



Department of the Environment

Regional Greenhouse Gas Initiative and the Maryland CO2 Budget Trading Program



Diane Franks
Metropolitan Washington Air Quality Committee
December 19, 2012



- RGGI Basics
- RGGI Progress
- RGGI 2012 Review
www.rggi.org
Stakeholder Materials



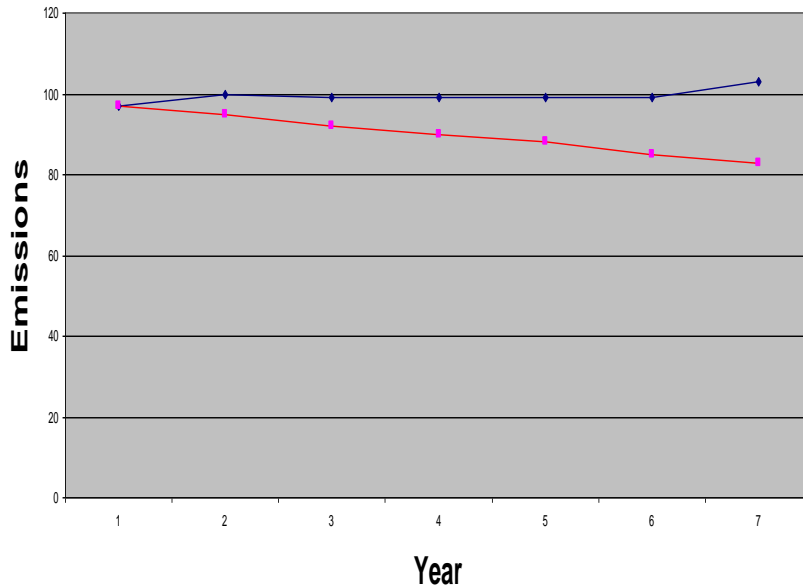
RGGI Basics



- Maryland officially became the 10th member of RGGI on April 20, 2007
- RGGI is a regional cap and trade program focused on reducing carbon dioxide (CO₂) emissions from power plants
- Not your “typical” cap and trade program
 - Technologies limited for CO₂ reduction
 - CO₂ reductions achieved by reduced demand not “scrubbers” or other end-of-the-pipe pollution control technologies

RGGI Framework

RGGI



- Establish cap
 - Cap selected to force reductions in a pollutant (CO₂)
 - Generate Allowances = Cap
 - Allowance price dictated by market
 - **Allowances purchased until cost of allowances equals cost of controls**
 - **Most sources will choose to install control to avoid increased cost as cap declines**
- Some generators better positioned to reduce CO₂ emissions
- Vision is to reduce demand through selling allowances and using proceeds to fund energy efficiency programs (helps all generators)

