



Department of the Environment

Regional Greenhouse Gas Initiative and the Maryland CO₂ Budget Trading Program



Topics

- RGGI Basics
- RGGI Progress
- RGGI 2012 Review



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
 - CO₂ reductions achieved by reduced demand not “scrubbers” or other end-of-the-pipe pollution control technologies
 - RGGI reductions to be achieved by
 - Setting a cap for the region
 - Auctioning allowances
 - **Using auction proceeds to create incentives for energy efficiency and reduced demand**
- Will result in a small, but positive benefit to Maryland electricity consumers



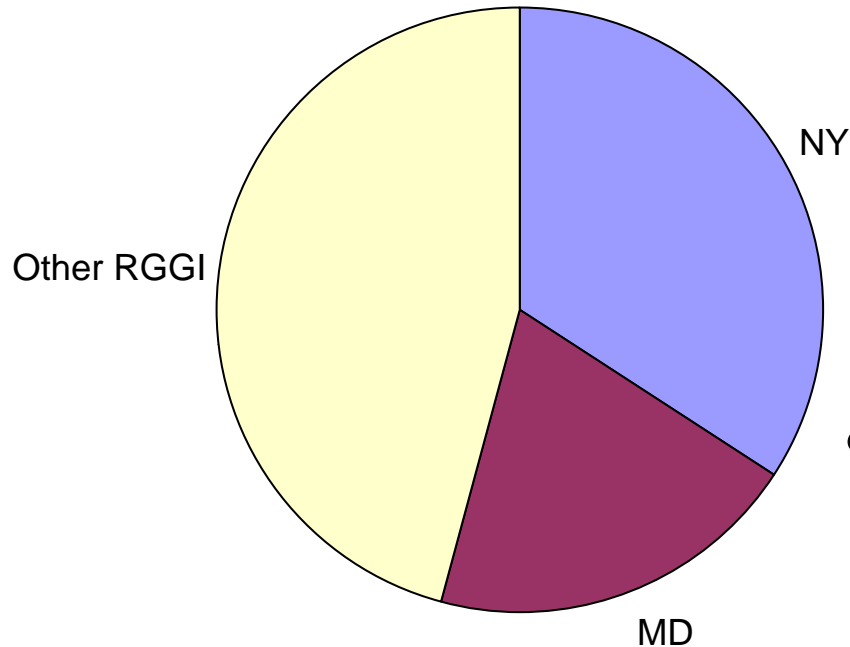
Key Pieces of RGGI

- MOU
- CO2 Allocations
- Model Rule
- Auction of allowances
- Energy Efficiency Program Funding
- Offsets





