

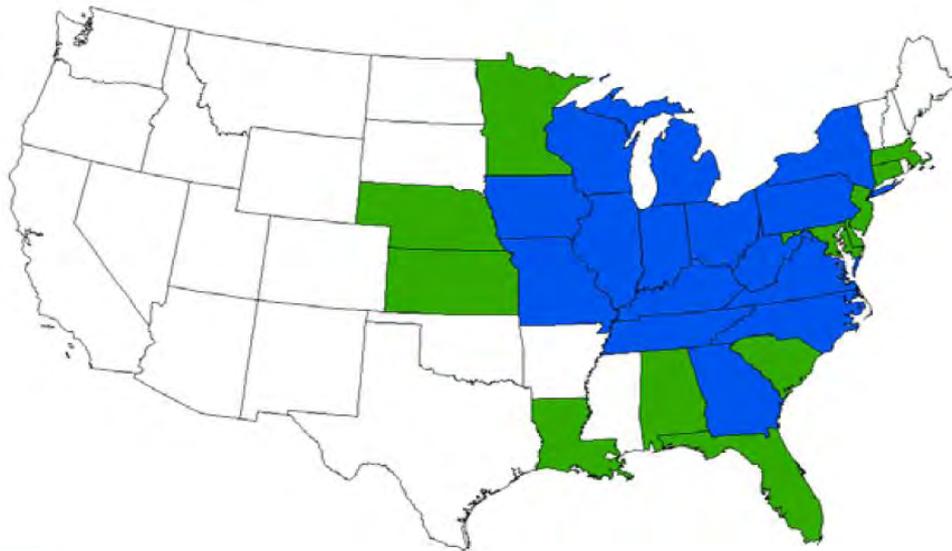
GECC, Homer City & Clean Air Transport Rule:

# Why EPA Should Adopt The Emissions Based Allocation Methodology in Phase I That It First Proposed

May 9, 2011

# Clean Air Transport Rule (CATR)

- CATR responds to litigation holding that EPA had not adequately controlled sources contributing to air quality impairments along the East Coast
- CATR is phased in. The first phase takes effect in January 2012, while the second phase is effective in January 2014.
- Phase I is at issue here.
- CATR is scheduled to be finalized June 2011.



SO<sub>2</sub> group 1 (15 States)  
SO<sub>2</sub> group 2 (12 States + DC)

States in both groups are covered for annual NO<sub>x</sub>



- CATR imposes SO<sub>2</sub> caps in 2012 (Phase I) and a more stringent SO<sub>2</sub> cap in 2014 affecting 15 states (Phase II).
- As originally proposed, Phase I caps are based on emission reductions achieved by operation of existing and planned pollution control equipment.
- Phase II caps are based on computer modeling of air quality needs and controls that can be “reasonably” installed by 2014.

# GECC, Homer City and the Transport Rule

- GE Capital Energy Financial Services (“GECC”) is one of two passive financial entities that own Homer City, a 3-unit coal-fired power generation facility, leased to and operated by Edison Mission Energy. It produces 1,884 MWs of electricity, enough for 2 MM homes.
- One of Homer City’s units is equipped with controls to reduce SO<sub>2</sub> and NO<sub>x</sub>, while the other units are only controlled to reduce NO<sub>x</sub> emissions.
- Homer City’s two units that are uncontrolled for SO<sub>2</sub> will have to install controls to meet CATR Phase II at a cost of ~ \$700 MM – not the focus here.
- EPA’s initial Transport Rule proposal is based on historic emissions, and Homer City received nearly enough SO<sub>2</sub> allowances to operate at current levels. EPA proposed two additional allocation methodologies in January (“NODA”), based on plants’ heat-input . The NODAs reduce Homer City’s allowance allocation by 66% - from 99,000 allowances to 33,000.
- The NODA would likely cause Homer City to sell ~1/3 as much power as in the past, due to the limited number of allowances provided by EPA and the likelihood that the cost of additional allowances will increase its operating costs to a point where it cannot sell at the marginal price of power.