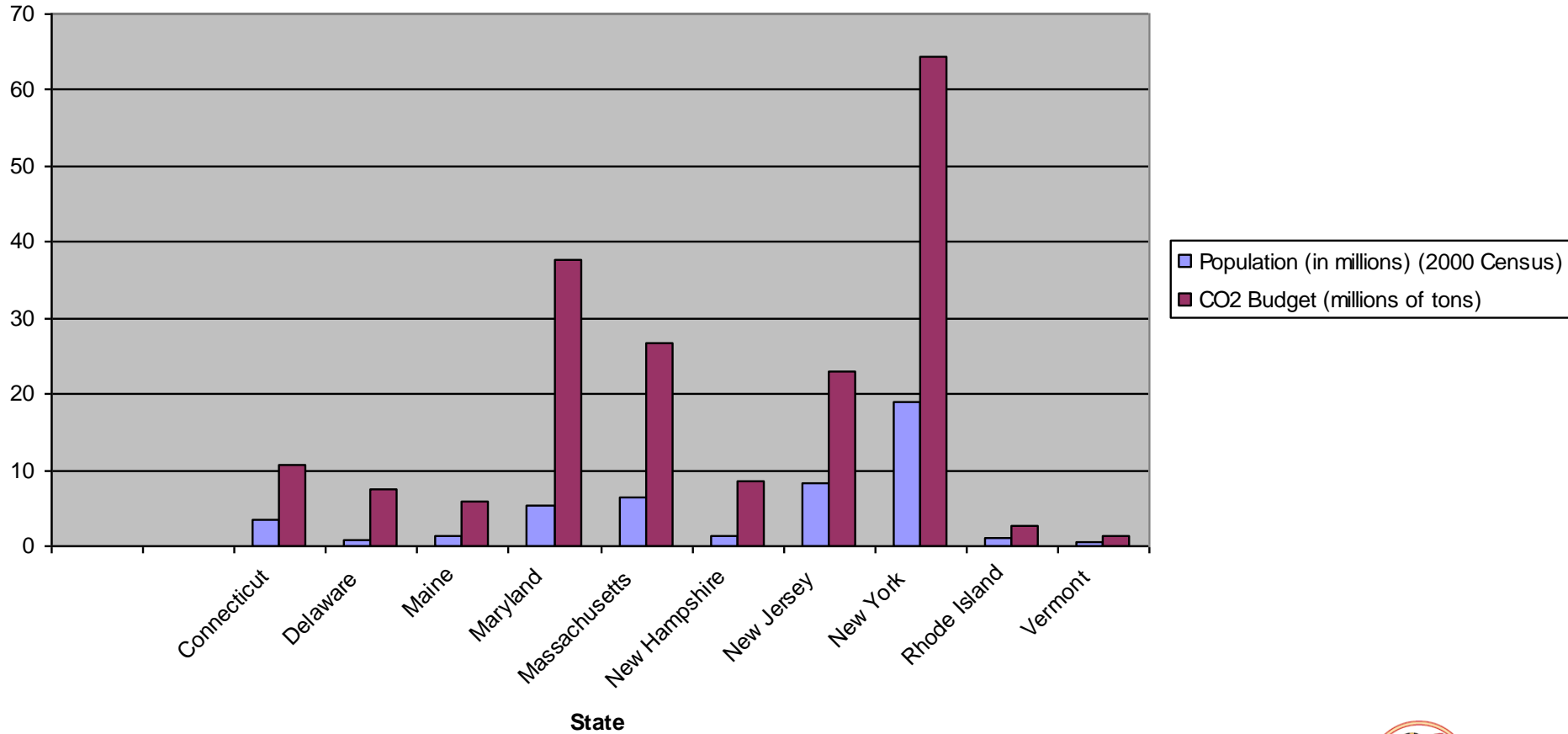
- Most RGGI allowances distributed through auctions (100% Auction)
- Direct allocation of allowances to sources avoided
- Active secondary market





RGGI Cap Apportionments

RGGI States: Populations & CO₂ Emissions Budgets



RGGI Goals



- **Original RGGI goal was to show that a cap and trade program for CO2 was possible**
 - Modest reduction goal
 - Proactive concept to provide revenue for energy efficiency programs and to cover cost of program through sale of allowances
- **Generation-based Program**
 - Each state apportionment set at average 2002-2004 emissions
- **10% Reduction Goal**
 - Offset growth in emissions and make a small reduction

RGGI Progress

- RGGI has completed its first control period: 2009-2011
- In many ways RGGI has been very successful:
 - RGGI has generated almost a billion dollars
 - Provided funding for energy efficiency programs, rebates to ratepayers and energy efficiency projects for the states as well as bill payment for low income residents and general fund relief
- In other ways RGGI has room for improvement
 - The RGGI MOU calls for a full program review in 2012

