



# Review of Draft CAIR Rule Language and Options

**Stakeholder Meeting  
March 9, 2006**



# CAIR – General Overview

- **Georgia can meet their NO<sub>x</sub> and/or SO<sub>2</sub> budget (as specified in 40 CFR Parts 51.123 and/or 51.124) by one of the following mechanisms:**
  - Interstate market-based cap-and-trade program as established in amended 40 CFR Part 96 and administered by U.S. EPA; or
  - Intrastate market based cap-and-trade program administered by Georgia EPD; or
  - Fixed NO<sub>x</sub> and/or SO<sub>2</sub> emission limits on each coal-fired EGU; or
  - Other approach not yet defined.

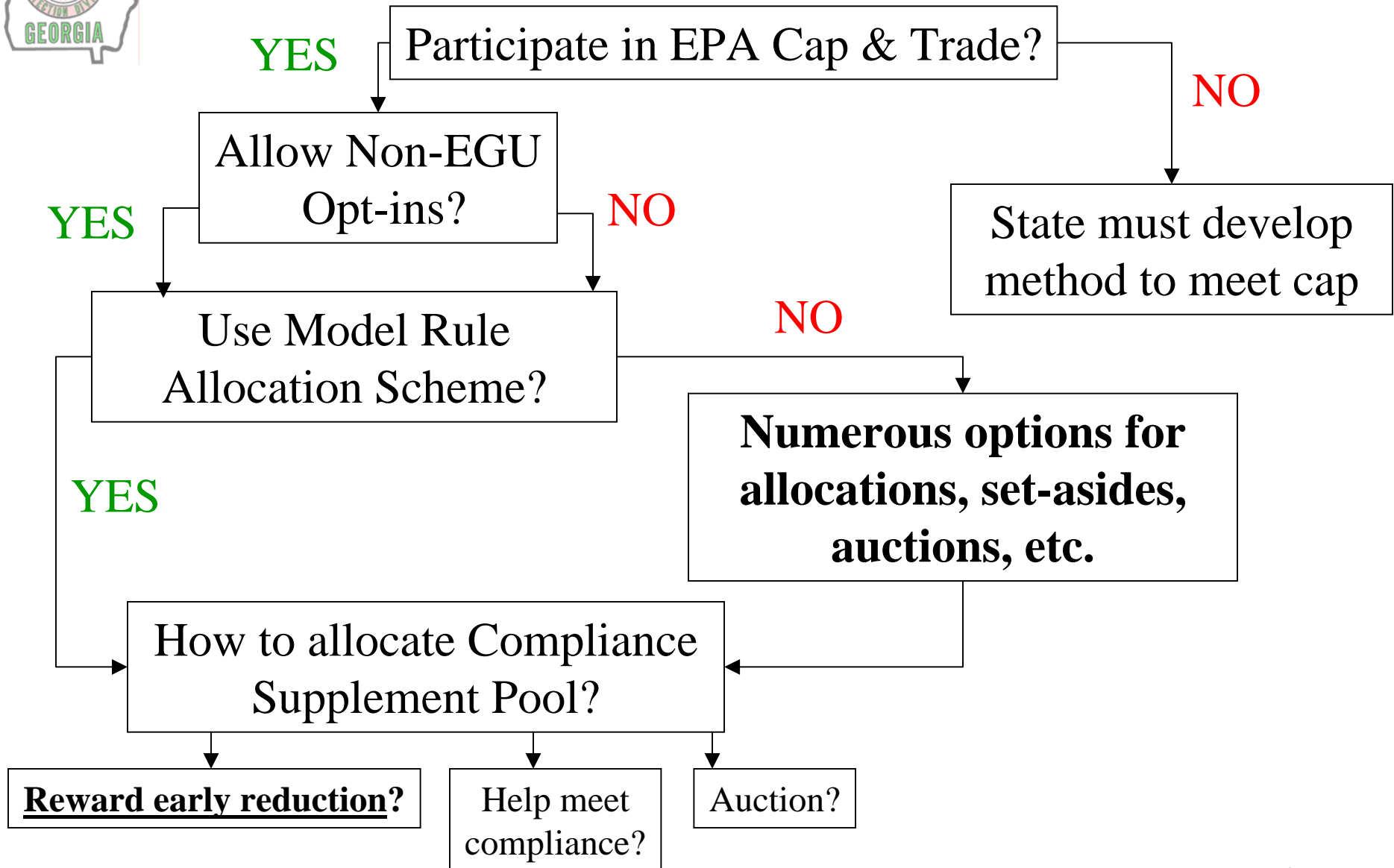


# CAIR Budget for NO<sub>x</sub>

- Trading Program for EGU NO<sub>x</sub>
  - Each state receives NO<sub>x</sub> budget based on historical heat input data
  - States choose how to allocate or auction the allowances among EGUs
  - Both an annual and ozone season program
    - Georgia is only in the annual (PM2.5) program
  - Choices for NO<sub>x</sub> program are independent of those for SO<sub>2</sub>, Hg
- Georgia budgets:
  - 103,618 tons: Actual EGU emissions in 2003
  - 66,321 tons/year for Phase I (2009-2014)
    - One-time compliance supplement pool of 12,397 tons
  - 55,268 tons/year for Phase II (2015 and beyond)
- Banking and Trading of allowances is allowed



# CAIR NO<sub>x</sub> Decision Tree





# Overview of Stakeholder Positions

- Fossil-Fueled Utilities
  - Participate in cap-and-trade program.
  - Do not require additional NO<sub>x</sub> or SO<sub>2</sub> mass emission rate reductions from applicable EGUs.
  - A variety of allocation schemes were suggested.
- Environmental Groups and Concerned Citizens
  - Establish a RE/EE set-aside.



# Overview of Stakeholder Positions

- Should Georgia allow non-EGU facilities to opt-in to the trading program?
  - Model Rule: Yes or No