RGGI Cap Apportionments

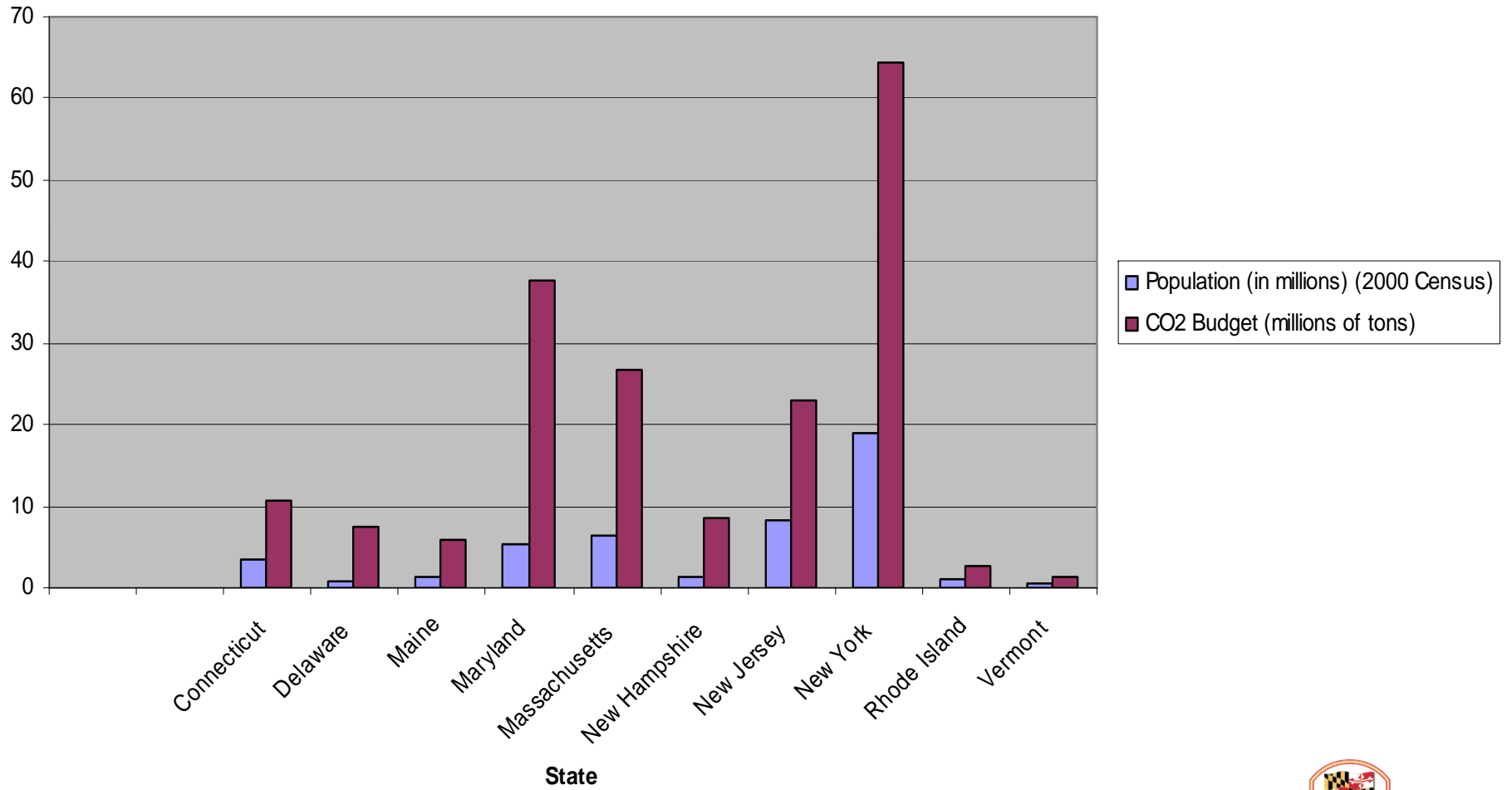


188,000,000 tons

- The price of allowances is determined:
 - By relative stringency of the emissions cap
 - Cost of mitigating the emissions under the cap
- Cost of allowances = cost of control



RGGI States: Populations & CO₂ Emissions Budgets



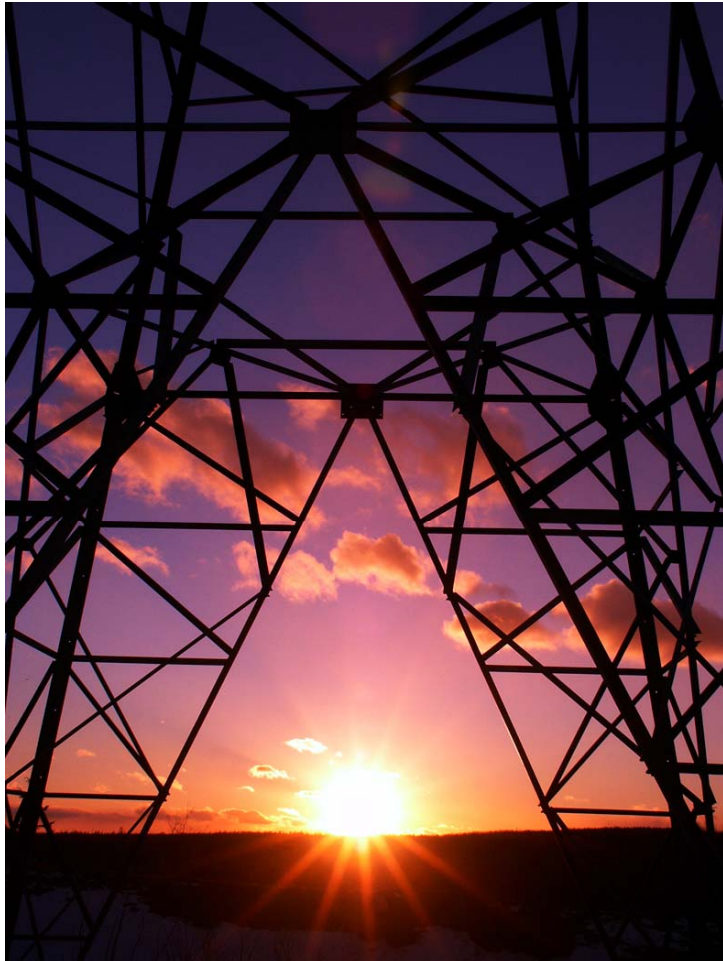


RGGI Goals

- **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



Auction Concept



- Auction of allowances relatively new concept
- Allowances given away to sources
 - Became assets for sources
- Cost to sources may affect
 - System reliability
 - Wholesale power prices
 - Retail electric prices for electric customers



New Perspective on Auction



- More allowances auctioned with proceeds to energy efficiency-the more consumers benefit
- Many RGGI states favored 100% auction





