Toxics Rule (EGU MACT) (power plant emissions of metals and acid gasses)
- NAAQS – ozone (impact of power plant emissions on air quality attainment standard for ozone)
- Clean Air Transport Rule (impact of power plant emissions on air quality attainment standards for SO₂ and NO_x in downwind areas – replaces CAIR)

Section 316(b) of the Clean Water Act

Section 316(b), added in the 1972 Clean Water Act Amendments, requires that the location, design, construction, and capacity of cooling water intake structures reflect the Best Technology Available (BTA) for minimizing adverse environmental impacts.



Impingement - the entrapment of any life stages of fish and shellfish on the outer part of an intake structure or against a screening device.

Entrainment - the incorporation of any life stages of fish and shellfish with the intake water flow entering and passing through a cooling water intake structure and into a cooling water system.

2011 Proposed 316(b) Rule

- **A new proposed rule was signed by EPA on March 28, 2011**
 - Applies to power plants and manufacturing facilities
 - Contains Uniform Impingement Mortality (IM) Standards
 - Either demonstrate by monitoring that IM does not exceed 12% on an annual basis
 - » 88 of 100 fish impinged must return to water source alive
 - Or, reduce intake velocity to 0.5 feet per second
 - » Most fish can swim away from the intake at that velocity
 - Also facilities with saltwater intakes must provide extra protection for shellfish
 - Currently contains no cost-benefit provisions
 - Facilities must comply within 8 years of effective date of final rule.

2011 Proposed 316(b) Rule (continued)

- Contains Entrainment Mortality (EM) Standards for existing units
 - BTA will be established by the FDEP on a case-by-case, site specific basis
 - FDEP must publish a written explanation, available to the public, that must include the consideration of certain factors:
 - » Entrainment Impacts on the water body;
 - » Cost-benefit determination;
 - » Local energy reliability, particulate emissions, and land availability if cooling towers are considered BTA;
 - » Remaining useful life of the facility
 - Must comply as soon as possible, but no actual time limit
- **FPL will file comments within 90 days of publication**
- **Final Rule due to be signed by July 27, 2012**
 - Would probably become effective in October 2012

Potential FPL Impacts

- **The current draft rule will potentially impact all FPL power plants in Florida, except Turkey Point, plus Scherer**
 - Most facilities would be required to conduct various studies addressing IM at the facility and have some type of IM controls:
 - Traveling screens with fish return systems and possibly barrier nets (coastal facilities) or wedgewire screens; and/or,
 - Reduced intake flow velocity
 - Those facilities required to meet EM standards must conduct:
 - EM Characterization and Mortality studies
 - Cost (both monetary and social) Evaluations
 - Socials costs include ecological costs (water use and air emissions) and impact to endangered species
 - All studies and evaluations must be peer reviewed to encourage public participation
 - Will be expensive and time consuming

Potential FPL Impacts

- The rule, as proposed, would have significant financial impacts on FPL and its customers
- FPL is again working with various industry groups and the FDEP to ensure that the final rule contains the proper balance between environmental protection and costs to our customers
- **Unique FPL plant issues to be addressed in Final Rule**
 - Manatees – Canaveral, Riviera, Port Everglades, Fort Lauderdale, Fort Myers
 - Spatial Limitations – Canaveral, Riviera
 - Cooling Ponds – Martin, Manatee, Sanford
 - Barrier Nets – St. Lucie, Canaveral, Riviera, Port Everglades, Fort Lauderdale, Fort Myers
 - Velocity Caps – St. Lucie

EPA's Proposed Air Toxics (EGU MACT) Rule

- On March 16, 2011, EPA issued a proposed rule that would reduce emissions of toxic air pollutant emissions from new and existing coal- and oil-fired power plants.
- EPA must set Maximum Achievable Control Technology (MACT) emission standards for existing sources in the category that are at least as stringent as the emission reductions achieved by the average of the top 12% best controlled sources for source categories with 30 or more sources.

Requirements for Coal-Fired Units

- Mercury: stringent numeric emission limits that require greater than 90% mercury removal
- Acid gases: Hydrochloric Acid (HCL) numeric emission limit as a surrogate, with an alternate surrogate of SO₂
- Non-mercury metallic toxic pollutants such as arsenic and chromium: numeric emission limit for total Particulate Matter (PM) as a surrogate, with alternate surrogate of total metal air toxics
- Organic air toxics (including dioxin): Work practice standards, instead of numeric standards, due to low-detected emission levels. Would ensure optimal combustion, preventing dioxin/furan emissions

EPA's Proposed Air Toxics Rule

Requirements for Oil-fired Units

- Acid gases: Numerical HCL and Hydrofluoric Acid (HF) emission limits
- Metal air toxics: Numerical emission limits for total metal air toxics (including mercury) with individual metal air toxics as alternate.
- Organic air toxics (including dioxin): Work practice standards, instead of numeric standards, due to low-detected emission levels. Would ensure optimal combustion, preventing dioxin/furan emissions.

Flexibility Provisions Afforded to All Affected Units

- Emissions averaging (units at same facility)
- "Limited-use units"

Schedule

- 3/16/11—proposed rule issued for public review and comment
- ~ 7/1/11—deadline for written comments on proposed rule to be submitted to EPA
- 11/16/11—EPA issues final rule (in accordance with timetable in Court Order)
- ~ 1/1/15—Compliance with final rule required (Note: This is a statutory requirement; i.e., three years from published date of final rule)
- ~ 1/1/16—EPA may grant a one-year compliance extension if such additional period is necessary for the installation of controls.
- ~ 1/1/18—The President may exempt any stationary source from compliance with any standard or limitation for a period of not more than two years if the President determines that the technology to implement such standard is not available and that it is in the national security interests of the U.S. to do so.