  - Stakeholders: No
- Should allocation be fuel-neutral or not? If not, what adjustments should be made for the various coal-types?
  - Model Rule: 1.0 (coal), 0.6 (fuel oil), 0.4 (natural gas)
  - Coal-Fired EGU Stakeholders: Keep EPA fuel adjustment factors.
  - Turbine EGU Stakeholders: Fuel Neutral or change the factors to 1.0 (coal), 0.8 (fuel oil), 0.7 (natural gas).



# Overview of Stakeholder Positions

- Criteria for Distribution of Allowances to Existing Sources;
  - Model Rule: Existing is prior to January 1, 2001 and allocate based on three highest heat input rates from 2000-2004.
  - Coal-Fired EGU Stakeholders: Existing is a source that has five years of operating data by December 31, 2005. Based on three highest heat input rates from 2001-2005.
  - Turbine EGU Stakeholders: Choose top 3 heat input from 1995 to 2004; Choose top heat input from prior five years.



# Overview of Stakeholder Positions

- Criteria for Distribution of Allowances to New Sources;
  - Model Rule: Existed on or after January 1, 2001 and allocated emissions based on adjusted heat rate, actual mercury emissions, and allocation comes from new source set-aside if available.
  - Coal-Fired EGU Stakeholders: Does not have five years of operating data as of December 31, 2005 and is allocated emissions based on availability in new source set-aside.
  - Turbine EGU Stakeholders: Varies from highest MW-hrs in last 2-5 years to a tiered approach.



# Overview of Stakeholder Positions

- Duration of Initial Allowance Allocation Period;
  - Model Rule: EPD must allocate allowances for 2009 through 2014 (NO<sub>x</sub>) and 2010 through 2014 (SO<sub>2</sub>) by October 31, 2006.
  - Coal-Fired EGU Stakeholders: Distribute allowances for years 2009-2014 (NO<sub>x</sub>) and 2010 through 2014 (SO<sub>2</sub>) by October 31, 2006.
  - Turbine EGU Stakeholders: Three to four years.



