THE REGIONAL GREENHOUSE GAS INITIATIVE

An Initiative of the Northeast and Mid-Atlantic States of the U.S.

The Regional Greenhouse Gas Initiative:
A Transparent, Simplistic, and Cost-Effective Approach
to Reducing Power Sector Greenhouse Gas Emissions

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Commission Advisor, Maryland Public Service Commission December 3, 2014

Carbon Monitoring System Applications Policy Speaker Series

www.rggi.org























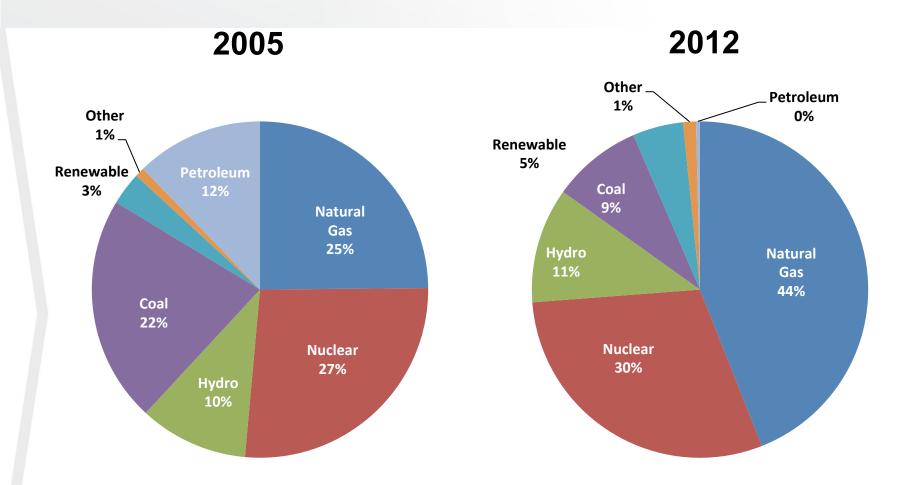






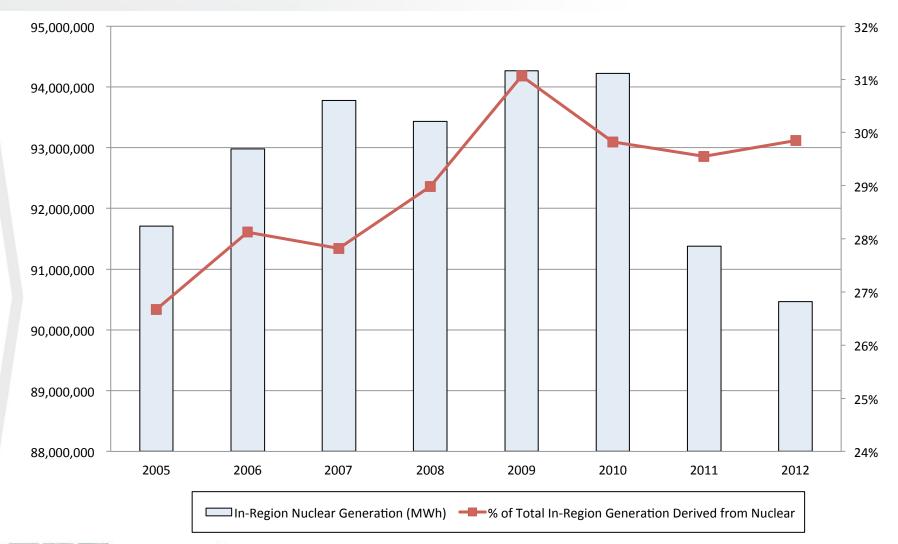


RGGI Region Generation Mix, 2005 vs. 2012



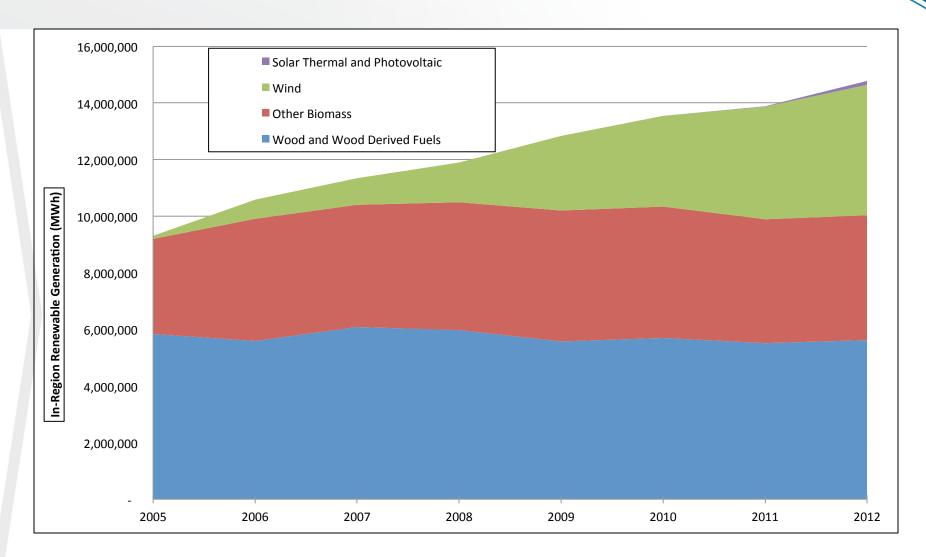


RGGI In-Region Nuclear Generation (MWh), 2005 - 2012





RGGI Region Renewable Generation (MWh), 2005 - 2012





RGGI In Brief

- Northeast and Mid-Atlantic states cap and reduce carbon dioxide emissions from the power sector
- Requires all power plants 25 MW or greater to hold one RGGI CO₂ allowance for each ton of CO₂ emitted for three year compliance periods
 - First control period was January 1, 2009 through December 31, 2011
 - Second control period began on January 1, 2012 and extends through December 31, 2014
- Quarterly CO₂ allowance auctions
- CO₂ allowance proceeds are re-invested in energy efficiency, the development of lowcarbon energy sources, direct bill assistance, and other greenhouse gas abatement strategies







RGGI CO2 Allowance Tracking System (COATS)

- Applicant's RGGI CO₂ Allowance Tracking System (RGGI COATS) account is where awarded CO₂ allowances will be transferred.
- Must be a RGGI COATS user before submitting CO₂ Allowance Auction Qualification Application