Potential Impacts of Proposed Rule on FPL's Coal-fired Units

Scherer Unit 4

- Since EPA has specified a 30-day averaging period for demonstrating compliance with the proposed emission limits, Scherer Unit 4 should be able to comply with the limits with new emission controls currently being installed.
- Costs incurred at Scherer Unit 4 for those emission controls are included in the ECRC.
- Georgia Power is exploring the possibility of using fuel additives to increase mercury capture by the wet scrubber.

SJRPP

- A 0.2 lb/MMBtu limit for sulfur (surrogate for HCL) would require SJRPP Units 1 and 2 to add technology or switch fuels. The mercury and particulate emission limits will likely require installation of an activated carbon injection system and baghouse.
- Compliance plans and costs for SJRPP are under evaluation with JEA.

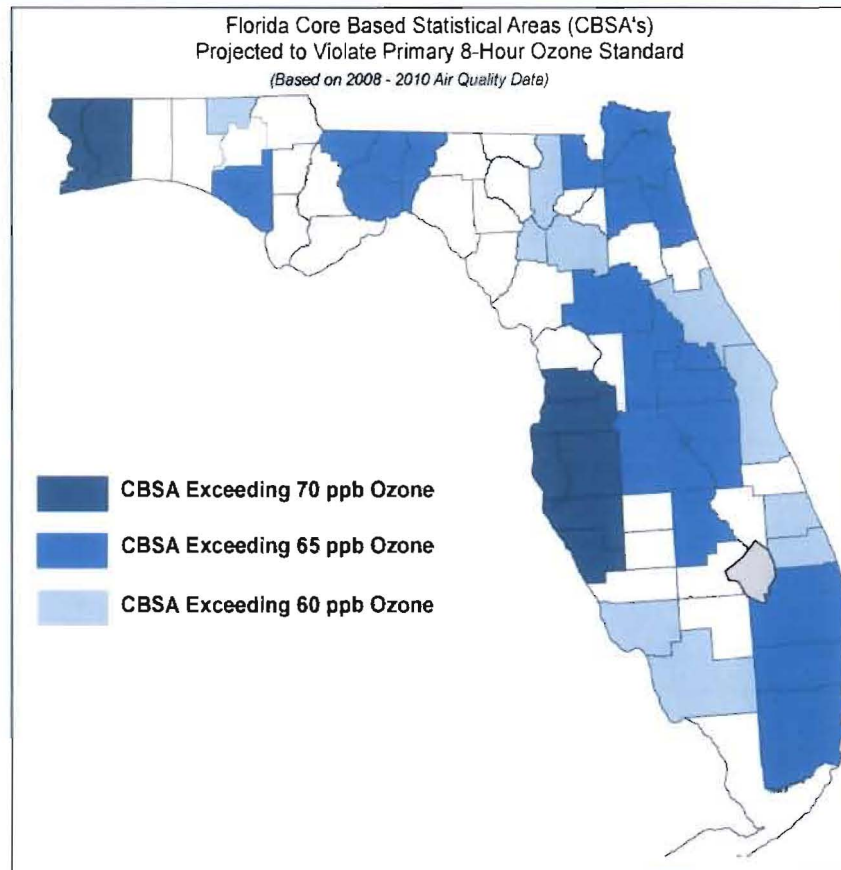
Potential Impacts of Proposed Rule on FPL's Oil-fired Units

- Martin 1 and 2 and Manatee 1 and 2 will need Electrostatic Precipitators (ESPs) in order to comply with the metals emission limits. Consistent with PSC approved stipulation, FPL is proceeding with ESP project on 800 MW units.
- May have to add a hydrated lime injection system to meet limits for HCL and HF.
- Turkey Point 1 and 2 will likely not be able to comply with proposed metals emission limits but may be exempted by “limited use” exemption.
- FPL believes that the continuous compliance demonstration requirements contained in the proposed rule are extremely onerous and unnecessary and will be commenting to that effect in our written comments to EPA.

National Ambient Air Quality Standard for Ozone Proposed Revision

- EPA's proposed 2010 revision to Ozone Standard was set at 0.075 ppm. All Florida counties comply with this standard based on 2008-2010 data.
- EPA concluded that the ozone standards were not as protective as recommended by EPA's panel of science advisors, the Clean Air Scientific Advisory Committee (CASAC).
- On January 6, 2010, EPA proposed revisions to the National Ambient Air Quality Standards (NAAQS) for ground-level ozone.
- Specifically, EPA is:
 - Proposing to revise the level of the primary 8-hour ozone standard to a level within the range of 0.060-0.070 parts per million (ppm).
 - Proposing to establish a separate cumulative secondary standard within a range of 7-15 ppm-hours.