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





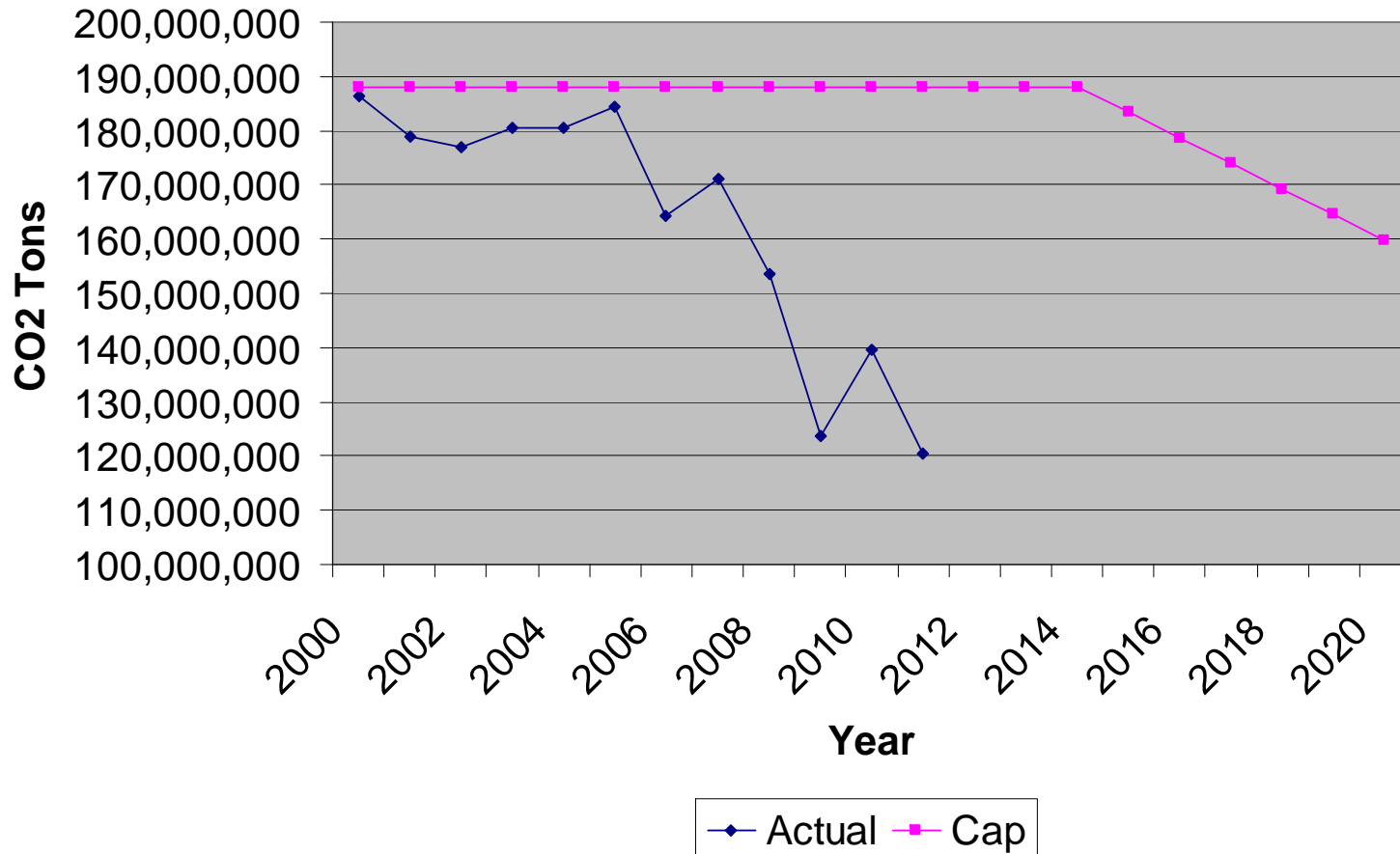
BUT...