# NODA Impact and GECC Recommendation

- GECC retained Charles River Associates (“CRA”) to estimate the impact of the NODAs on the price of power. CRA found:
  - The price of electricity will increase under the NODAs by at least \$359 MM and potentially as much as \$514 MM
  - The NODAs provide no environmental benefit beyond EPA’s original proposal – the total allowances granted in the region are nearly identical
  - Higher power prices benefit entities that receive large allowance surpluses at the expense of consumers and allowance-short entities
  - The NODA’s will cost Homer City between \$40-46 MM per year in 2012-13

## GECC Recommendation

For Phase I of CATR, EPA should adopt its original emissions-based methodology

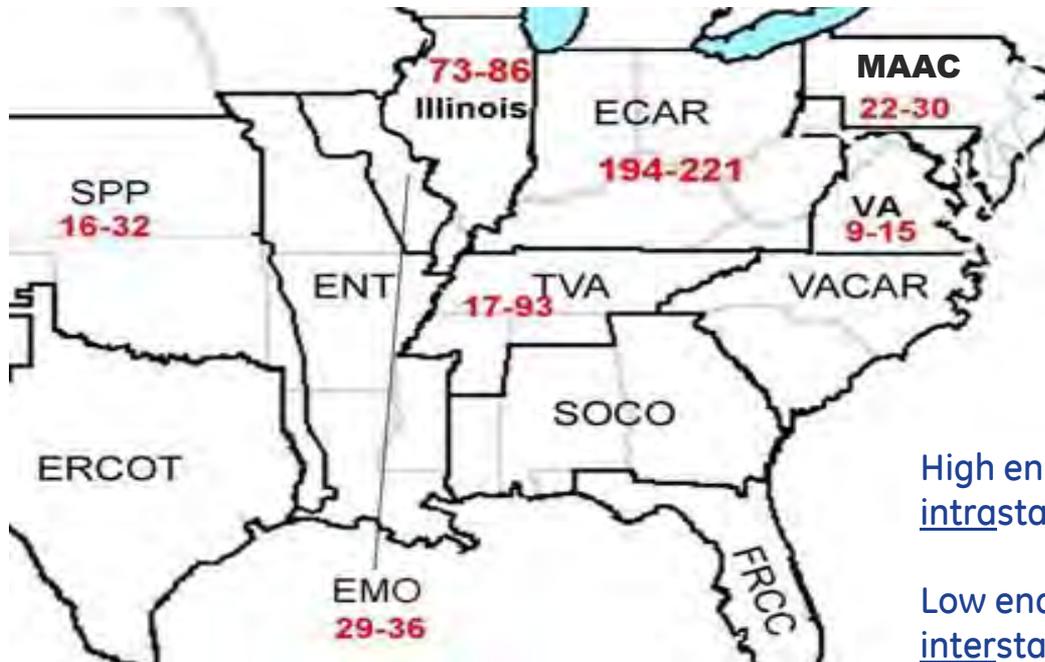
– OR –

Apply an emissions-based allocation methodology to Phase I, and switch to a heat-based approach in Phase II

# Why Consumers Should Care

- The cost of the NODAs is concentrated in the economically-challenged Midwest – Illinois, Indiana, Ohio, Kentucky and West Virginia.

Increase in Electricity Costs Resulting from NODA vs. EPA's Initial Transport Rule Proposal (in \$ 2010 millions)



The Public Pays for No Environmental Benefit

High end of range is with intrastate trading.

Low end of range is with interstate trading.