Potential Ozone Nonattainment Areas in Florida



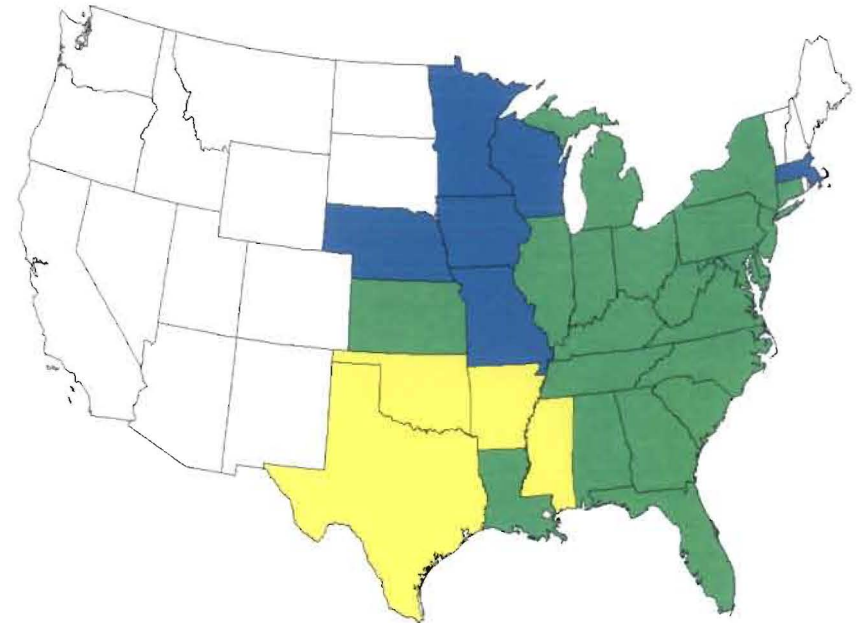
Revision to the lower end of the range creates more areas that would not meet the new standard based on 2008-2010 data.

Implementation Timeline for the New Ozone Standard

- EPA expects final standard to be announced by end of July 2011
- State designations of non-attainment areas would be due approximately March 2012 with EPA final designations by March 2013 using 2010 – 2012 data
- State Implementation Plans due within 3 years of EPA designation including state rule revisions to address local non-attainment
- Attainment dates required by 2016 to 2026 depending on severity of problem including local and upwind sources
- EPA proposes to make changes to proposed Clean Air Transport Rule to include further reductions needed
- Depending on where the level is set, the potential nonattainment classification could require Reasonably Available Control Technology (RACT) controls at some FPL units, such as Turkey Point and offsets for construction of all new fossil generating units in nonattainment areas

The Proposed Clean Air Transport Rule

- On August 1, 2010 EPA published the proposed Clean Air Transport Rule to cap emissions of SO₂ and NO_x from power plants in 32 states that contribute to the ability of downwind states to attain and/or maintain the National Ambient Air Quality Standards for Ozone and PM_{2.5}.
- The proposed rule is in response to the D.C. Circuit's vacatur of the Clean Air Interstate Rule (CAIR) and beginning in 2012, emissions reductions would be governed by this rule, rather than CAIR.
- The Clean Air Transport Rule would cap NO_x and SO₂ emissions over two phases and would create an allowance trading program whereby units would have to hold sufficient NO_x and SO₂ allowances to cover annual emissions.



- States in Annual SO₂ & NO_x & NO_x Ozone Season
- States in Annual SO₂ & NO_x only
- States in NO_x Ozone Season only
- States not covered by Transport Rule

FPL Compliance with Proposed Clean Air Transport Rule

- The Clean Air Transport Rule scheduled to go into effect on January 1, 2012.
- The proposed Clean Air Transport Rule creates four new allowance currencies: Annual NOx, Ozone NOx, Group 1 and Group 2 SO2.
- Unlimited banking of allowances authorized under program.
- EPA proposed to allocate allowances to electric generating units (EGUs) based on the lower of 2009 actual emissions or *projected* 2012 emissions using ICF International's Integrated Planning Model.
- A subsequent EPA Notice of Data Availability proposed consideration of two alternative allowance allocation methodologies.
- Based on SO2 and NOx emission reductions FPL has been able to achieve through new generation and technology additions, FPL should have sufficient allowances to cover projected emissions.
- Any excess NOx and SO2 allowances can be sold and the value returned to FPL customers through the ECRC.





EPA Rulemaking Impacts Gulf Power Company

Presentation to the
Florida Public Service Commission
April 27, 2011

Agenda

- Pending EPA rules
- Unit Preliminary Evaluations
- Other Considerations

Pending EPA Rules

- EGU MACT
 - Proposed 3/2011, Final 11/2011, Compliance 2015.
 - Coal and oil-fired units limits proposed on Particulate Matter (PM), Mercury (Hg) and Acid Gases (HCL or SO₂ will be measured).
 - 30 day averages include startup, shutdown and malfunction (SSM) monitored with new CEMS.
- NAAQS OZONE
 - Proposed 1/2010 (60 to 70 ppb range), Final Expected 7/2011, Compliance around 2017.

Pending EPA Rules

continued

- 316 (b)
 - Proposed 3/2011, Final 7/2012, Compliance – Impingement reductions no later than 8 years, and entrainment reductions based on State implementation. Monitoring expenditures are possible 6 months after final rule.
 - Fish impingement (I) and entrainment (E), i.e. reduce cooling water intake velocity and conduct studies on I & E to prove compliance.
- ASH /CCRs (Coal Combustion Residuals)
 - Proposed Rule 6/2010, Final Expected 2012, Compliance – If “Subtitle D” we expect effective date of 2013; if “Subtitle C,” we expect effective date of 2014 -16 (based on State adoption).
 - Existing ash ponds closed or retrofitted. Future ash ponds require liner. Retrofit from wet ash sluicing to dry ash system.
 - Subtitle C is not currently authorized in the State of Florida.

