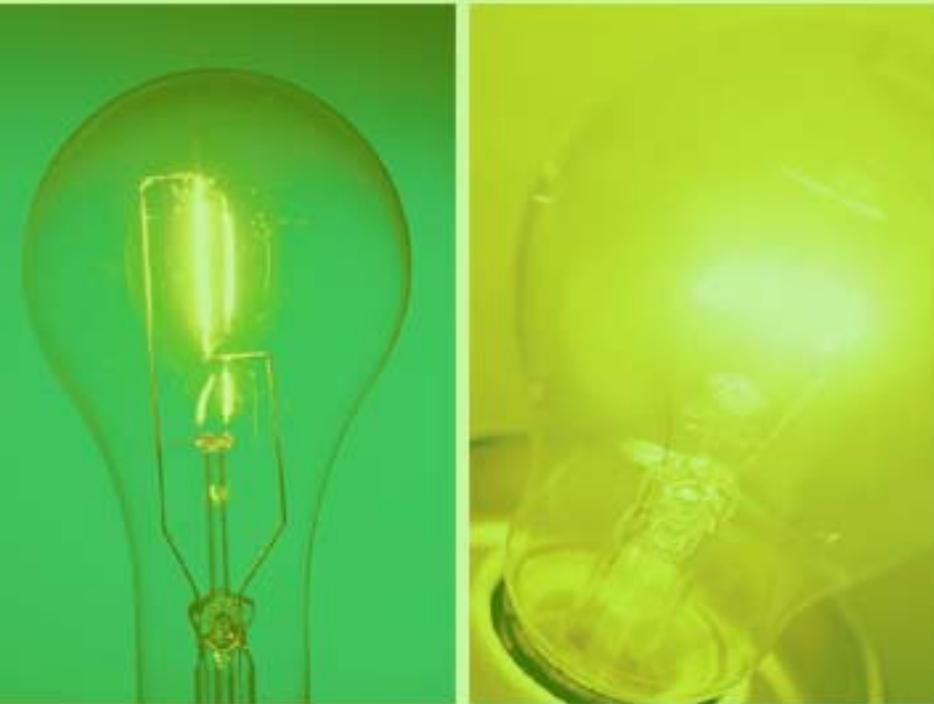


New Clean Air Rules for JEA in Fostering Environmental Partnerships



Environmental Partnering
Workshop

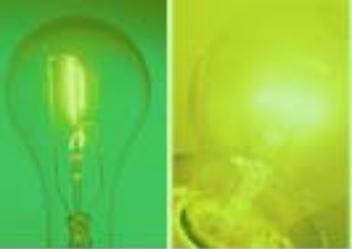
September 8, 2006

Berdell Knowles, JEA Legislative Advocate
knowb@jea.com



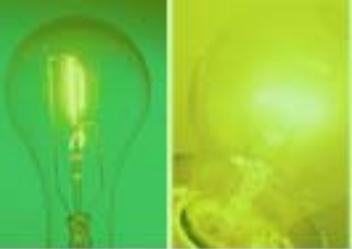
Clean Air Interstate Rule (CAIR)

- Purpose: To reduce the interstate transport of particulate matter and ozone (from SO₂ and NO_x) into areas not in attainment of NAAQS
- Florida has no counties that do not meet NAAQS
- Reduce SO₂ by 50% by 2010, 65% by 2014
- NO_x reduced by comparable amounts
- Covers 28 eastern states and DC



JEA Concerns with CAIR

- Significant discounting of SO₂ allowances from Acid Rain program
- Use of fuel factors for calculating NO_x allowances
- Heat input, as opposed MWh output basis, to calculate NO_x allowances
- Inclusion of all JEA units as “existing sources”



JEA's CAIR Implementation

- JEA already has BACT for SO₂
- Will have to purchase SO₂ allowances
- May fuel-switch
- No additional monitoring required
- JEA has BACT for NO_x, except at SJRPP
- JEA will install SCR's at SJRPP
 - Unit 2 in 2008
 - Unit 1 in 2009