- See https://rggi-coats.org for details including the RGGI COATS User's Guide at:

https://rggi-coats.org/eats/rggi/image/help/_rggi/RGGIGettingStartedGuide.pdf

The User's Guide may also be accessed by selecting the User's Guide sub-menu option under the Reference menu option.

RGGI COATS (https://rggi-coats.org/eats/rggi/)



The RGGI CO₂ Allowance Tracking System (RGGI COATS) is the platform that records and tracks data for each state's CO₂ Budget Trading Program.

Public Reports RGGI COATS enables the public to view, customize, and download reports of RGGI program data and CO₂ allowance market activity. Access reports here: Special Approvals Offset Projects Accounts Account Representatives Sources Owner/Operator Transaction Price Report Quarterly Emissions Annual Emissions Control Period Emissions Summary Level Emissions

RGGI COATS Accounts									
RGGI COATS enables market participants to receive and transfer ${\rm CO_2}$ allowances, register offset projects, and submit offset project Consistency Applications and Monitoring and Verification Reports.									
Registered users login below.									
A login is required only for authorized account representatives (AARs), alternate account representatives (AAARs), or electronic submission agents to access compliance or general accounts.									
Username *									
Login									
Register to use RGGI COATS Click here to register to become a RGGI COATS user.									
Forgot your RGGI COATS username?									

The Regional Greenhouse Gas Initiative (RGGI) is a cooperative effort by participating states to reduce emissions of carbon dioxide (CO₂), a greenhouse gas that causes climate change.

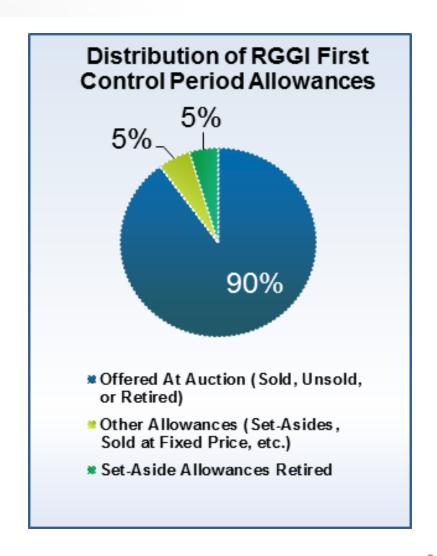
RGGI Inc.