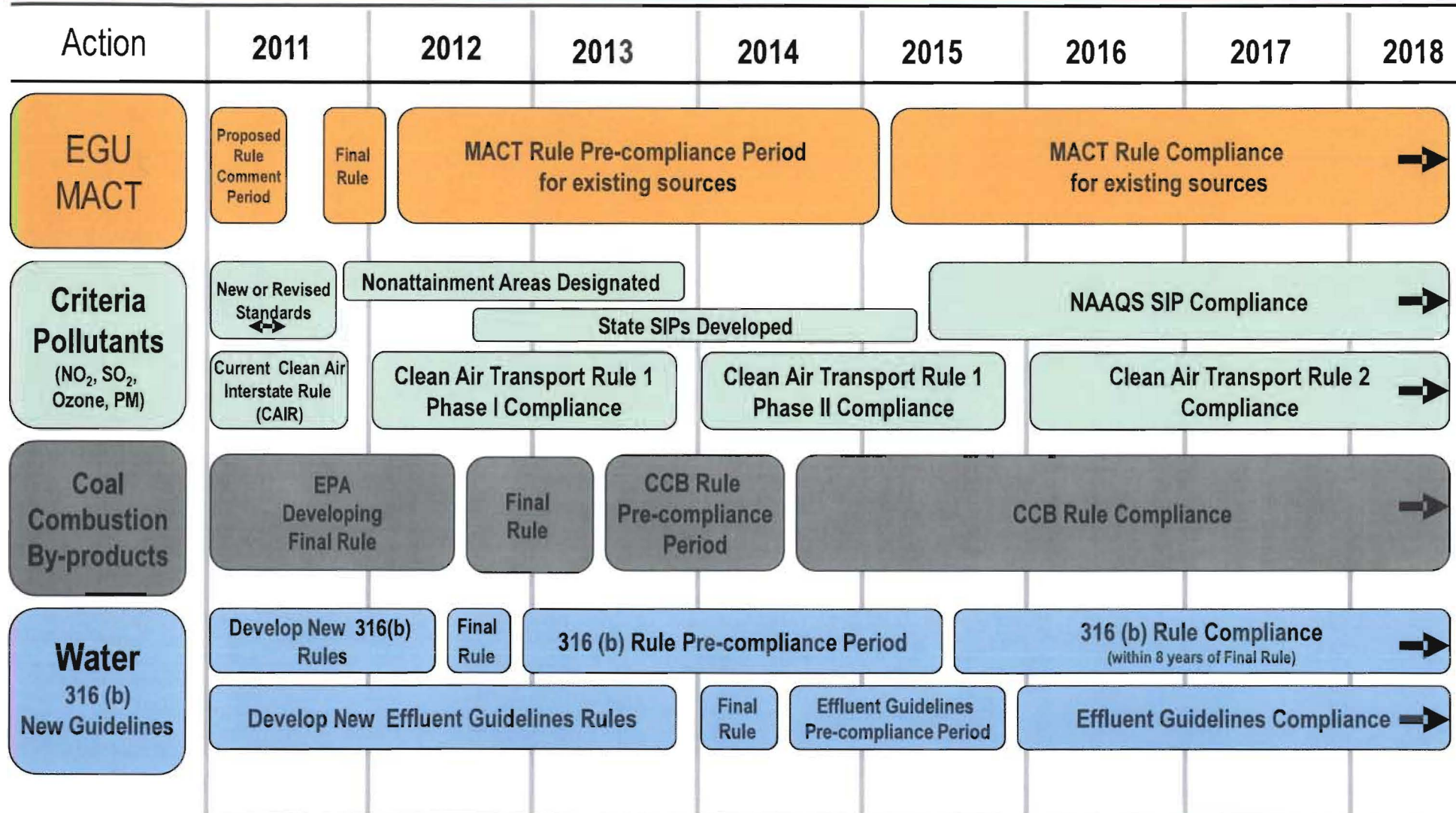
Pending EPA Rules

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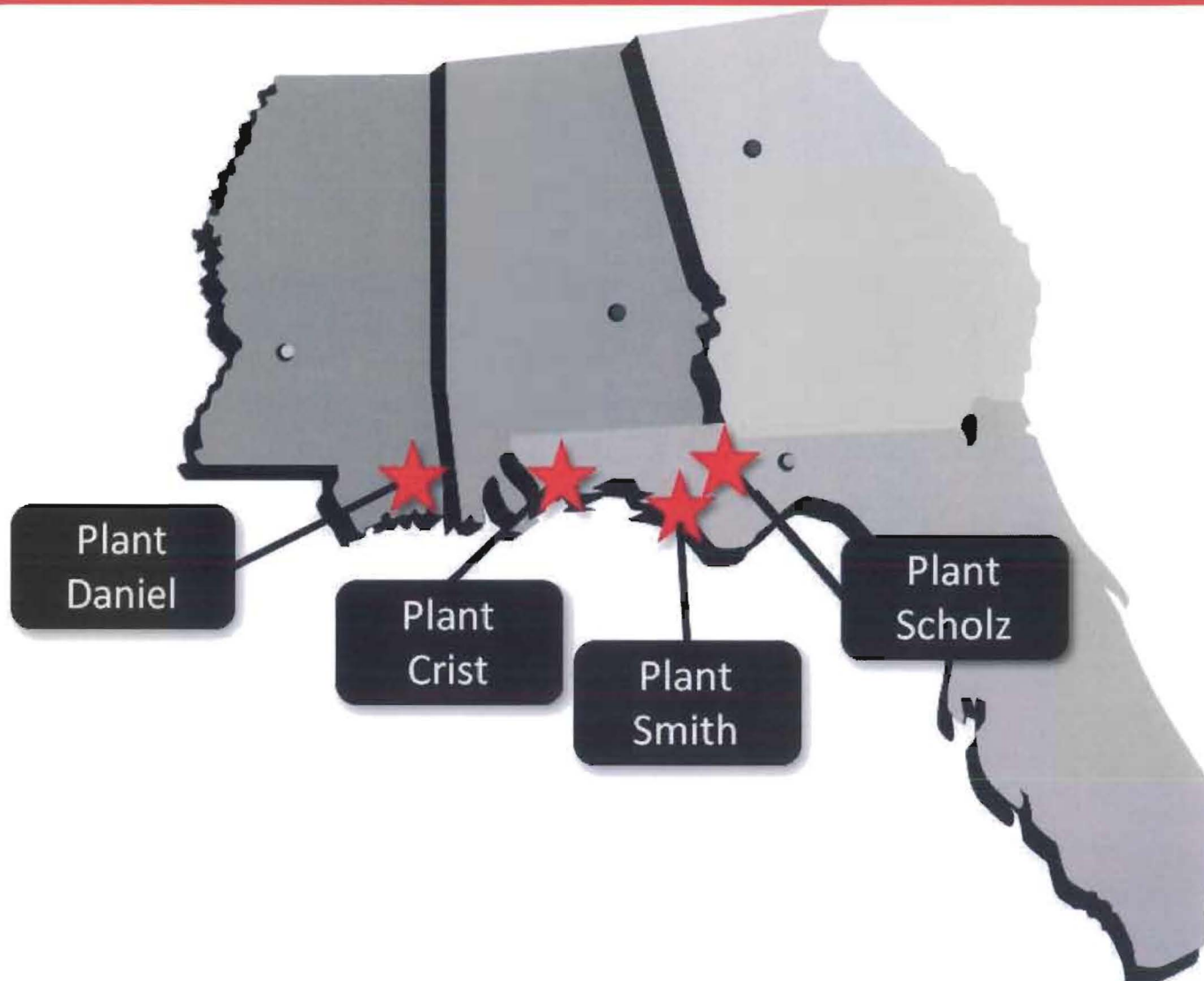
- **NUMERIC NUTRIENT CRITERIA (NNC)**
 - EPA has set new standards for nitrogen and phosphorous discharges in our National Pollutant Discharge Elimination System Permits (NPDES).
 - Fresh water standards for nitrogen and phosphorous are 0.67 mg/L for total nitrogen and 0.06 mg/l for total phosphorus.
 - In mid-October 2011, EPA will propose new NNC criteria for marine and estuarine waters.

EPA New Regulatory Actions Timeline

(updated 4/11/2011)



Gulf Power Generating Facilities



Current Controls

Unit	Air	Water	Ash
Crist 4	FGD + SNCR	Booster Tower	Dry
Crist 5	FGD + SNCR	Booster Tower	Dry
Crist 6	FGD + SCR (2012)	Cooling Tower	Dry
Crist 7	FGD + SCR	Cooling Tower	Dry
Scholz 1		Once-Thru	Wet
Scholz 2		Once-Thru	Wet
Smith 1	SNCR	Once-Thru	Wet
Smith 2	SNCR	Once-Thru	Wet
Daniel 1	FGD (2014) + SCR (2015)	Cooling Lake w/ Small Intake in River	Dry
Daniel 2	FGD (2014) + SCR (2016)	Cooling Lake w/Small Intake in River	Dry