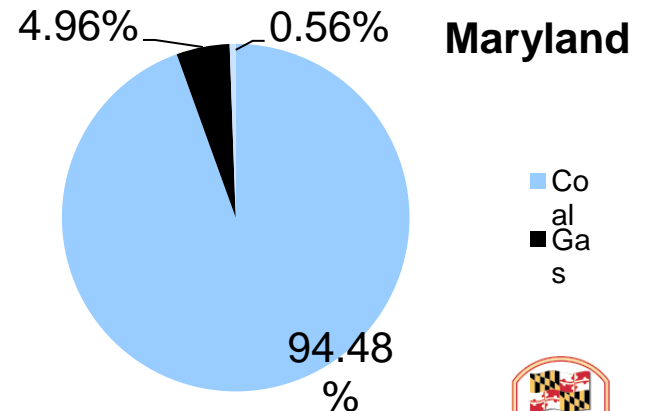
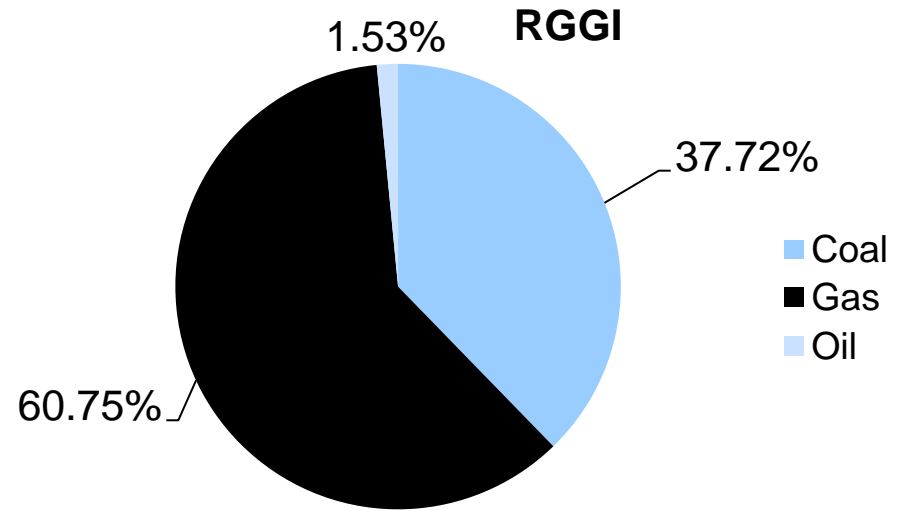


- RGGI's original goal was a 10% reduction in CO₂ emissions
- RGGI set the cap based on emission levels from 2000-2005

BUT.....

Unanticipated Events

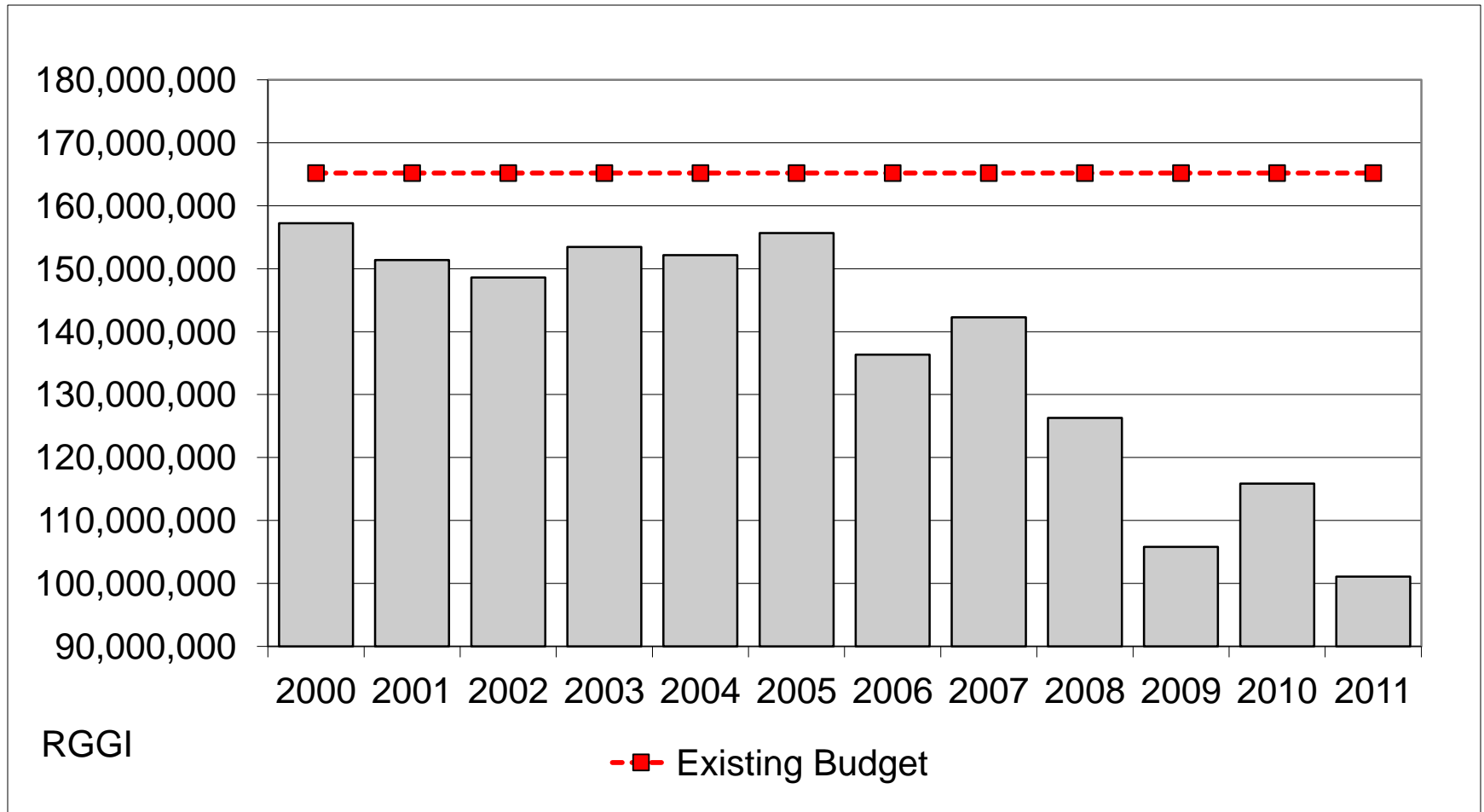
- In 2007 electricity demand fell due to the economic downturn and mild weather
- The price of natural gas fell substantially; many electricity generators switched to natural gas, lowering emissions
- As a result CO2 emissions today are ~28% lower than expected and as the control period ends, the states hold a substantial number of allowances