RGGI Inc. is a nonprofit corporation created to provide technical and administrative services to the Regional Greenhouse Gas Initiative CO2 budget trading programs of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont.



RGGI's Efficient Market-Based System

- RGGI states distributed approximately 90% of allowances by auction the first control period
- RGGI is the first marketbased emissions program to distribute nearly all allowances by auction



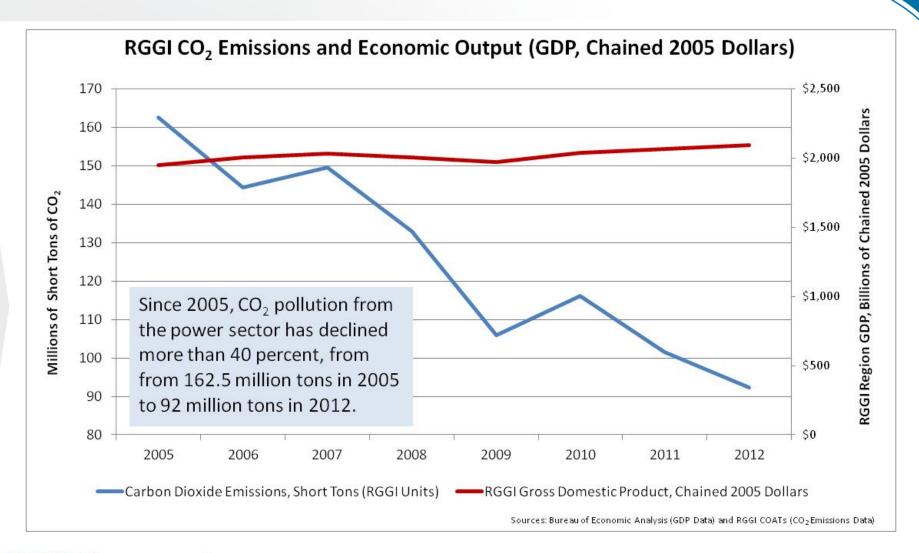


RGGI's Efficient Market-Based System

- At the end of the first control period, compliance entities and their affiliates held 98 percent of all CO₂ allowances in circulation
- After six years, no evidence of anti-competitive conduct
- 25 quarterly auctions held since September 2008
 - 397M first control period (2009-11) CO₂ allowances sold
 - 314M second control period (2012-14) CO₂ allowances sold
- First control period CO₂ allowance auction clearing prices ranged from \$1.86 to \$3.51.
- Second control period CO₂ allowance auction clearing prices have ranged from \$1.93 to \$5.00.



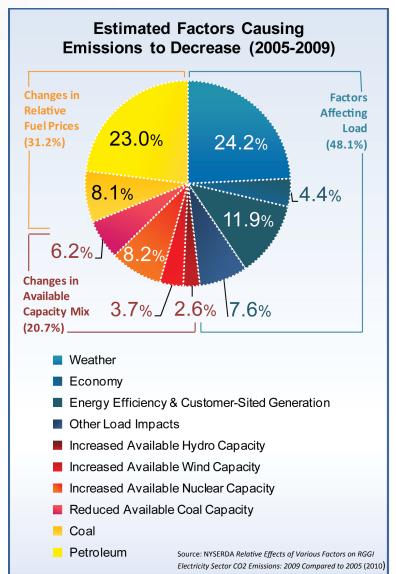
RGGI: A Triple Set of Benefits CO₂ Emissions and Economic Output





Factors Driving GHG Reduction in the RGGI Region

- Key reasons for power sector emissions reductions (2005 compared to 2009) were:
 - Switch to natural gas
 - 31% was due to changes in relative fuel prices
 - Increased energy efficiency
 - 12% was due to Energy
 Efficiency
 - More renewable energy
 - 6.2% was related to increase in Hydro/Wind Capacity





- Environmental Benefits
- Consumer Benefits
- Economic Benefits





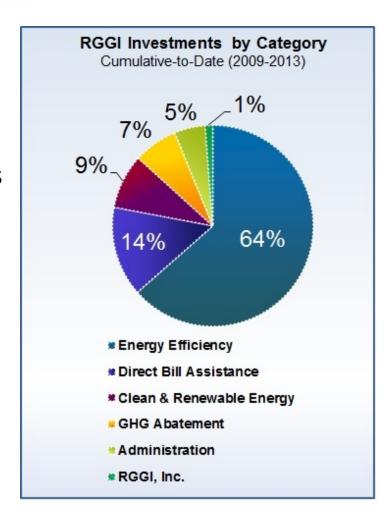
- RGGI cap helps drive transition to cleaner fuel and energy sources
- Efficiency investments deliver \$2 \$4 in benefits for every dollar invested
- Reinvestment of auction proceeds helps reduce GHG and traditional Clean Air Act pollutant emissions