Unit Viability On Coal Preliminary Evaluation

Unit	EGU MACT	316 (b)	Ash	Ozone
Crist 4	Baghouse + ACI	Screens or Closed Loop Cooling	Retrofit for Subtitle "D" or "C"	N/A
Crist 5				
Crist 6		N/A		
Crist 7		N/A		
Scholz 1	FGD+Baghouse+ACI	Screens	Retrofit for Subtitle "D" or "C"	SCR
Scholz 2	FGD+Baghouse+ACI			SCR

Lower Risk of
Unit Retirement

Higher Risk of
Unit Retirement

Unit Viability On Coal Preliminary Evaluation

Unit	EGU MACT	316 (b)	Ash	Ozone
Smith 1	FGD+Baghouse+ACI	New Screens or Closed Loop System	Retrofit for Subtitle "D" or "C"	SCR
Smith 2				SCR
Daniel 1 50% costs	FGD+Baghouse+ACI	New Screens	Retrofit for Subtitle "D" or "C"	SCR
Daniel 2 50% costs	FGD+Baghouse+ACI			SCR

Lower Risk of
Unit Retirement

Higher Risk of
Unit Retirement

Other Potential Considerations

Facility	Conversion to Biomass	Natural Gas Firing	Transmission
Crist	Very Unlikely	Potential (Crist 4 / 5)	Reliability/ Transmission Upgrades
Scholz	If Renewable Mandate	Very Unlikely	Very Unlikely
Smith 1 & 2	If Renewable Mandate	Under Study	Reliability/ Transmission Upgrades
Daniel	Very Unlikely	Very Unlikely	Under Study