Unanticipated Events

RGGI: Actual Emissions vs Cap

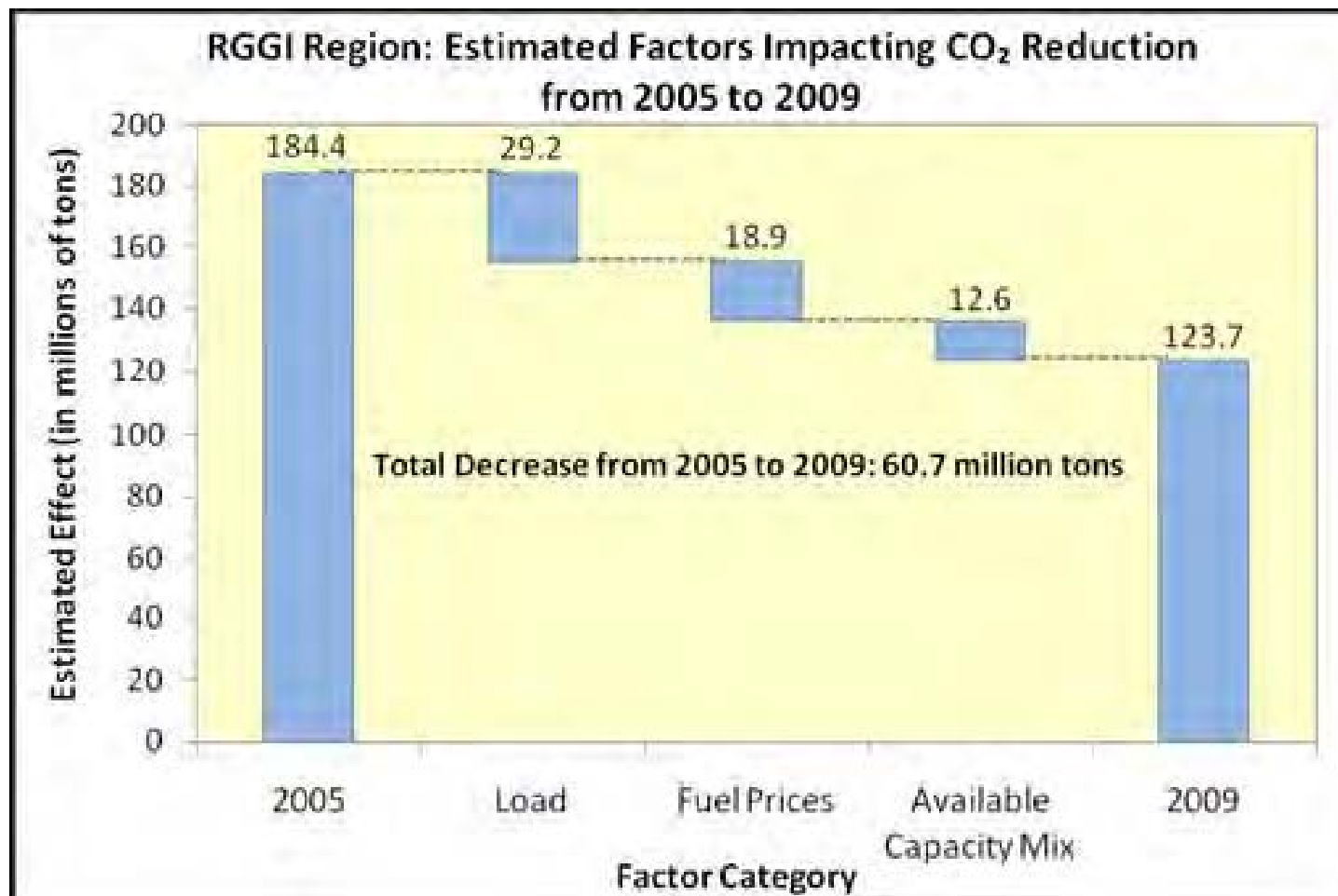


- RGGI's original goal was a 10% reduction in CO2 emissions
- RGGI set the cap based on emission levels from 2000-2005





Unanticipated Events



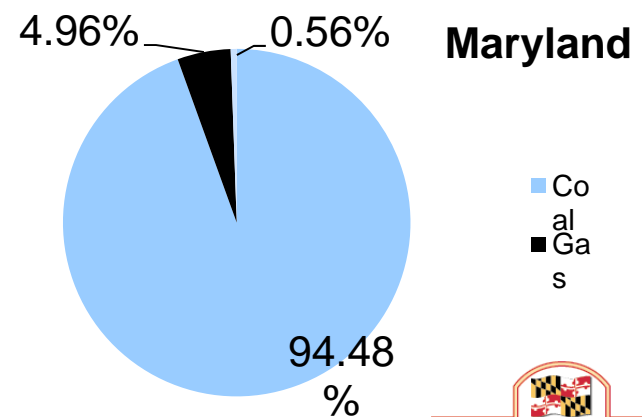
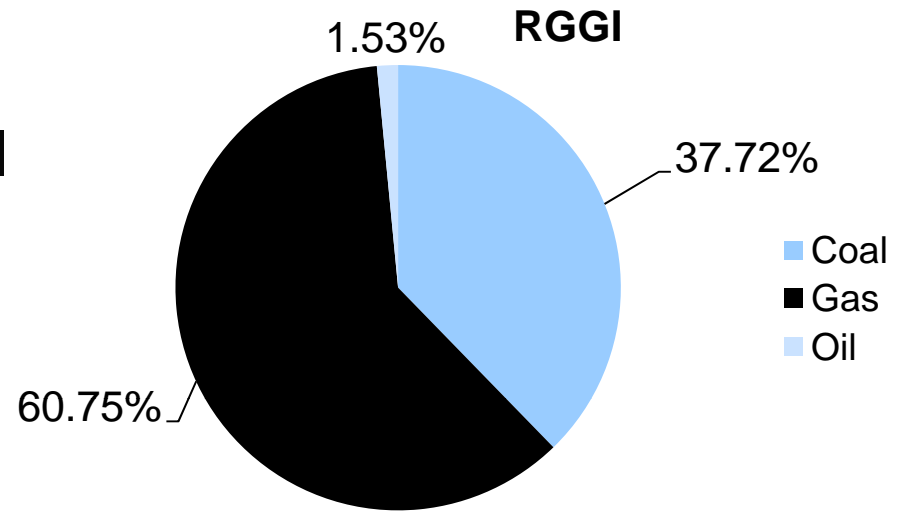
In 2007 electricity demand fell due to the economic downturn and mild weather





