

Air Quality Rules Update:

CAIR CAMR

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CAIR

Federal

Clean Air Interstate Rule

CAIR

Purpose:

- to reduce yearly sulfur dioxide (SO₂) and nitrogen oxides (NO_x) emissions from upwind states that contribute to **fine particle (PM_{2.5})** violations in downwind states, and
- to reduce seasonal (May through September) NO_x 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** SO₂ and NO_x statewide emission caps for EGUs starting in 2009, becoming permanent in 2015.

Why is Florida Subject to CAIR?

- EPA modeling shows Florida's **SO₂ and NO_x emissions** having a small but significant impact on PM_{2.5} 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_x 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 NO_x 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 29th, Florida will opt-in to Cap-and-Trade Program to provide
 - greater flexibility and
 - lower coststo Florida utilities.

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

- NO_x 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_x and
 - 65% SO₂combined 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 NO_x 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

CAIR significantly cuts emissions of SO₂ 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.



CAMR

Federal Clean Air Mercury Rule

CAMR

- Purpose: To reduce mercury emissions from coal-fired electric power plants nationwide.
- States must meet declining mercury statewide emission caps for coal-fired 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 coststo 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.

Questions?