Likely

Uncertain

Unlikely

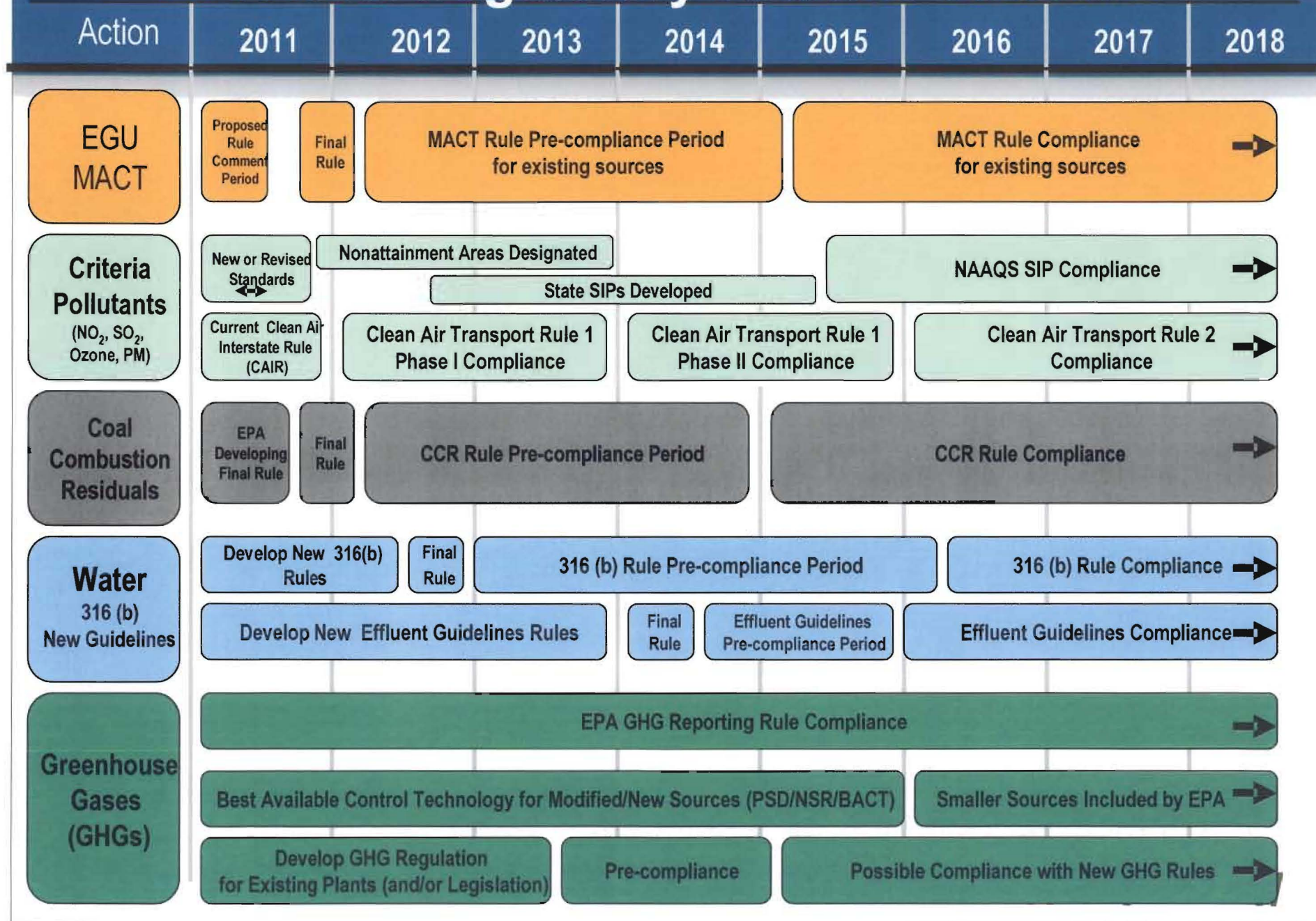
Next Steps

- Continue to monitor and comment on regulations and meet with EPA.
- Continue to work with our elected officials on legislative solutions.
- Continue to refine our cost evaluations based on emerging data.

Environmental Regulatory Update

April 27, 2011

EPA New Regulatory Actions Timeline



Proposed Clean Air Transport Rule (CATR)

- Replaces the Clean Air Interstate Rule (CAIR)
- EPA proposed a preferred approach and took comment on two alternatives.
 1. EPA's preferred approach -- allows intrastate trading and limited interstate trading among power plants. Trading limited by overall state caps.
 2. In the first alternative, trading is allowed only among power plants within a state.
 3. In the second alternative, EPA specifies the allowable emission limit for each power plant and allows some averaging of emission rates.
- EPA plans to finalize the CATR by June 2011. The CATR will take effect beginning in January 2012.
- Although it has similar overall targets as the Clean Air Interstate Rule (CAIR), the CATR would follow a very different approach. In 2014 it transitions to a state budget-based approach with limitations on interstate trading.
- The CATR establishes entirely new NO_x and SO₂ trading programs

Sulfur Dioxide

- SO₂ annual allowance allocations
 - CAIR used Acid Rain program allowances. CATR establishes new SO₂ “currency.”
 - Acid Rain allowances will continue to be used only for Acid Rain compliance.
 - SO₂ program split into Group 1 and Group 2 states
 - Group 1 allocations become more stringent in 2014
 - Sources may trade only with other sources in the same group of states
 - FL is a Group 2 state
 - EPA has proposed 3 allocation options with a broad range of results for PEF

Nitrogen Oxides

- NOx annual and ozone season allowance allocations
 - Replace current CAIR allocations
 - Current proposed CATR NOx allocations will be reassessed in response to revised ozone ambient air quality standard
 - Allocations likely to be reduced
 - Should take effect in the 2017 timeframe

Proposed Utility MACT - Schedule

- Released March 16
- 60-day comment period
- Final rule due November 2011
- Final rule effective 1Q 2012
- Statutory compliance deadline 1Q 2015
- Case-by-case, one-year extension

Proposed EGU MACT: Summary of Coal-Fired Standards

- **Mercury:** Numeric emission limit to prevent 91% of mercury in coal from being released to the air
- **Acid Gases:** HCl numeric emission limit as a surrogate, with an alternate surrogate of SO₂
- **Non-mercury metallic pollutants (e.g., arsenic, chromium):** Numeric emission limit for total PM as a surrogate, with an alternate surrogate of total metal air toxics
- **Organic air toxics (including dioxin/furans):** Work practice standards, instead of numeric emission limits, to ensure optimal combustion preventing dioxin/furan emissions
- Emission limits include Start-up and Shut-down periods (work practice standards for malfunctions) and are measured on 30-day rolling average