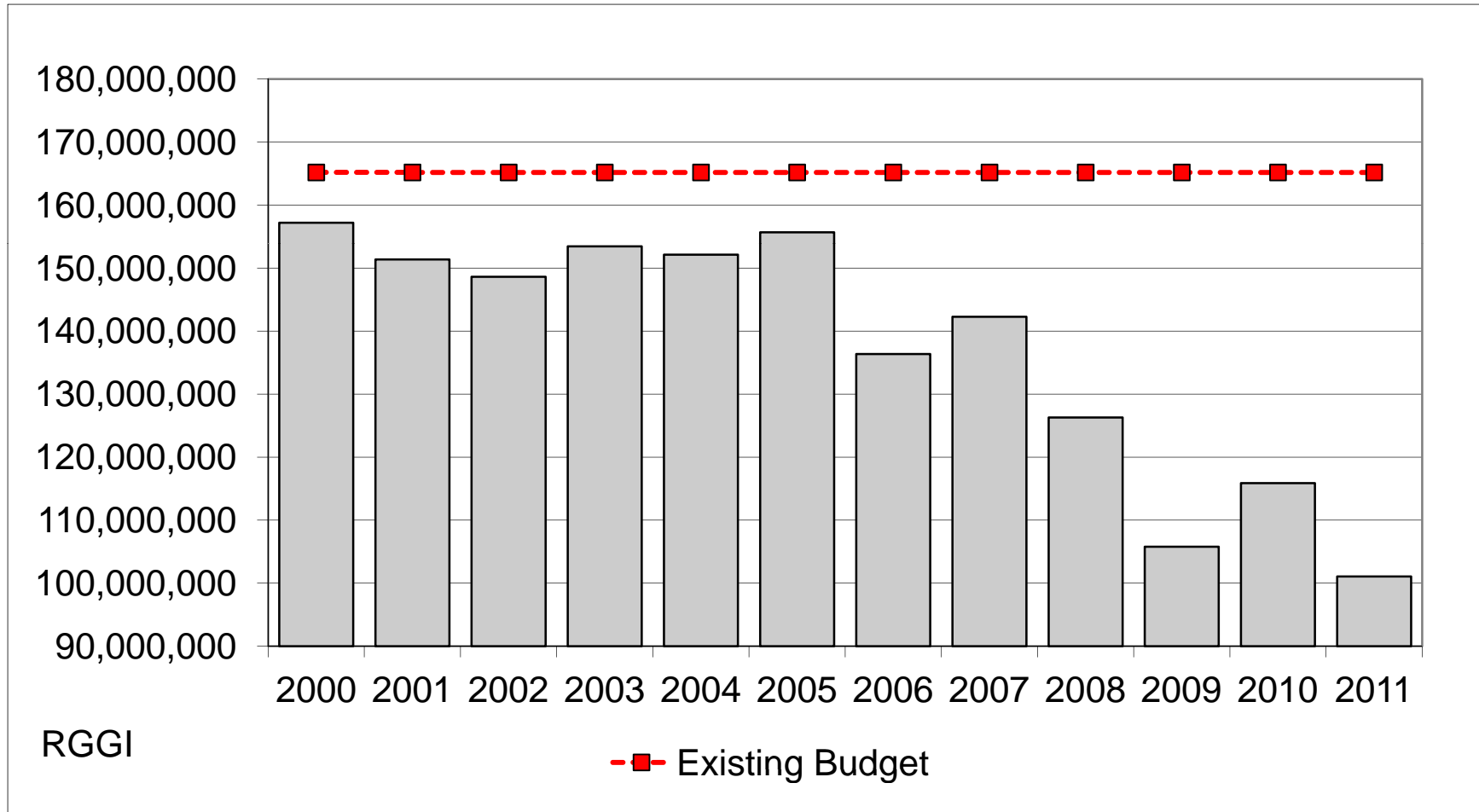
Unanticipated Events

- 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





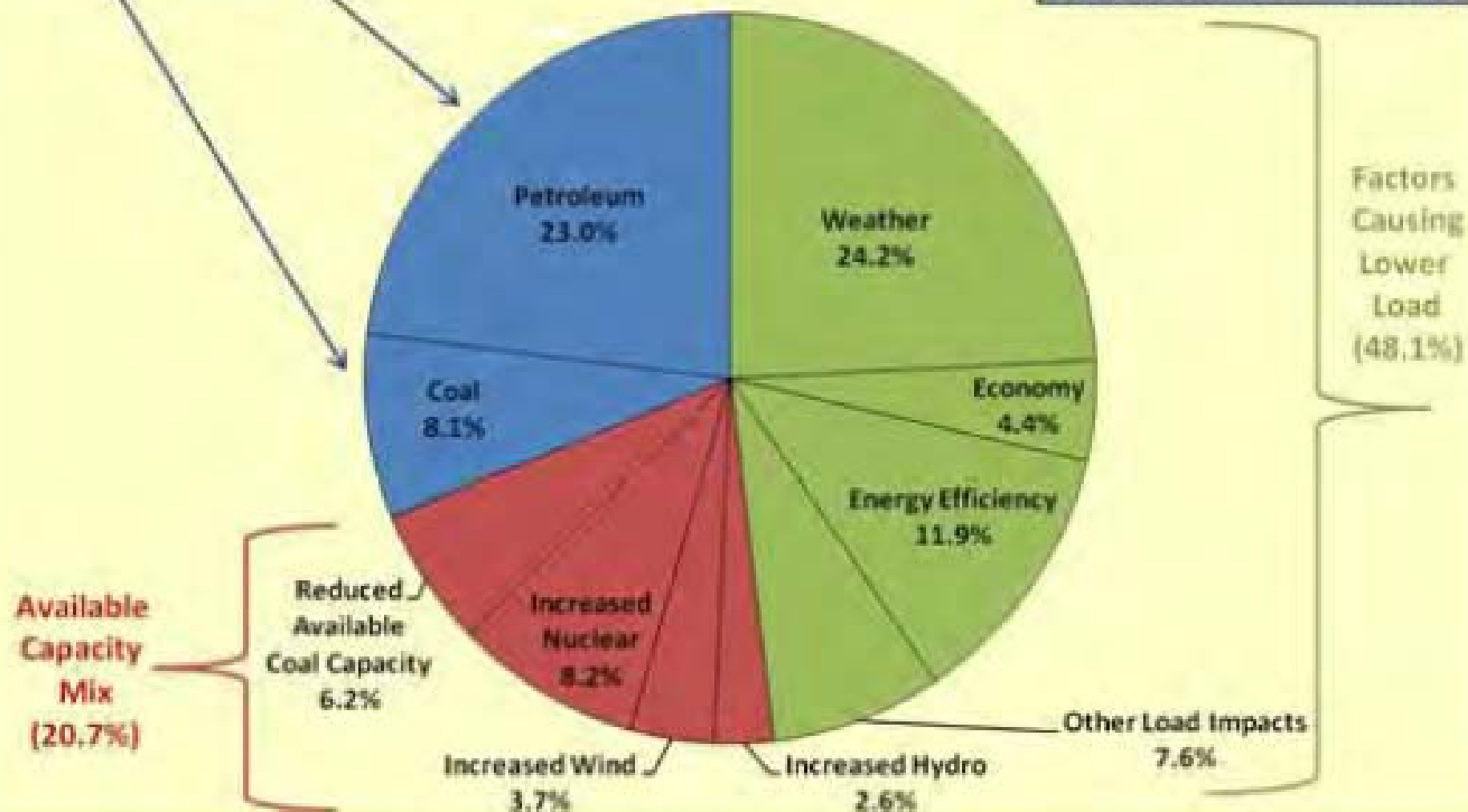
RGGI Historical Emissions



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

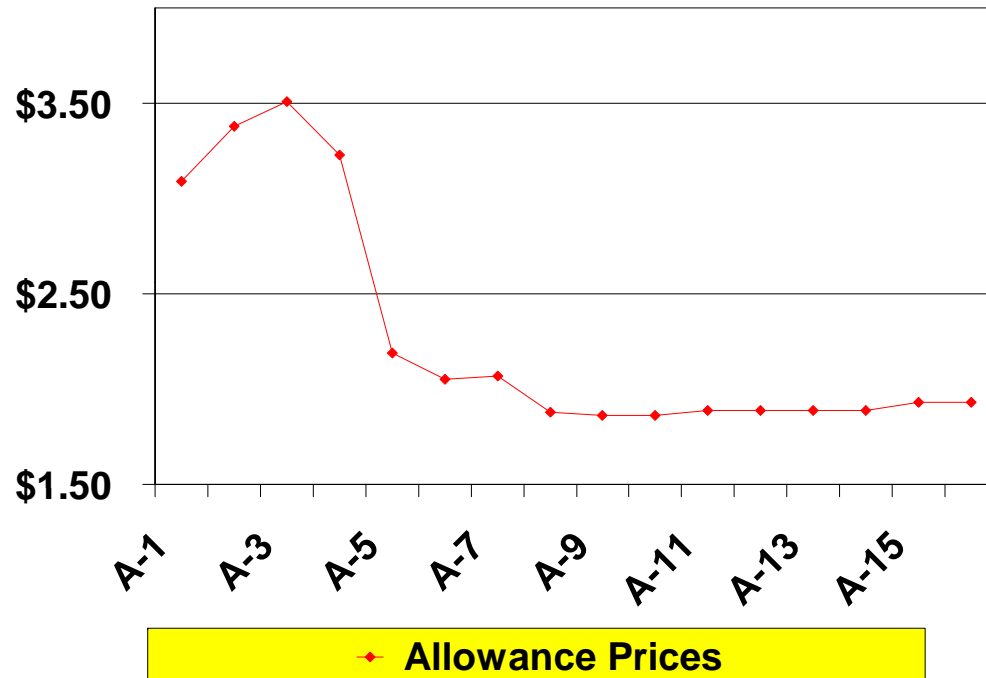
RGGI CO₂ Emissions:
2005: 184.4 million tons
2009: 123.7 million tons
Decrease: 60.7 million tons

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





RGGI Progress