# Overview of Stakeholder Positions

- Duration of Subsequent Allowance Allocation Periods;
  - Model Rule: EPD must allocate allowances for 2015 and thereafter by October 31, 2009 and each year thereafter (annual period).
  - Coal-Fired EGU Stakeholders: Continue to cover a five year block period. Reallocate every five block calendar years.
  - Turbine EGU Stakeholders: Annual updating.
- How much of a “look-ahead” should be provided?
  - Model Rule: 4 to 6 years
  - Stakeholders: 3 years



# Overview of Stakeholder Positions

- **What should be the baseline for future re-allocations?**
  - Model Rule: Baseline remains unchanged.
  - Coal Fired EGU Stakeholders: Update baseline – The 5-year baseline period of 2015-2019 would be based on 2006-2010, etc. Note this is on a five year “block” basis.
  - Turbine EGU Stakeholders: Update baseline annually.
- **How and when should the new sources become existing sources? And how should their allowances be calculated?**
  - Model Rule: Five years of operational data after January 1, 2001 and allocated on the 11<sup>th</sup> year after operation based on output. Allowances would then come from the “existing” source pool.
  - Stakeholders: Must have five full years of operating data and allocate based on average of three highest mercury emission rates. A “new” source would become “existing” at least 9 years after operation began.



# Overview of Stakeholder Positions

- **How and when should the new sources become existing sources? And how should their allowances be calculated?**
  - Model Rule: Five years of operational data after January 1, 2001 and allocated on the 11<sup>th</sup> year after operation based on output. Allowances would then come from the “existing” source pool.
  - Coal-Fired EGU Stakeholders: Must have five full years of operating data and allocate based on average of three highest mercury emission rates. A “new” source would become “existing” at least 9 years after operation began.



# Overview of Stakeholder Positions

- Should retired units continue to receive allowances?
  - Model Rule: Yes
  - Coal-Fired EGU Stakeholders: No; however, once a source has received a distribution of allowances, it should be allowed to retain those allowances during the remainder of that allocation period.
  - Turbine EGU Stakeholders: Receive allowances for up to three years following retirement.
- Should EPD auction any or all of the allowances or distribute them to eligible sources?
  - Model Rule: Does not matter.
  - All Stakeholders: Environmental Groups support auction for Clean Energy Fund.



## Overview of Stakeholder Positions

- Should EPD withhold any portion of the allowances for RE/EE projects?
  - Model Rule: Silent on this issue.
  - Coal-Fired EGU Stakeholders: No
  - Turbine EGU Stakeholders: If an RE or EE project meets the definition of EGU than ok.
  - Environmental Stakeholders: Yes



# Overview of Stakeholder Positions

- **How large of a new source set-aside is needed?**
  - **Issues:** Little use of new sources recently, but greater turbine utilization or new large plant could oversubscribe
  - **Model Rule:** 5% thru 2013; 3% after
  - **Stakeholder positions:** Georgia Power, MEAG & Oglethorpe want 3% set-aside thru 2019 only; Murray (KGen), Progress & Tenaska want >5% set-aside
  - **Proposal:** 3% through 2014; 3% after



# “Working Draft - NO<sub>x</sub>” Regulatory Overview

- **Adopt by Reference without Changes**
  - Part 96 Subparts BB (Designated Rep), CC (Permits), DD(Reserved), GG (Allowance Transfers), and HH (Monitoring and Reporting)
- **Adopt by Reference With Minor Changes**
  - Part 96 Subparts AA (General Provisions) and FF (Allowance Tracking System)
- **Adopt by Reference with Changes**
  - Part 96 Subpart EE – Allowance Allocations
- **Do not adopt Part 96 Subpart II – NO<sub>x</sub> Unit Opt-Ins**