Proposed EGU MACT

Summary of Oil-Fired Standards

- **Acid Gases:** HCl and HF numeric emission limits
- **Metal Air Toxics:** Numeric emission limits for total metal air toxics (including mercury) with individual metal air toxic numerical limits as an alternate
- **Organic air toxics (including dioxin/furans):** Work practice standards, instead of numeric emission limits, to ensure optimal combustion preventing dioxin/furan emissions

Compliance Options for PEF

Anclote

- **Controls:** Sorbent injection, electrostatic precipitator (ESP)
- Increase use of natural gas

Crystal River 1 & 2

- **Controls:** Scrubber, activated carbon injection (ACI), fabric filter
- CEMs required for particulate matter, mercury, HCl (SO₂ surrogate)

Crystal River 4 & 5

- **Possible Additional Controls:** ACI/sorbent injection, fabric filter
- CEMs required for particulate matter, mercury, HCl (SO₂ surrogate)

Suwannee

- **Controls:** Sorbent injection, ESP
- Continue to run on natural gas

Compliance plans are under study and are subject to change.

EGU MACT – Primary Issues

- Non-mercury HAPs should be subject to further study before regulating.
- Adequate time for compliance should be provided.
- Compliance with non-mercury metals standard (PM) – a consistent standard for the filterable portion should be established.
- Startup/Shutdown/Malfunction; EPA should establish work practice standards for startup and shutdown emissions, too.
- EPA should establish area source limits.

316(b) Rule for Cooling Water Intake Structures at Existing Facilities

- New performance standards for impingement and entrainment mortality from existing cooling water intake structures
 - Impingement: Entrapment of all life stages of fish and shellfish on the outer part of a cooling water intake structure, limited to those organisms collected or retained by 3/8 inch screen mesh.
 - Entrainment: The incorporation of all life stages of fish and shellfish with intake water flow passing through a 3/8 inch mesh cooling water intake structure and into a cooling system.
- Pre-Publication Release March 28, 2011
- 90-day comment period after publication in *Federal Register*
- Final rule due July 2012
- Impingement requirements to prevent aquatic mortality
- Entrainment requirements to prevent passage of aquatic organisms into plant's cooling system
- All PEF plants are impacted, even those with closed-cycle cooling.

Impingement Requirements

- Impingement mortality $\leq 12\%$ annual average and $\leq 31\%$ monthly average for all organisms on 3/8 inch screen:
 - Ristroph screens with other enhancements to safely remove impinged organisms
 - Organism return system to safely deposit impinged organisms back into suitable habitat free from influence of the facility.
- Or, cooling water intake structure with ≤ 0.5 foot per second through screen velocity
- Where appropriate, additional requirement to reduce shellfish impingement with technology enhancements such as barrier nets.

Entrainment Requirements

- Applies to facilities with ≥ 125 MGD cooling water flow:
 - Entrainment Characterization Studies
 - Comprehensive Technical Feasibility Studies
 - Benefits Valuation Study
 - Non-water Quality and Other Environmental Impacts Studies
- Tight submission deadlines:
 - Initial EM data collection plan within 6 months date of rule
 - Peer review of plans within 12 months date of rule
 - Entrainment characterization within 4 years date of rule
 - Feasibility, Benefits, Non-water quality studies within 5 years date of rule

Summary of 316(b) Required Info, Studies

'11	'12	'13	'14	'15	'16	'17	'18	'19
Proposed Rule	Final Rule	2Q 2013: First studies due <ul style="list-style-type: none"> Source water physical data Cooling water intake structure data Source water baseline biological characterization data Cooling water system data Proposed Impingement Mortality (IM) reduction plan Performance studies Operational status Entrainment characterization study plan 			2Q 2016: Results for proposed impingement mortality reduction plan 4Q 2016: Results for entrainment characterization	4Q 2017: Final studies due <ul style="list-style-type: none"> Comprehensive technical feasibility and cost evaluation Benefits valuation study (financial and non-financial) Non-water quality and other environmental impacts 		
		4Q 2013: Peer-reviewed entrainment characterization study plan						

Compliance deadlines

- Impingement: As soon as possible and within eight years
- Entrainment: May extend beyond eight years w/State approval

Compliance Requirements at PEF Facilities

Anclote

- Entrainment Characterization Studies
- Organism return plan required - 2011 permit
- Additional shellfish protection

Bartow

- Entrainment Characterization Studies
- Organism return plan required - 2011 permit
- Additional shellfish protection

Crystal River

- Entrainment Characterization Studies
- Organism return plan / shellfish protection
- CR 4&5 Closed Cycle Cooling – may be required to address impingement

Suwannee

- Entrainment Characterization Studies
- Organism return plan will be required in 2011 permit renewal

Next Steps

- Continue review/analysis of proposed 316(b) rule
- Compile data and conduct additional testing as appropriate
- Participate in regulatory process
 - Prepare detailed comments to EPA
 - Educate state and federal policymakers
- Develop compliance strategies
- Implement site-specific NPDES permit renewal requirements that relate to proposed 316(b) rule.