Fossil Fuel Generation Mix



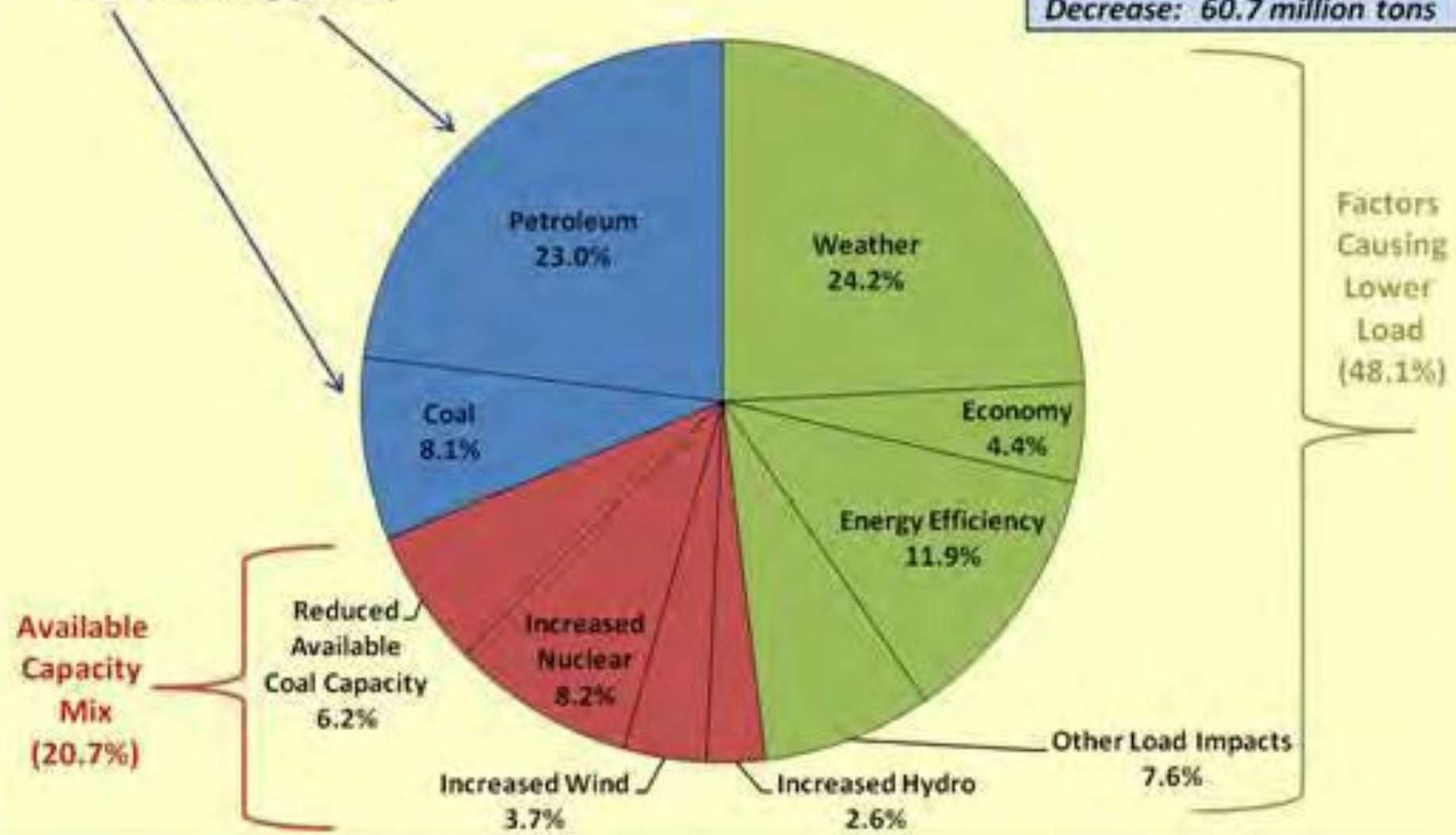
RGGI Historical Emissions



RGGI Region: Estimated Factors Causing CO₂ Emissions to Decrease from 2005 to 2009

RGGI CO₂ Emissions:
2005: 184.4 million tons
2009: 123.7 million tons
Decrease: 60.7 million tons

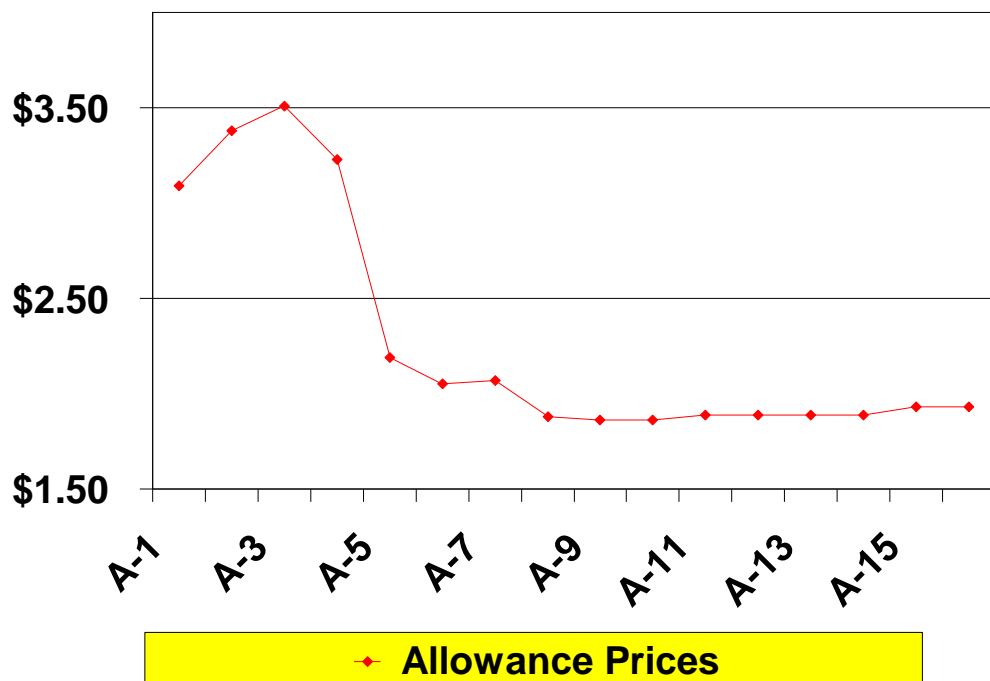
Changes in Relative Fuel Prices /
Fuel Switching (31.2%)



Factors
Causing
Lower
Load
(48.1%)

Available
Capacity
Mix
(20.7%)