# “Working Draft” CAIR NO<sub>x</sub> Policy: Overview

## Major “working draft” recommendations:

1. Join EPA’s NO<sub>x</sub> cap-and-trade program
2. No opt-ins of non-EGUs
3. Modified allocation scheme with periodic updating
4. Clean energy set-aside



# “Working Draft” for NO<sub>x</sub>:

## 1. Join EPA’s Cap-and-Trade Market

### **Justification:**

- Cost-effective control in largest possible trading market
- Creates financial incentive for reductions
- Ozone and PM transport is regional in scope
- Can use NAAQS attainment SIPs to achieve specific local reductions if needed
- Supported by all stakeholders, especially industry



## “Working Draft” for NO<sub>x</sub>: 2. No Opt-ins of non-EGUs

### **Justification:**

- Opt-ins could complicate program administration
- No indication of strong industry interest to opt-in due to monitoring, paperwork, and other requirements
- Could enable more EGU emissions
- No stakeholders expressed support for opt-ins



## **“Working Draft” for NO<sub>x</sub>:**

### **3. Modified Allocation Scheme**

- **Definition of New vs. Existing Sources**
- **Treatment of Retired Units**
- **Timeframe Covered by Initial and Subsequent Allocations**
- **Define Allocation Baseline**
- **How are these parameters defined for**
  - Initial Allocation?
  - Subsequent Allocations?



# “Working Draft” for NO<sub>x</sub>:

## 3. Initial Allocation

- **Existing Unit Definition**
  - *Model Rule*: Commenced operation before Jan 1, 2001
  - *Proposal*: Commenced operation before Jan 1, 2006
- **New Unit Definition**
  - *Model Rule*: Commenced operation on or after Jan 1, 2001
  - *Proposal*: Commenced operation on or after Jan 1, 2006



## “Working Draft” for NO<sub>x</sub>:

### 3. Initial Allocation (2)

- **Treatment of Retired Units – Model Rule**
  - ***Model Rule:*** Retired units are allocated allowances as long as the affected unit is retired on or after Jan 1, 1999.
  - ***Proposed Rule:***
    - Retired units **ARE NOT** allocated allowances.
    - A retired unit is one that is retired prior to January 1, 2006.



## “Working Draft” for NO<sub>x</sub>:

### 3. Timeframe Covered by Initial Allocation

	Model Rule	Proposal
Baseline Years	2000-2004	2003-2005
Allocation Years	2009-2014	2009-2011
Reporting Date to EPA	10/31/2006	10/31/2006