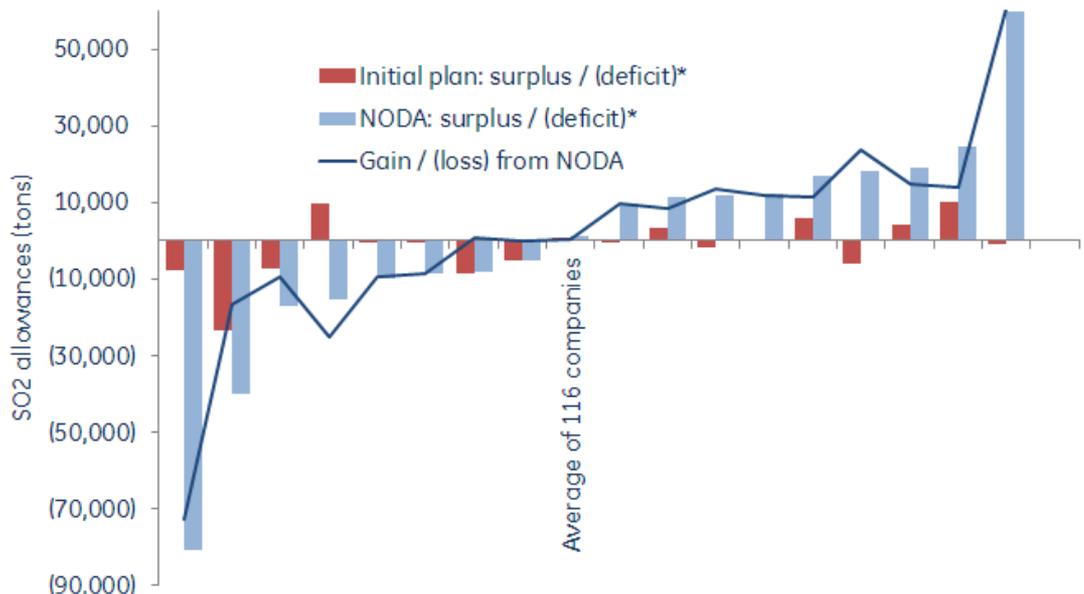
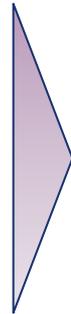
# What is Wrong With the NODAs?

- NODA supporters' argument is based on false premises that undermine the effectiveness of EPA's well-established emissions trading programs.
  - NODA supporters ask EPA to reward one class of power plants ("EGUs") over another because they installed control equipment as a compliance strategy rather than purchase allowances.
  - EGUs that chose to comply with Clean Air Act of 1990 and CAIR by purchasing allowances were acting lawfully and consistent with EPA implementation of Congressional policy designed to achieve economically-efficient emission reductions.
  - The NODAS upset settled expectations by changing the rules after years of accepted EPA policy promoting economically efficient trading, at a time when those who are adversely affected have no opportunity to install equipment within the 2012-14 timeframe.
    - ✓ It creates regulatory uncertainty over whether EGUs should engage in efficient market behavior given the risk of later being judged imprudent for not acting otherwise.
    - ✓ It also increases the cost and constrains the availability of financing, which ultimately increases the cost to consumers.
  - Many NODA-supporters own gas plants that installed no SO<sub>2</sub> controls, and/or certain coal plants that installed equipment under enforcement orders after being cited for non-compliance, begging the question: Why should these EGUs be rewarded?

# What is Wrong With the NODAs?

- The NODAs concentrate allowances in the hands of a small number of power companies, thereby providing them market power the exercise of which leads to higher allowance and power prices.
  - By design, EPA's original proposal allocated to EGUs essentially the number of allowances needed to maintain current operations without installing controls. The result is that allowances are spread across the industry – individual units either had a small surplus or shortage.
  - The NODAs do the opposite – resulting in a small number of dominant allowance-holders and several power companies with severe deficits.

Selected Company  
SO<sub>2</sub> Allowance  
Surplus / (Deficit) as  
Compared to 2009  
Emissions Adjusted  
for New Scrubbers  
With 95% Removal