Allowance prices have fallen to the reserve price because of the abundant supply of allowances. More scarcity of allowances is needed for higher prices and to drive further reductions.

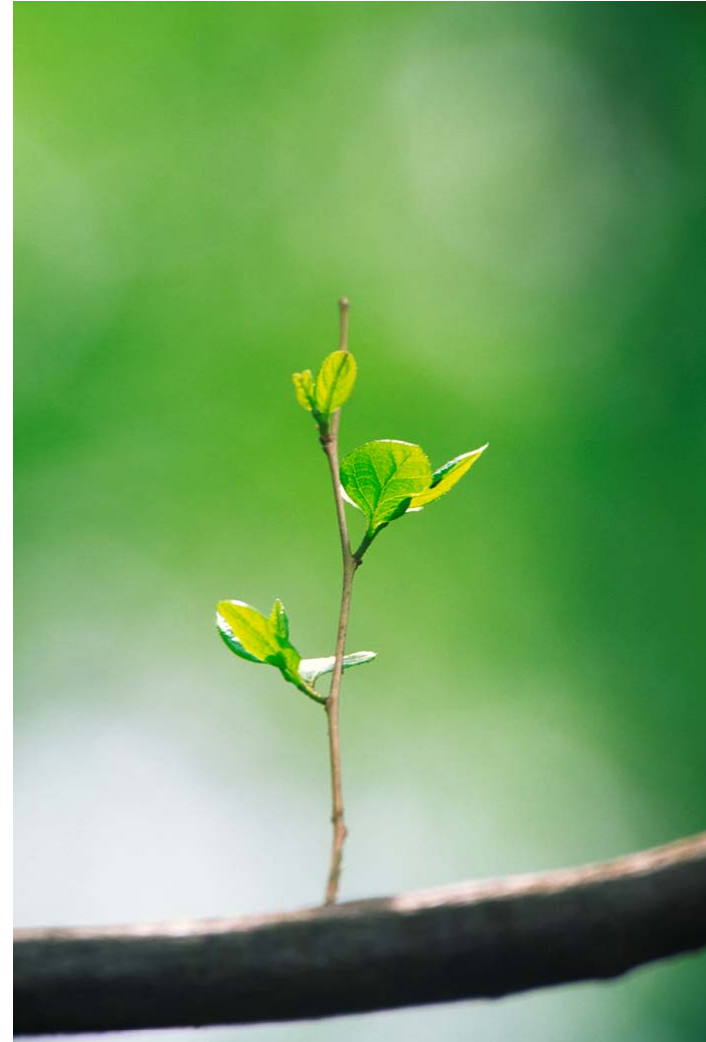
- 20% more allowances were offered at auctions than emissions were generated during the first control period; generators have all they need or wanted to bank
- States can carry unused allowances into next control period but that period can have excess also