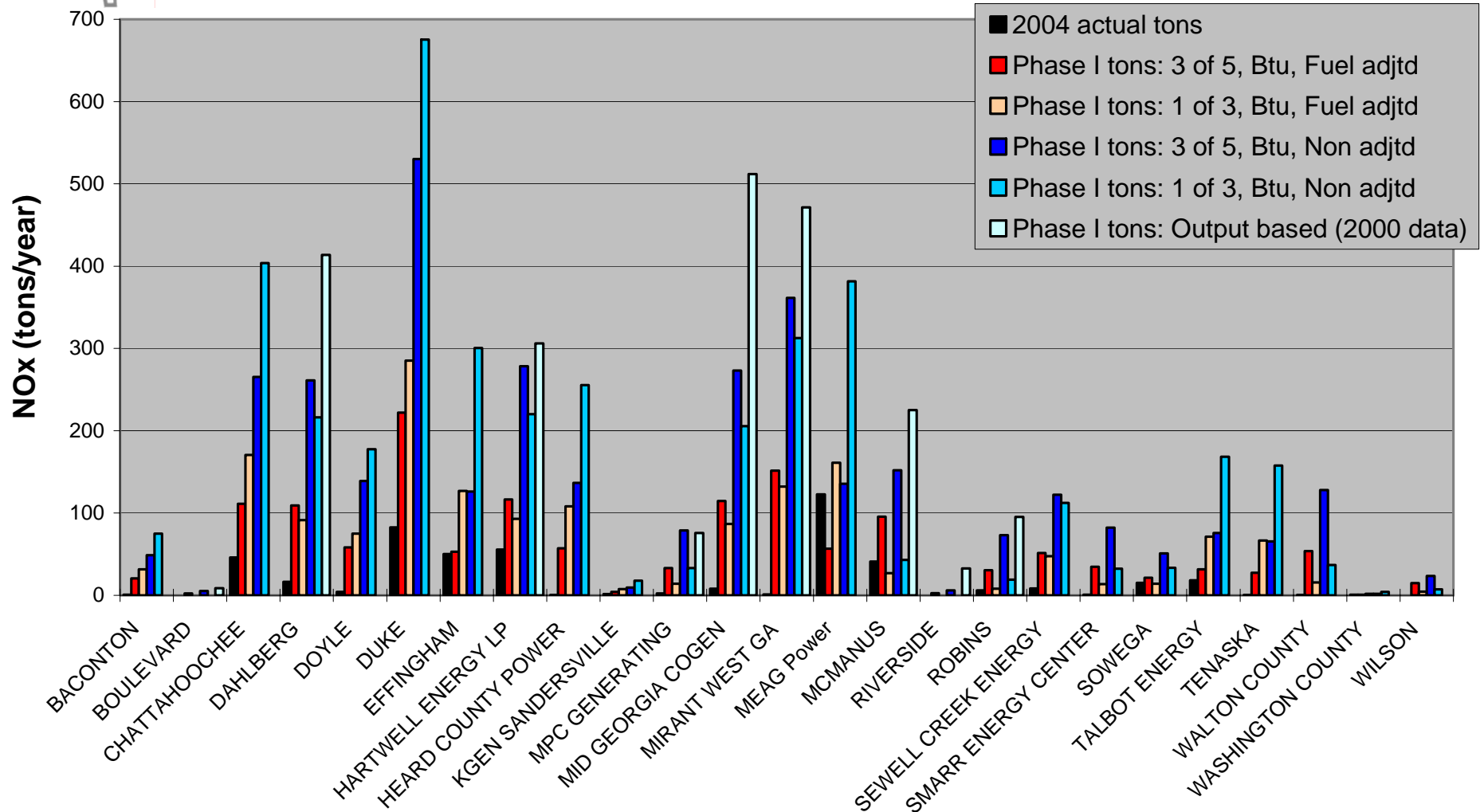
## “Working Draft” for NO<sub>x</sub>:

### 3. Baseline for Initial Allocation for Existing Sources

	Model Rule	Option A	Option B
Baseline Years	2000-2004	2003-2005	2003-2005
Basis (1)	Fuel Adj HI	Fuel Adj HI	Fuel Adj HI
Basis (2)	Avg of 3 Highest control periods	Highest Control Period	Highest Control Period