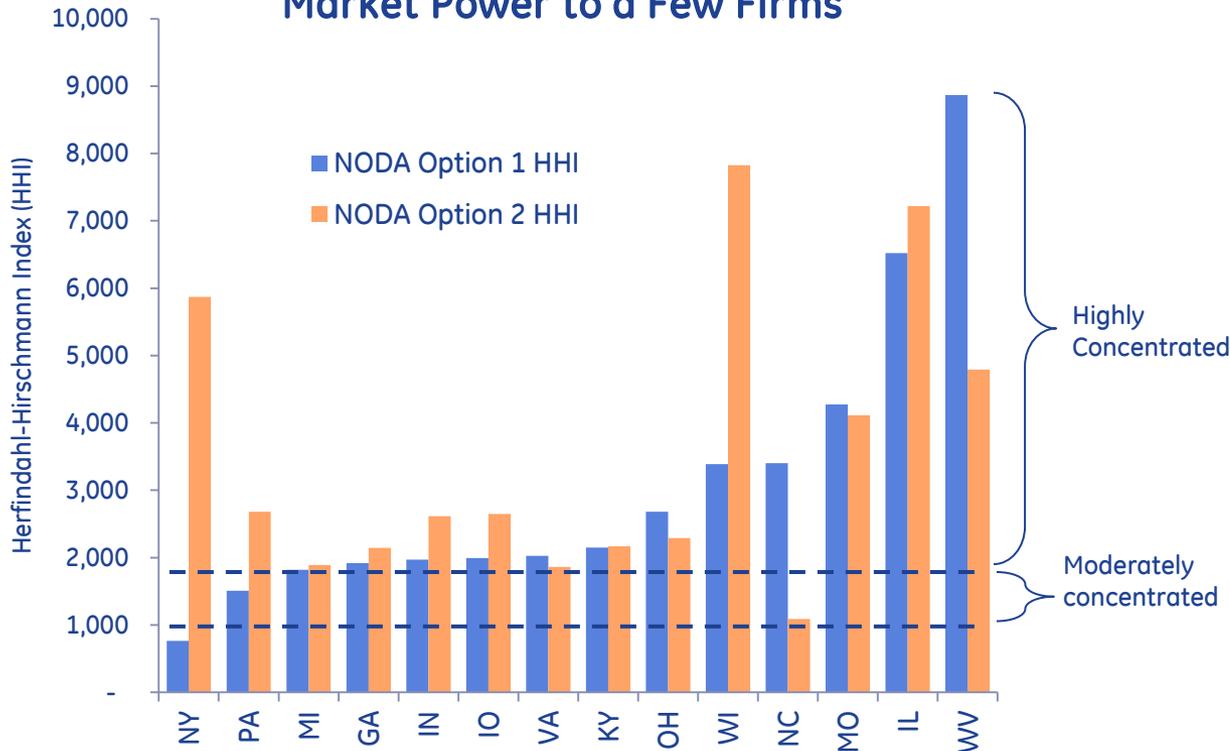


\* Source: EPA, Ventyx, GECC

# NODAs Concentrate Allowances – Intra-state Case

- By concentrating excess allowances in the hands of a few EGUs, the Phase I NODA alternatives could encourage anti-competitive behavior in the intra-state trading case that detracts from the efficiency of the allowance market

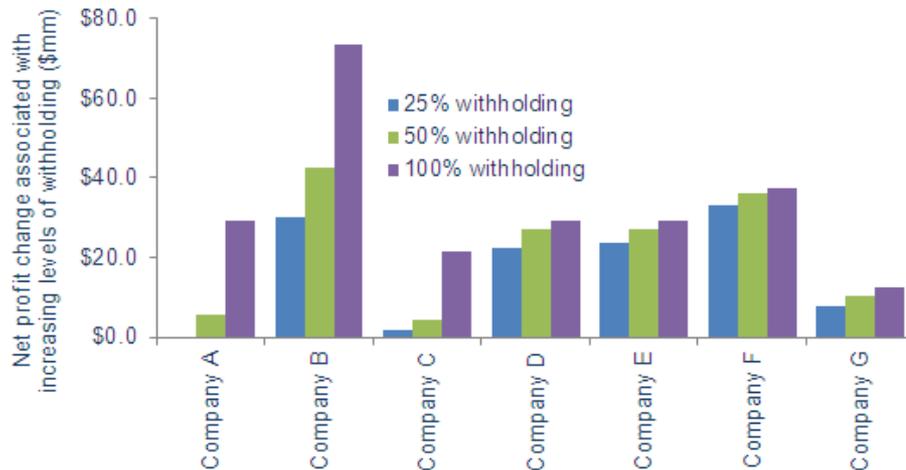
**Concentration of Excess Allowances Gives Market Power to a Few Firms**



- The Herfindahl-Hirschmann Index (“HHI”) is used by DOJ and FERC for anti-trust and market power concentration assessment purposes
- FERC’s guidelines levels: 1,000 (moderate concentration) and 1,800 (high concentration) – ripe for abuse
- DOJ guideline levels: 1,500 (moderate concentration) and 2,500 (high concentration) – ripe for abuse.

