

## An Overview of the RGGI Process RGGI Cap Level, Auction Design, Auction Proceeds, & Offsets

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## Environment Northeast

- Environmental Policy, Research, and Advocacy
  - Non-profit NGO with a regional approach
  - Offices in: Rockport and Portland, ME; Boston, MA; Providence, RI; Hartford and New Haven, CT; Charlottetown, PEI, Canada
- Our mission is to address large-scale environmental challenges that threaten regional ecosystems, human health, or the management of significant natural resources. We use policy analysis, collaborative problem solving, and advocacy to advance the environmental and economic sustainability of the region.
- Program Areas
  - Energy Policy
  - Climate Change
  - Diesel Pollution
  - Forests and Bioenergy
- Official Stakeholder in the RGGI Process



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## Presentation Outline

- RGGI Overview
  - RGGI Structure
  - Cap Level
- Offsets and Biomass
- Auction Design Elements
  - Reserve Price
- Cap Level Issues: current data & uncertainty

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## RGGI Basics

- 10 States involved in the Regional Greenhouse Gas Initiative (RGGI)
  - Maine, Massachusetts, New Hampshire, Vermont, Rhode Island, Connecticut, New York, New Jersey, Delaware and Maryland
- First mandatory cap-and-trade program for carbon dioxide in the US
- Applies to all fossil fuel-fired electricity generating units with nameplate capacity of 25 MW or greater
- Program commences Jan 1, 2009
- June 2<sup>nd</sup> 2008 is date of first auction
- Three-year compliance period, banking is allowed

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## Two-Phase Cap

- Two-phase cap:
  - Stabilization at “current” levels for 2009-2014.
  - State budgets are reduced 2.5% per year 2015-2018 for a total reduction of 10%
- The initial regional cap is set at 188 million tons CO<sub>2</sub> for the 10 states
- Each state has an allocation of the total cap to sell, but the regional cap is the most important as RGGI is a regional market with trading

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## Offsets

- Offsets from other sectors can be used to cover a portion (3.3%) of a RGGI unit's compliance obligation.
  - Offsets must be real, additional, permanent, quantifiable, enforceable
  - Standards approach —uses predefined protocols for determining eligibility
  - Example: Afforestation — all land non-forested for past 10 years eligible — does not require project-specific analysis of additionality
- Initial geographic location: 1) within the RGGI states, 2) states with a comparable cap & trade program, 3) states that sign an Offsets Memorandum of Understanding
- “Offset Triggers” at \$7 per ton/allowance (increase offset to 5%)
- “Safety Value” at \$10 (increase offsets to 10%, expands geographic scope, 4 yr compliance period)

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## Offsets

- Initial offset categories:
  - landfill methane capture & combustion
  - Sulfur hexafluoride (SF<sub>6</sub>) capture & recycling at electricity transmission facilities
  - sequestration through afforestation (tree planting)
  - End-use fossil fuel (natural gas, propane, and heating oil) energy efficiency
  - methane capture from agricultural operations
- Possible future categories:
  - Forest management
  - Avoided deforestation
  - Other

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## Eligible Biomass

- The Model Rule allows certain generation plants co-firing biomass with fossil fuels to make CO<sub>2</sub> deductions from their compliance obligation
- In order to deduct emissions, biomass must be “sustainably harvested”
- This is left up to individual states to define
- This is not relevant for existing plants (must burn >50% fossil fuel to fall under RGGI)
- Because of this, and controversy over what “sustainably harvested” means, some states have deleted this provision

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## Optional Elements of the Model Rule – Exemptions for Cogeneration

- The model rule has several optional sections which each state will have to decide whether or not to include in their specific rulemaking process.
- These include exemptions for industrial units that sell less than 10% of their output to the grid.
  - If a unit is exempted from RGGI, the state's total cap must be reduced by the amount of tons attributable to that source
  - Maine has included this, although it currently does not apply to any units
  - Maine has also chosen to set aside allowances to cover the emissions for the two Verso paper mills, which export more than 10% to the grid



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## Optional Elements – Voluntary Renewable Purchases

- Optional set-aside for voluntary renewable purchases.
  - For each control period, states can set aside some carbon credits and retire them at a set rate when it is verified that voluntary renewable energy purchases were made.
  - Retiring these credits will help support the voluntary renewable market and will ensure that these programs can continue to claim a reduction in carbon emissions.