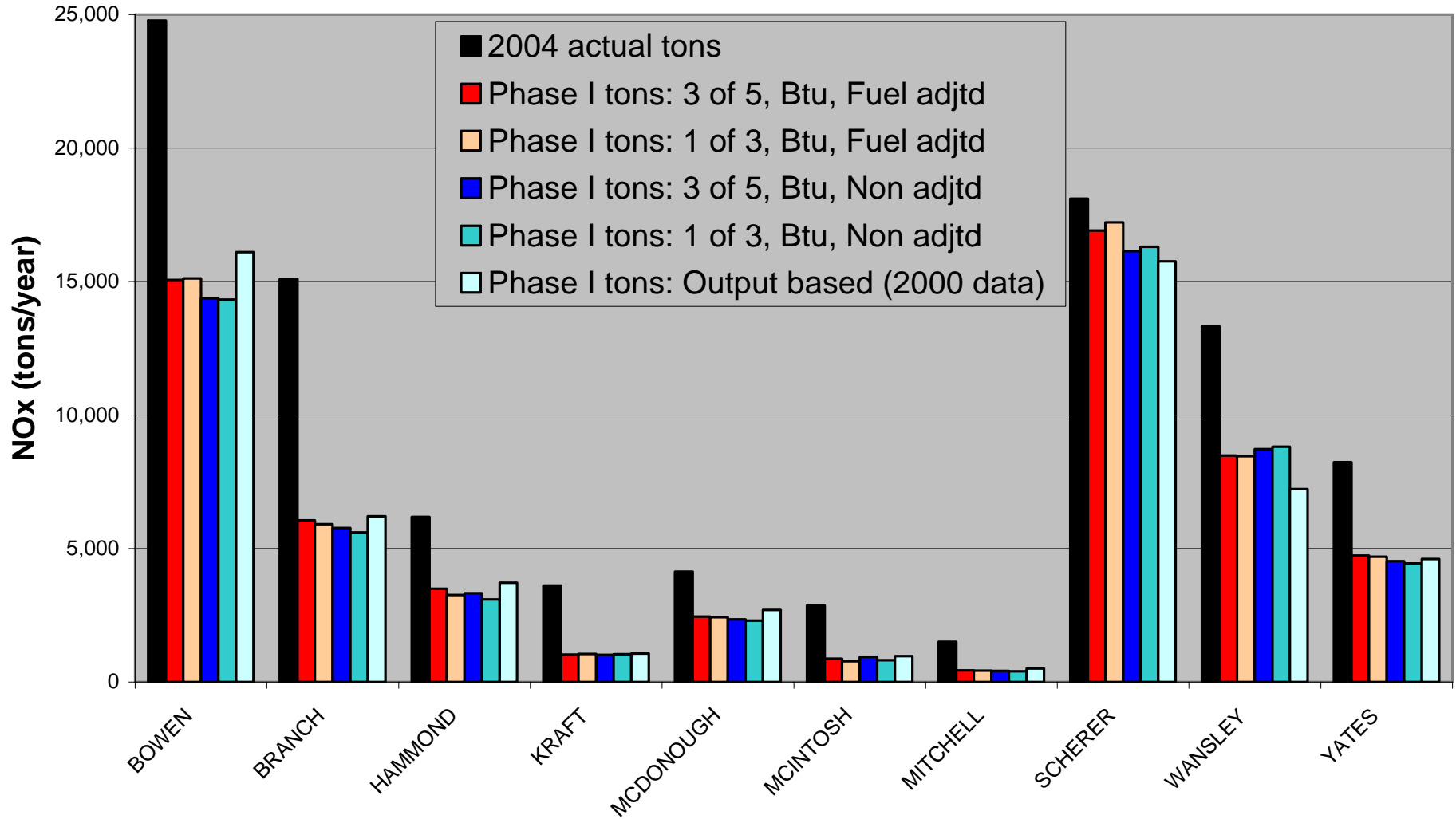


# Sample NO<sub>x</sub> Allocations: CAIR Phase I





# Sample NO<sub>x</sub> Allocations: CAIR Phase I





### 3. “Working Draft” for NO<sub>x</sub>: Available NO<sub>x</sub> Allowances

	2009-2014 Tons per year	2015+ Tons per year
Existing Units	MR: 63,005 PR: 61,015	MR: 53,610 PR: 50,839
New Units	MR: 3,316 PR: 1,990	MR: 1,658 PR: 1,658
Other Set-Asides	MR: 0 PR: 3,316	MR: 0 PR: 2,763
Total	66,321	55,268



### 3. “Working Draft for NO<sub>x</sub>”: Periodic Updating of Allocations – Option A

Reporting Date	Baseline Years	Allocation Years
10/31/2006	2003-2005	2009, 2010, 2011
10/31/2008	2005-2007	2012
10/31/2009		2013
10/31/2010		2014
10/31/2011	2007-2009	2015
10/31/2012		2016
10/31/2013		2017