- 10 jobs in construction, as well as additional jobs in design and manufacturing for every \$1 million invested in building retrofits
- Keeps \$ within the region—for energy efficiency and other investments

RGGI: A Triple Set of Benefits Proceeds Investments

- Invested more than \$950 million of auction proceeds in range of clean energy, direct bill assistance, GHG abatement, and climate change adaptation programs
- More than 3 million households and 12,000 businesses have participated in RGGI-funded programs
- Benefits business and families by reducing energy bills, creating jobs, reducing harmful pollutants
- Reduced overall demand for electricity reduces market price of electricity for all consumers



"Several states have already put a price on carbon dioxide pollution and their economies are doing fine"

"Experience shows that states that work together on market based initiatives -- like RGGI in the Northeast -- can provide net economic benefits"

-Sue Tierney & Paul Hibbard

1.6
BILLION
in net economic
benefit to region¹

16
THOUSAND
job-years created¹

BILLION
in energy bill
savings across
the region¹



RGGI Moving Forward



Program Changes for 2014

- Reduces regional RGGI cap from 165 million short tons to 91 million short tons for 2014
- Adds interim adjustments to the 2014-2020 allowance budgets to account for banked allowances
- Cost containment reserve (CCR) of CO₂ allowances that creates a fixed additional supply of CO₂ allowances at certain allowance prices
- Requiring regulated entities to acquire and hold CO₂ allowances equal to at least 50 percent of their emissions in each of the first 2 years of the 3 year control period



Program Changes for 2014

Analyses indicate that program changes will:

- Reduce projected 2020 power sector CO₂ emissions to about half of 2005 levels.
- Generate approximately 80 90 million tons of cumulative emission reductions by 2020 when compared to the current RGGI program
- Projected to increase gross state product by more than \$8 billion, real personal income by more than \$7 billion, and add more than 130,000 job-years



RGGI and the EPA Clean Power Plan

RGGI States filed comments in support of the general framework of the proposed Clean Power Plan and offered recommendations on a number of revisions to the CPP to ensure that early action to reduce carbon emissions from the power sector is recognized, and that the state targets are verifiable, transparent, equitable and enforceable.

- November 5th Comments
 - http://www.rggi.org/docs/PressReleases/ PR110714_CPP_Joint_Comments.pdf
- December 1st Supplemental Comments
 - http://www.rggi.org/docs/PressReleases/PR120114_RGGI_SupplementalComments_CPP.pdf



Supplemental Slides



RGGI Auctions - Clearing Prices & Demand

First Control Period Auctions												
AUCTION:	3	4	5	6	7	8	9	10	11	12	13	14
Clearing Price	\$3.51	\$3.23	\$2.19	\$2.05	\$2.07	\$1.88	\$1.86	\$1.86	\$1.89	\$1.89	\$1.89	\$1.89
Allowance Demand	2.5x	2.6x	2.5x	2.6x	2.3x	1.3x	0.75x	0.57x	1.1x	0.3x	0.18x	0.63x

Second Control Period Auctions											
AUCTION:	15	16	17	18	19	20	21	22	23	25	25
Clearing Price	\$1.93	\$1.93	\$1.93	\$1.93	\$2.80	\$3.21	\$2.67	\$3.00	\$4.00	\$5.00	\$4.88
Allowance Demand	0.62x	0.57x	0.65X	0.53x	2.2X	2.1X	2.01X	2.7X	3.1X	2.5X	2.9X
Allowance Demand with CCR supply (Auction 23 Only)								2.5X			



RGGI Auction Proceeds Investment Maryland Energy Efficiency



EmPOWERing Clean Communities in Maryland

- Caroline County Habitat for Humanity completed six energy efficiency makeovers for low-to-moderate income families.
- Reduced annual electric consumption by more than 38,000 kWh and propane consumption by more than 470 gallons
- Produced an estimated lifetime savings of more than \$170,000 in energy costs for six families.