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## RGGI Allocation and Auction Issues

- The allocation of allowances has been left to the state's discretion
- At a minimum, 25% of the allocations must be auctioned or allocated to programs to be used for a "consumer benefit or strategic energy purpose"
  - i.e. to support energy efficiency, renewable energy, innovative energy technologies or consumer rebates
- Most if not all states have decided to auction 100% of their allowances after minor set-asides for issues such as CHP, long-term contracts, and retirement of credits to support voluntary renewable energy

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## Auction Design

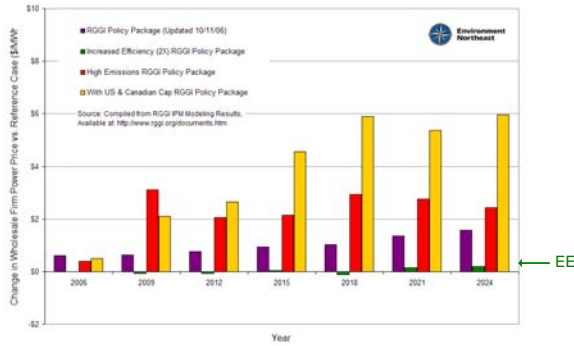
- RGGI contracted with the University of Virginia, Resources for the Future and the California Institute of Technology to provide specific auction design recommendations
- These included:
  - Single-Round Sealed-Bid, Uniform Price Auction
  - Separate auctions held for different vintages
  - Auctions would be regional and held quarterly
  - Auction Future Year Allowances (4 yrs in advance)
  - Market Open to All Qualified Participants
  - Auction should include a Reserve Price

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## Use of Auction Proceeds – Energy Efficiency First

IPM Forecasts of Wholesale Electric Power Prices Changes Reference Case vs. RGGI Policy

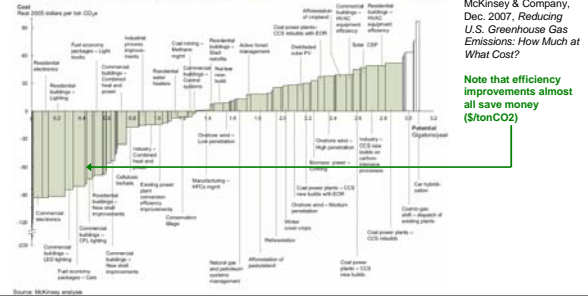


## Supply vs. Demand Investments:

The cap influences supply side technology investments but more direct investment is needed in efficiency programs to capture the opportunity

New England efficiency programs deliver energy savings at ~3 cents/kWh while additional supply costs as much as 10 cents/kWh

U.S. MID-RANGE ABATEMENT CURVE – 2030



## Auction Design - Reserve Price

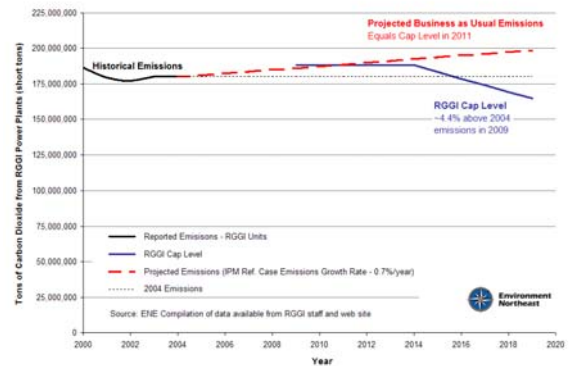
- A reserve price is a common element of auction design
- The reserve price accomplishes three essential goals:
  - Ensures that the states do not give away a commodity below its value to society (the program goal is to deliver a reduction in emissions which requires a price)
  - Guards against collusive behavior
  - Gives developers of new technologies a higher level of certainty as to the value of carbon, reducing their development risks.
- The reserve price should be set at a level that reflects the low-end of societies willingness to pay for carbon emissions reductions
  - ENE believes that it should be at least \$3/ton CO2
  - As the market develops the reserve price should transition to being about 80% of the current spot market price or the \$3/ton limit, whichever is higher.

MSOF

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## RGGI Cap Level Concerns



## Slide 15

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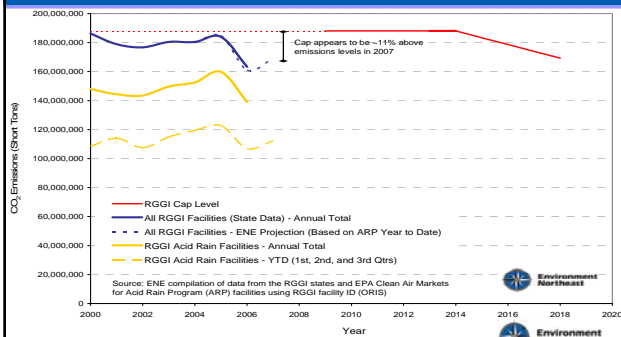
MSOffice1 society's (apostrophe "s")

Also, is it better to say "willingness" or "ability / capacity"

Re: the \$3/ton, can you fit a parenthetical that indicates why we think this is the right # or the amount of society's willingness or at least where it came from?

M Stoddard, 12/5/2007

## Comparisons of the RGGI Cap Level to Recent RGGI Facility CO2 Emissions



## Has the RGGI Cap Been Set Too High?

- Maybe – this needs to be carefully monitored with states regularly reporting emissions data

Policies that states can implement to address this include:

- Establish an auction reserve price mechanism with allowances withheld in a contingency account and released when the carbon hits a certain price such as \$20 ton, and
- Make a collective commitment to review the status of the RGGI cap level beginning at the start of 2010 with necessary adjustments made at the beginning of the second compliance period (2012) to ensure reduced emissions across the region

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