Other Pending Regulatory Drivers

- Steam Electric Effluent Limitation Guidelines
- Numeric Nutrient Criteria
- Coal Combustion Residuals
- FERC Transmission Planning and Cost Allocation
- NERC Transmission Reliability Assessments

Closing

- Unprecedented scope of new regulatory requirements
- Unprecedented limited timeframe within which to comply
- Will impose significant new costs on existing generating fleet and customers
- Must incur costs now to ensure compliance
- Other regulatory initiatives will add further costs

Collaborating on a flexible, efficient transition to minimize cumulative customer effects is essential



tecenergy.com

Potential Impacts of EPA Rulemakings on Tampa Electric

**Florida Public Service Commission
Internal Affairs Meeting**

April 27, 2011

EPA Rulemaking Areas

- 316 (b) Cooling Water Intake
- EGU Maximum Achievable Control Technology Rule
 - (formerly CAMR)
- Clean Air Transport Rule
 - (formerly CAIR)
- Coal Combustion Products (CCPs)
- Numeric Nutrient Criteria (NNC)
- New Ozone Standard

316(b) Cooling Water Intake

- Big Bend and Bayside Stations cooling water from Tampa Bay
- Potential requirements for Tampa Electric
 - Installation of fine mesh screens
 - Organism return system
- Cost impacts are uncertain at this time

EGU Maximum Achievable Control Technology (MACT) Rule

- Electric Utility Steam Generating Units (EGU)
- Rule replaces EPA's Clean Air Mercury Rule (CAMR)
- Tampa Electric must complete analysis of the proposed rule
- Potential impacts to Tampa Electric include:
 - Modifications to existing equipment
 - Decreased unit availability
 - Testing requirements
- Cost impacts to Tampa Electric are as yet unknown

Clean Air Transport Rule (CATR)

- Rule replaces EPA's Clean Air Interstate Rule (CAIR)
- Tampa Electric has completed more than \$1.2 billion in environmental projects
- These improvements contribute to meeting the CATR
- Impacts to Tampa Electric of the CATR rule
 - Reduced due to environmental improvement projects

Coal Combustion Products (CCPs)

- Tampa Electric recycles 98% of its CCPs
- This recycling rate is one of the highest in the U.S.
- Big Bend ash ponds have low risk of incident similar to TVA
- Big Bend ash storage areas are low profile and are lined
- Impacts if CCPs are deemed to be a hazardous waste by EPA
 - Recycling rate will be reduced
 - Onsite disposal not available
 - Hazardous waste landfills currently prohibited by Florida law
- These factors could leave no viable alternative for ash disposal

Numeric Nutrient Criteria

- Stringent criteria for freshwater and coastal discharges
- Freshwater criteria will impact Polk Power Station
- Coastal criteria will impact Big Bend and Bayside Stations
- Both will require the installation of treatment technology
- Costs will depend on the type of technology selected

New Ozone Standard

- In January 2010, EPA proposed to strengthen National Ambient Air Quality Standards (NAAQS) for ozone
- Currently Hillsborough County is in attainment for ozone
- Expect Hillsborough County to become non-attainment for ozone
- Impacts will depend on final standards and rule requirements
- A non-attainment designation would require modification or installation of new emissions control equipment

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

OUTSIDE PERSONS WHO WISH
TO ADDRESS THE COMMISSION AT

INTERNAL AFFAIRS
APRIL 27, 2011

<u>Speaker</u>	<u>Representing</u>	<u>Item #</u>
Randy LaBauve Vice President Environmental Services	Florida Power & Light	2
Bentina Terry VP External Affairs and Corp Services Mike Burroughs VP and Sr. Production Officer	GULF Power	2
Mike Kennedy and David Bruzek Members of Progress's Florida Environmental Services Organization	Progress Energy Florida	2
Paul Carpinone Director Environmental	Tampa Electric	2

III. Supplemental Materials for Internal Affairs

NOTE: The following material pertains to Item 4 of
this agenda.

Task	Telecomm	Elect	Gas	Water	Total Hours	Travel	Travel Details	Total Travel Cost
I. Communicate project mission to Commissioners and staff						2 person-trips (one night)	Air and ground= 1200; Lodging = 300; food = 100	
	18	18	18	18	72			\$1,600
1. Prepare draft project memo	8	8	8	8				
2. Meet with psc ees internally to describe project plan	5	5	5	5				
3. Prepare formal project plan	5	5	5	5				
II. Define alternative methods and procedures	41	41	34	34	150			
1. Study old and new legislation to identify requirements	10	8	8	8				
2. Identify required processes and procedures	15	15	10	10				
3. Identify organization and skill sets	8	8	8	8				
4. Identify educational requirements and professional development needs	8	8	8	8				
III. Assess current processes and procedures and recommend modifications	26	26	26	26	104			
1. Review current processes and procedures	10	10	10	10				
2. Interview staff	8	8	8	8		2 person-trips (one night)	Air and ground= 1200; Lodging = 300; food = 100	\$1,600
3. Create matrix of current to new procedures	8	8	8	8				
IV. Assess current staffing arrangements	18	16	16	16	66			
1. Review responsibilities	10	8	8	8				
2. Create matrix of current to new tasks	8	8	8	8				
V. Prepare draft report	40	30	30	30	130			

Parties/Staff Handout
Internal Affairs/Agenda
on 7/27/2011
Item No. 46

						2 person- trips (one night)	Air and ground= 1200; Lodging = 300; food = 100	\$1,600
VI. Host meetings to review draft recommendations	8	8	8	8	32			
1. Determine whether proposed structure meets requirements								
2. Evaluate changed or missed requirements								
VII. Prepare final report	30	25	20	15	90			
Total hours	181	164	152	147	644			\$4,800
Hours cost at \$200/hr	\$36,200	\$32,800	\$30,400	\$29,400	\$128,800			
Total proposal cost	\$133,600							