RGGI 2012 Review

- RGGI MOU calls for a comprehensive review of the program in 2012
- Review is underway
- Extensive stakeholder process including webinars and meetings





MARYLAND STATUS

TOTAL FIRST CONTROL PERIOD

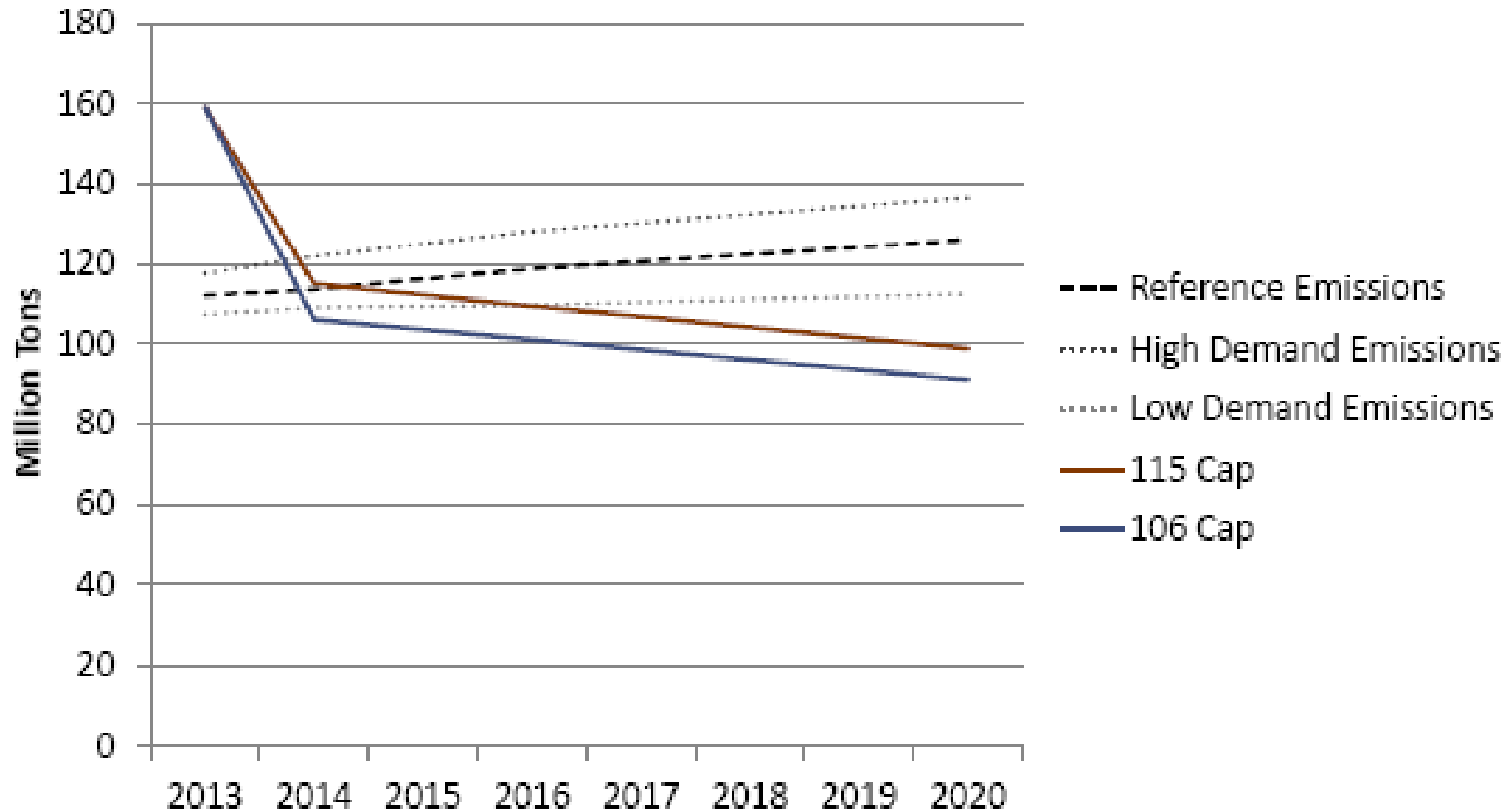
112,511,949

- SOLD – 74,176,704
- UNSOLD – 19,794,971
- SET-ASIDES – 20,290,274
 - RETIRED – 8,964,929
 - **UNUSED – 11,325,345.....no market**



