## **Air Quality Rules Update:**

CAIR CAMR

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## Federal Clean Air Interstate Rule



#### Purpose:

- to reduce yearly sulfur dioxide (SO2) and nitrogen oxides (NOx) emissions from upwind states that contribute to fine particle (PM2.5) violations in downwind states, and
  - to reduce seasonal (May through September) NOx emissions from upwind states that contribute to **ozone** violations in downwind states.
- Affects 28 Eastern states.

## CAIR (cont'd)

 CAIR targets electric generating unit (EGU) emissions.

 Affected states must meet declining SO<sub>2</sub> and NO<sub>x</sub> statewide emission caps for EGUs starting in 2009, becoming permanent in 2015.

## Why is Florida Subject to CAIR?

 EPA modeling shows Florida's SO<sub>2</sub> and NO<sub>x</sub> emissions having a small but significant impact on PM<sub>2.5</sub> nonattainment areas in Macon & Atlanta, GA, and Birmingham, AL.

## Why is Florida Subject to CAIR? (cont'd)

 EPA modeling also shows Florida's seasonal NO<sub>x</sub> emissions having a small but significant impact on the Atlanta ozone nonattainment area.

What does CAIR Require of States? States Implementation Plans that >mandate source emission reductions or >opt-in to the EPA-administered Cap-&-Trade Program. Under Cap-&-Trade, a unit that reduces emissions below its "allowance" generates emission "credits" that may be banked for future use or

transferred or sold to other EGUs.

# What does CAIR Require of States? (cont'd)

- If a state opts-in to Cap-&-Trade
  - it may not impose any restrictions on trading but
  - may allocate NOx allowances to its EGUs in any manner of its choosing, as long as the statewide cap is not exceeded.

# What does CAIR Require of States? (cont'd)

States must submit CAIR implementation plans to EPA by Sept. 11, 2006.

Florida will be submitting a provisional plan so that EPA can begin their review but the final plan can not be submitted until current litigation is resolved.

#### How will Florida Comply with CAIR?

In rules approved by the ERC on June 29<sup>th</sup>, Florida will opt-in to Cap-and-Trade Program to provide

greater flexibility and

lower costs

to Florida utilities.

### How will Florida Comply with CAIR? (cont'd)

- NO<sub>x</sub> allowances for existing units will be based on "fuel-adjusted heat input."
- New unit allowances will be based on electrical output.

This helps mitigate the cost of retrofitting older units with modern pollution controls while encouraging efficiency for future units.

### How will Florida Comply with CAIR? (cont'd)

To encourage replacement of older units, retired units will continue to receive allowances for 9-11 years after shutdown.

New units that have not yet been allocated allowances will receive allowances from a special "set-aside" for their initial years of operation.

### **Benefits of CAIR to Florida**

- Lower ozone & fine particle levels due to significant emission reductions in Florida
- Estimated reductions by 2015
  - 76% NO<sub>x</sub> and
  - 65% SO<sub>2</sub>

combined with with similar emission reductions in neighboring states.

## Benefits of CAIR to Florida (cont'd)

#### Fewer

- premature deaths,
- cases of chronic bronchitis,
- asthma attacks, and
- hospitalizations for respiratory and heart disease

among Florida's sensitive populations

## Benefits of CAIR to Florida (cont'd)

 Less nitrate deposition to Florida's water bodies; and
Less regional haze due to reduced SO2 and NOx emissions

## Benefits of CAIR to Florida (cont'd)

 Significant mercury reductions as a "co-benefit" of control equipment installed to meet CAIR.

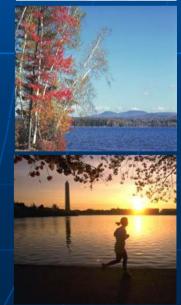
#### **Summary on CAIR**

CALR significantly cuts emissions of  $SO_2$  and  $NO_x$  from power plants and:

- Helps cities and States in the East meet new, more stringent national ambient air quality standards (NAAQS) for ozone and fine particles.
- Guarantees substantial benefits for public health and the environment.
- Achieves the largest reduction in air pollution in more than a decade (since the highly successful Acid Rain Program).
- Provides one of the largest investments in pollution control technology in history.
- Serves as the single most important step to take now to improve air quality in the U.S.









## Federal Clean Air Mercury Rule

CAMR

 <u>Purpose</u>: To reduce mercury emissions from coal-fired electric power plants nationwide.

States must meet declining mercury statewide emission caps for coalfired power plants starting in 2010, becoming permanent in 2018.

# CAMR (cont'd)

About 30% of Florida's electricity is generated by coal-fired power plants. Currently, 60% of Florida's coal-fired capacity is equipped with sulfur dioxide scrubbers; additional scrubbers and other control devices are being installed to comply with CAIR. This equipment has the "co-benefit"

of reducing mercury emissions.

# CAMR (cont'd)

As a result of CAIR, 85-90% of Florida's coal-fired generation should be achieving mercury removal efficiencies of about 85% by 2012. What does CAMR Require of States?

- States may mandate
  - Source emission reductions or
  - > opt-in to the EPA-administered Cap-&-Trade program.

Under Cap-&-Trade, a unit that reduces emissions below its "allowance" generates emission "credits" that may be

- banked for future use or
- transferred or sold to other EGUs.

# What does CAMR Require of States? (cont'd)

If a state opts-in to Cap-&-Trade, it

may not impose any restrictions on trading but

may allocate mercury allowances to its power plants in any manner of its choosing, as long as statewide cap is not exceeded.

# What does CAMR Require of States? (cont'd)

 States must submit CAMR implementation plans to EPA by Nov. 17, 2006.

#### Florida's Concern with Federal CAMR

- The first phase of CAMR is designed to take advantage of the co-benefits of CAIR;
- The Phase 1 cap for Florida is much higher than needed: 2,464 lb/yr
- Actual projected emissions of just over 1,000 lb/yr after CAIR controls go on.
- DEP's concern was that a large number of credits would be generated and banked during Phase 1, potentially delaying further mercury reductions that would otherwise occur in Phase 2 (beginning 2018).

#### How will Florida Comply with CAMR?

In rules approved by the ERC on June 29th, Florida will opt-in to cap-&-trade to provide

- greater flexibility and
- lower costs

to Florida utilities.

#### How will Florida Comply with CAMR?

- To avoid a large build-up of banked allowances during Phase 1, the department will set aside 25% of the state's allowances in a "compliance set aside" for years 2012-2017.
- If a unit installs and operates controls, but still exceeds its Phase 1 allowance, it may obtain allowances from the set-aside.
- New units may also access the set-aside for their initial years of operation.
- Otherwise, these allowances will be held by the state and not introduced into the market.