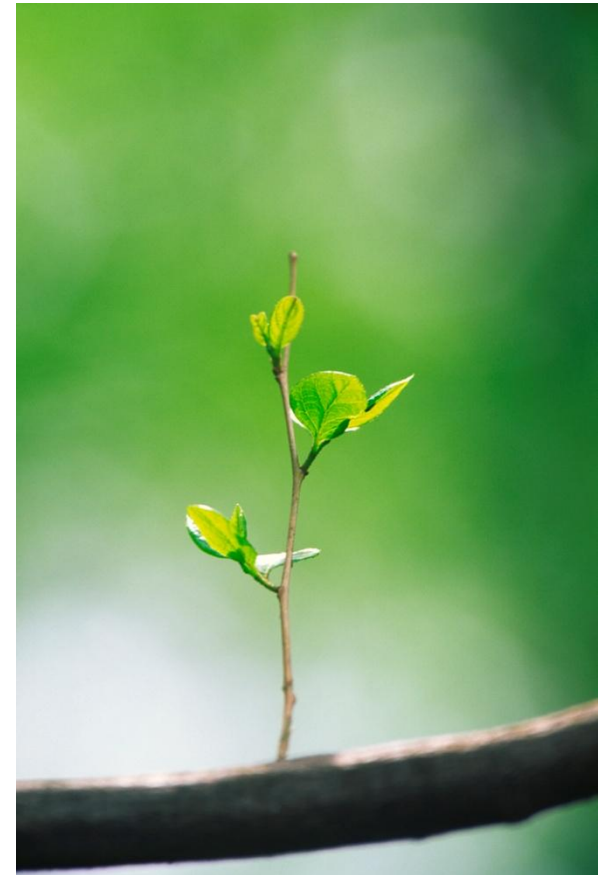
RGGI Progress



- 20% more allowances were offered at auctions than emissions were generated during the first control period; generators have all they need or wanted to bank
- States retired unused allowances rather than move them into the next control period
- Prices fell to the reserve price because there were too many allowances

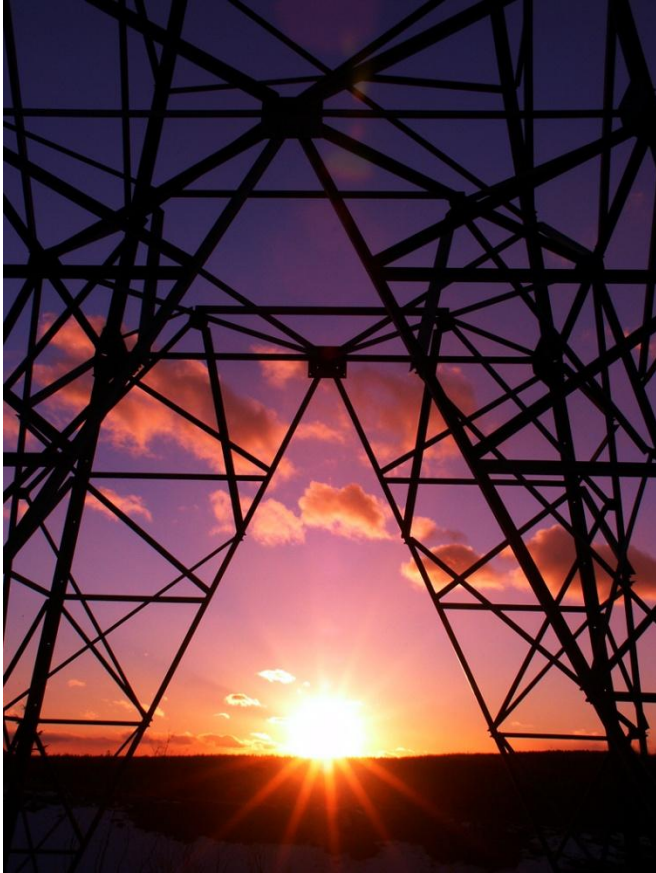
2012 Comprehensive Review

- 2012 review required by RGGI MOU
 - Requires a review of all components of the RGGI program
- Cap is important consideration