### 3. “Working Draft for NO<sub>x</sub>”: Periodic Updating of Allocations – Option B

Reporting Date	Baseline Years	Allocation Years
10/31/2006	2003-2005	2009, 2010, 2011
10/31/2008	2005-2007	2012
10/31/2009	2006-2008	2013
10/31/2010	2007-2009	2014



### 3. “Working Draft for NO<sub>x</sub>”: Periodic Updating: Existing Unit Definition

Commencement of Operation before Dates Given	Model Rule	Option A	Option B
Initial Allocation 2009-2011	01/01/2001	01/01/2006	01/01/2006
Re-Alloc. 2012 2013 2014	Same as above	01/01/2008 01/01/2008 01/01/2008	01/01/2008 01/01/2009 01/01/2010
Re-Alloc. 2015	Same as above	01/01/2011	01/01/2011



### 3. “Working Draft for NO<sub>x</sub>: Modified Allocation Scheme

- **Move to fuel-neutral output (MWh) basis ASAP**
  - ***Rationale:*** Promotes energy efficiency; Fuel-neutral
  - ***Problems:*** Issue of data availability at first
  - ***Stakeholder positions:*** Environmental groups support; Some (not all) utilities prefer emissions or heat input basis



## “Working Draft for NO<sub>x</sub>”: 4. Clean Energy Set-Aside (1)

**Allocate 5% of NO<sub>x</sub> allowances to Georgia Environmental Facilities Authority to be auctioned to create a fund for competitive grants to renewable energy and energy efficiency projects.**

### **Rationale:**

- Upfront funding for EE/RE projects (~\$9 million/year\*)
- Competitive basis would promote cost-effective proposals
- Recommended by coalition of public interest and environmental stakeholders
- Used by other states (& considered by GA) in NO<sub>x</sub> SIP Call
  - EPA guidance document exists
- Less paperwork, more upfront support than letting RE/EE projects join CAIR as new sources



## **“Working Draft for NO<sub>x</sub>”: 4. Clean Energy Set-Aside (2)**

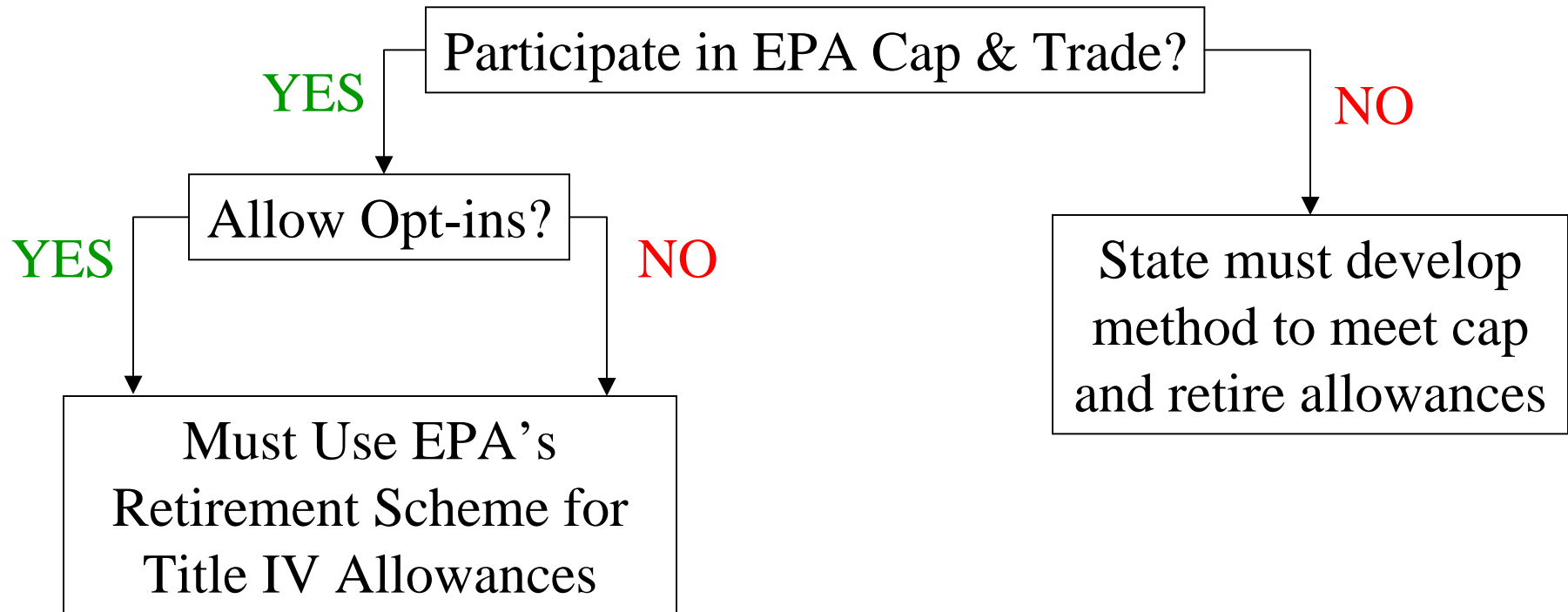
- **Georgia EPD to allocate each calendar year 5% of the NO<sub>x</sub> allowances of the Georgia CAIR Budget to GEFA.**
- **GEFA auctions the NO<sub>x</sub> allocation**
  - **The proceeds from this auction to be used for investments in end-use energy efficiency and renewable energy projects.**
- **Allocation and Awarding of the EE/RE Set-Aside to be explained in detail in a guidance document under development**