# NODAs Make Withholding Profitable – Intra-state

- Market power makes it financially attractive for the seven predominant surplus allowance-holders to withhold allowances rather than sell them into the market
  - The price of power goes up in response to a withholding of 40% of the *surplus* allowances (6% of *total* allowances granted by EPA)



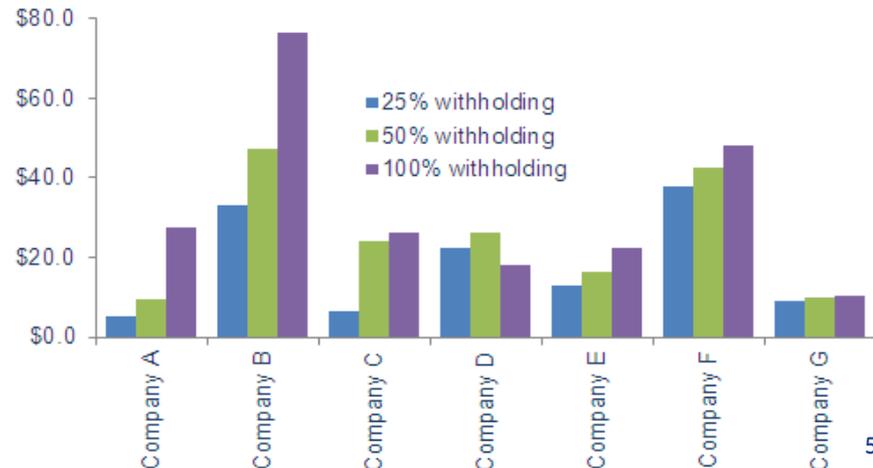
Companies make more money by withholding allowances, obtaining greater revenue from selling more power at a higher price

Source: Charles River Associates, May 2011 report entitled: "Market Power Implications of EPA's Proposed Alternative Allowance Allocations under CATR for 2012-13"

# Withholding is Also Profitable – Inter-state Case

- CRA examined allowance concentration if EPA permits inter-state trading
  - If permitted, unfettered inter-state trading results in a HHI index of 479, indicating that the allowance market is not concentrated
  - Ordinarily, in an un-concentrated market surplus holders could not withhold allowances profitably
  - However, as the graph below indicates, withholding remains an attractive strategy to surplus allowance holders given the impact of such a strategy on allowance and power prices
- A withholding strategy has little risk to surplus allowance holders in the intra- and inter-state cases, given the opportunities to use withheld allowances to reduce operating costs, as shown on the next slide

Large surpluses granted under the NODAs make withholding profitable, even in un-concentrated markets