Cap Levels Under Consideration



106 M tons
(Ave of 2009-2011 emissions)

101 M tons
(2011 actual emissions)

97 M tons
(Projected 2014 emissions)

91 M tons
(Projected 2012 emissions)



New Flexibility Mechanism

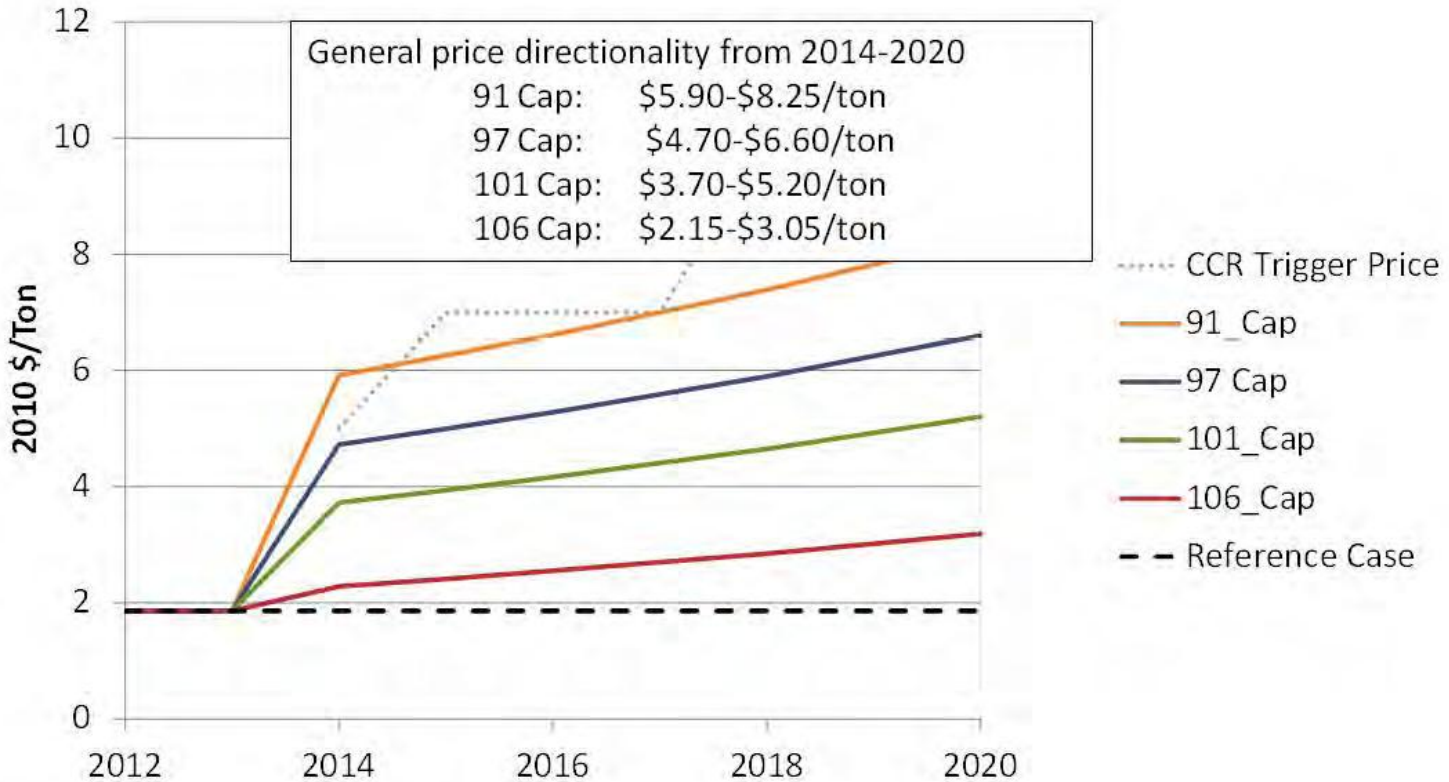


Cost Containment Reserve -
Consists of a fixed quantity of allowances, in addition to the cap, that would be held in reserve, and is only made available for sale if allowance prices exceed predefined price levels

- CCR under consideration:
10 Million allowances
- Trigger Prices:
\$5(2014); \$7(2015-2017);
\$10(2018 and beyond)



Projected Allowance Prices





Learn More About RGGI Changes



www.rggi.org

Stakeholder Materials



Questions?