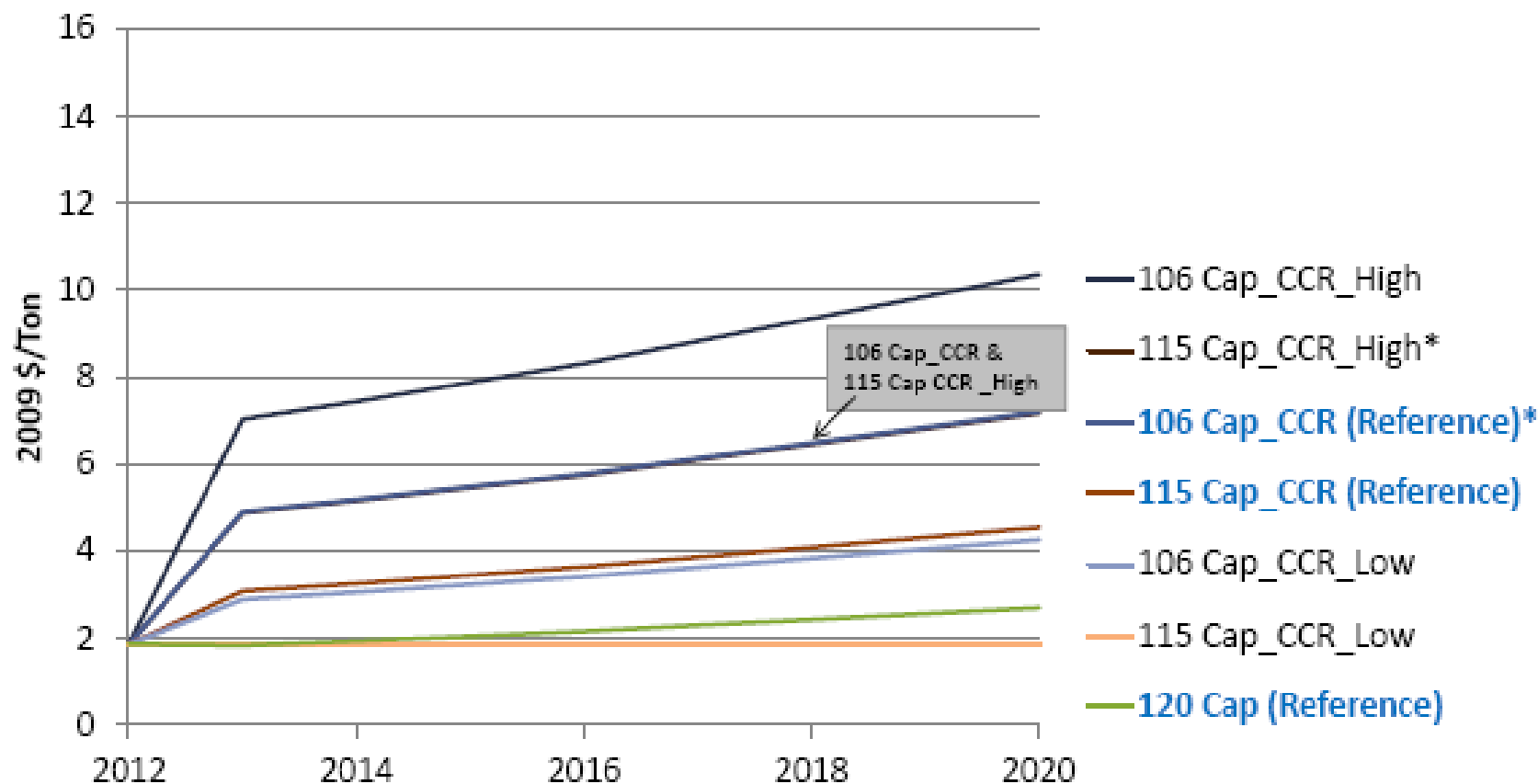


RGGI Regional Projected Emissions





Allowance Prices (IPM Modeling)



*The 115 Cap_CCR_High and 106 Cap_CCR results appear on the chart as single line

*Sources withdraw 10 MM Tons from the CCR in 2014 in both the 106 Cap_CCR_High (at \$7) and 115 Cap_CCR_High (at \$5)



Questions?





Strategic Energy Investment Fund

SEIF Percentages	Budget Reconciliation Percentages	Allocated to
17	50	<u>Energy Assistance Account</u> Department of Human Resources to be used for the Electric Universal Service Program and other electricity assistance programs in the Department of Human Resources
23	0	<u>Rate Relief Account</u> Provide rate relief by offsetting electricity rates of residential customers
46	27	<u>Low and Moderate Income Efficiency and Conservation Programs Account</u> Energy efficiency and conservation programs, projects, or activities and demand response programs
10.5	20	<u>Renewable and Clean Energy Programs Account</u> Renewable and clean energy programs and initiatives; energy related public education and outreach; and climate change programs
3.5	3.0	<u>Administrative Expense Account</u> Costs related to the administration of the Fund (but limited to not more than \$4,000,000)
100.0	100.0	Maryland Total Revenue To Date
		\$197,434,490 