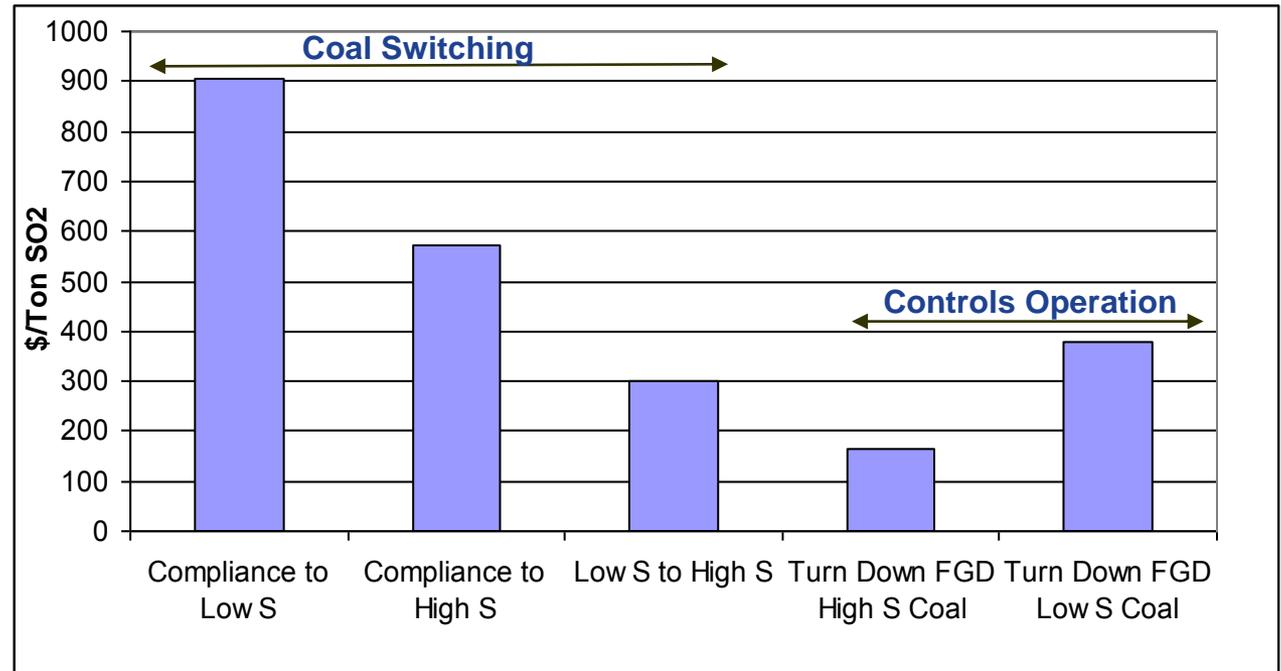


# Use of Withheld Allowances

- Withheld allowances can be used to reduce operating costs at the expense of higher SO<sub>2</sub> emissions in the 2012-14 timeframe. Banking is unlikely because allowances become virtually worthless in January, 2015 when a separate EPA rule comes into effect

- Each bar represents an option to use an allowance to reduce variable costs
- The fourth and fifth bars were used by CRA to estimate the benefit that surplus allowance-holders would realize.
- To be conservative, CRA did not use the coal switching benefits to estimate savings
- CRA did not examine individual permits

Surplus Allowances Can Be Used to Reduce Variable Costs



Source: Charles River Associates, May 2011 report entitled: "Market Power Implications of EPA's Proposed Alternative Allowance Allocations under CATR for 2012-13"

# NODAs Do Not Meet EPA Stated Objectives and Have Significant Adverse Social Impacts

- If EPA selects either of the NODA alternatives, Homer City and similarly situated EGUs have only one compliance option in Phase I given the limited (6 months) compliance period – purchase allowances which may or may not be available at a price that may or may not enable the facilities to sell at or below the marginal price of power.
- The NODA alternatives are inconsistent with EPA's stated objective that compliance in Phase I be accomplished with existing and committed control technologies
  - Homer City and similarly situated EGUs cannot meet Phase I requirements with existing equipment, and controls cannot be acquired within the January 2012 deadline month for compliance
- A failure to generate revenue from power sales could have significant social side-effects:
  - Significant reduction of highly paid skilled IBEW employees (Homer City's average wage = \$73,500/year)
  - Adverse financial impact on those who provide and transport coal to these facilities
  - Significant impact on the financial well-being of surrounding, economically-stressed communities.
  - These side effects are not unique to Homer City. Similar side effects are likely to be felt in multiple plants throughout IL, IN, KY, MI, MO, OH, WV, PA with the NODA

# Summary: Why EPA Should Adopt Its Initial Proposal Rather Than Either of the NODAs

EPA's original Phase I approach is vastly superior to the NODA alternatives. Specifically, it:

- Promotes economic efficiency – minimizes CATR impact on consumer electricity prices
- Preserves capital for use in purchasing Phase II equipment
- Preserves high paying jobs that would be at least temporarily lost, and also enhances the financial well-being of surrounding communities
- Avoids windfall profits for one class of EGUs at the expense of consumers and other EGUs