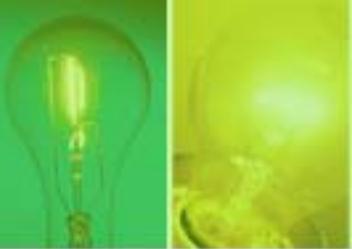
EXISTING BOILER STRUCTURE – EAST VIEW



NEW DUCTWORK WITH REACTOR INSTALLED – EAST VIEW

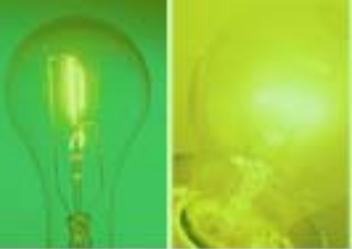


NEW DUCTWORK WITH REACTOR INSTALLED – WEST VIEW



SCR Highlights

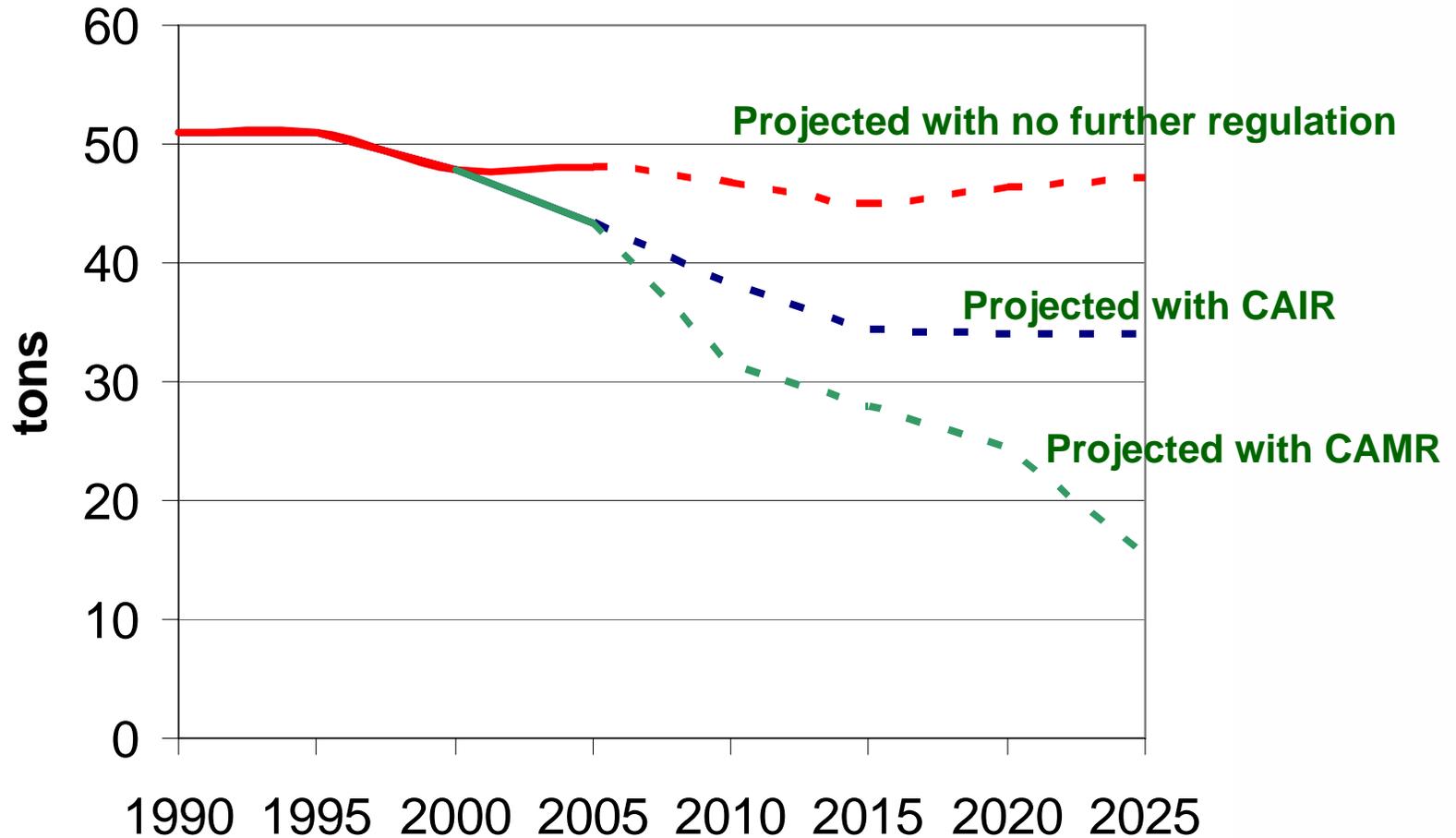
- \$250-260M investment
- No additional capacity
- Significant NO_x reductions
 - > 20K tons in 2004
 - < 7K tons in 2010
- Some mercury reduction



Clean Air Mercury Rule (CAMR)

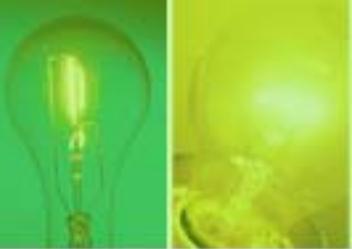
- Purpose: to reduce air emissions of Hg from Coal-fired power plants
- First rule ever to reduce mercury from power plants
- Covers all states and territories
- Phase I reductions to 38 tons by 2010
- Phase II reductions to 15 tons by 2018
- State budget 2,466 lbs
- Cap-and-trade
- Demonstrate compliance beginning in 2009

National Hg Power Plant Emissions: Historic and Projected with CAMR



Source: EPA

Note: 1999 emission estimate for utility coal boilers is based on 1999 Information Collection Request (ICR); 1990 and 1996 are based on different methodology.



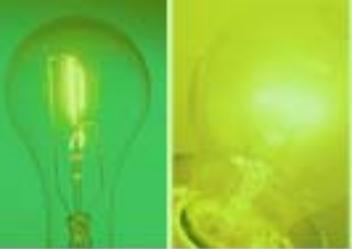
JEA Concerns with CAMR

- Cap-and-trade or MACT
- Recognition of co-benefits from CAIR
- CFBs characterized as coal units
- Need some ability to accommodate growth
- Not constrict JEA's fuel diversity
- No commercially available CEMS



JEA's CAMR Implementation

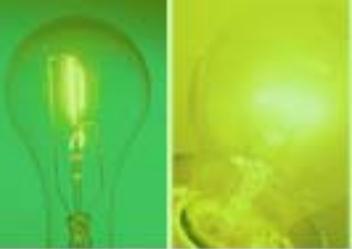
- Hg emission reductions from SCR
- New emission monitoring requirements
- Continued operation of existing controls



Hg Reduction Controls for Solid Fuels at JEA

Controls	Hg Reduction
CFB/Scrubber _{Dry} /Baghouse	90%
Precipitator	36%
Precipitator/Scrubber _{Wet}	66%
Precipitator/Scrubber _{Wet} /SCR	90%

Source: Federal Register, v. 69, no. 230, USEPA NODA



Summary

- Clean Air Rules are the most significant air quality regulation ever
- Will improve air quality in communities across the nation and in Jacksonville
- Promulgated with significant levels of stakeholder involvement
- Still potentially impacted by unsettled litigation
- Reflects a reasonable balance between environmental/health benefits and costs