# CAIR for SO<sub>2</sub>: Options and Considerations



# CAIR SO<sub>2</sub> Decision Tree





# CAIR Cap and Trade for SO<sub>2</sub>

- Continuation of Acid Rain Program
  - Existing sources retain their Title IV allowances
  - New sources must buy allowances on the market
- Georgia budgets:
  - 539,258 tons: Actual EGU emissions in 2003
  - 213,057 tons/year for Phase I (2010-2014)
  - 149,140 tons/year for Phase II (2015 and beyond)
- Banked Title IV allowances can be used at a retirement ratio:
  - Pre-2010 Vintage: ratio of 1:1
  - 2010-2014: ratio of 2:1
  - 2015 and beyond: ratio of 2.86:1
  - Note: Georgia utilities have a sizable pool of banked allowances



## **“Working Draft for SO<sub>2</sub>”**

- **Adopt Model Rule with No Changes**
  - **Participate in Cap-And-Trade Program**
  - **Do Not Allow SO<sub>2</sub> Opt-Ins**
  - **Do Not Modify Allowance Allocation Scheme**
  
- **Supported by Stakeholders**



# CAIR

## Implementation Timeline



## Revised Timeline for CAIR -2006

- Feb 20 – Mail draft rule with options to stakeholders
- March 9 – CAIR Stakeholder Meeting
- March 24 – Stakeholder comments due to EPD
- Mar-Apr – Draft CAIR Rule Language; Internal Review of CAIR Rule Language
- Apr – Brief DNR Board
- May – Propose Rule
- June – First Public Hearing
- Aug – Brief DNR Board Meeting on Comments Received & Revised Rule Language (or Adopt Rules if Possible)
- Sept – Repropose; **CAIR SIP Submittal Deadline is 9/12/06**
- Oct – Second Public Hearing; **Deadline for Submitting NO<sub>x</sub>, SO<sub>2</sub> Allocations to EPA**
- Dec - DNR Board Adopts Rules; Submit NO<sub>x</sub>, SO<sub>2</sub> Allocations to EPA;
- Late Dec – **Submit CAIR SIP to EPA;**



# Electronic Docket

- <http://www.air.dnr.state.ga.us/airpermit/cair/>
  - Contact information
  - Schedules & Meetings
  - Background Information
  - Affected Sources
  - Proposals & Comments