

THE REGIONAL GREENHOUSE GAS INITIATIVE

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

The Regional Greenhouse Gas Initiative Experience

May 13, 2013

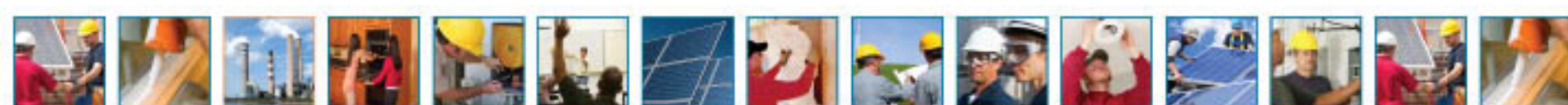
19th Annual Energy and Climate Change Research Seminar

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Commissioner, Maine Public Utilities Commission

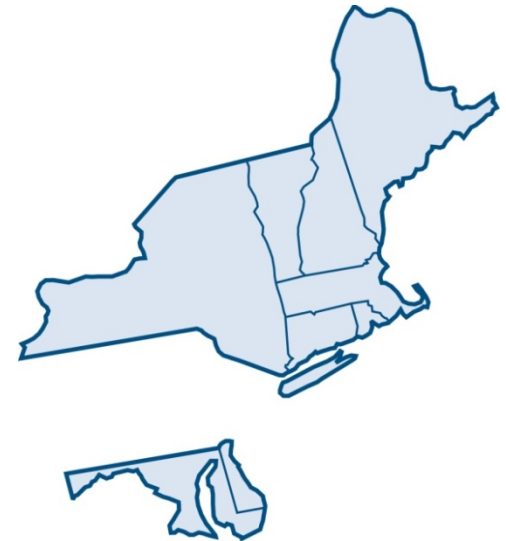
Treasurer, RGGI, Inc. Board of Directors

www.rggi.org



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 low-carbon energy sources, direct bill assistance, and other greenhouse gas abatement strategies



RGGI Allowance Auctions

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

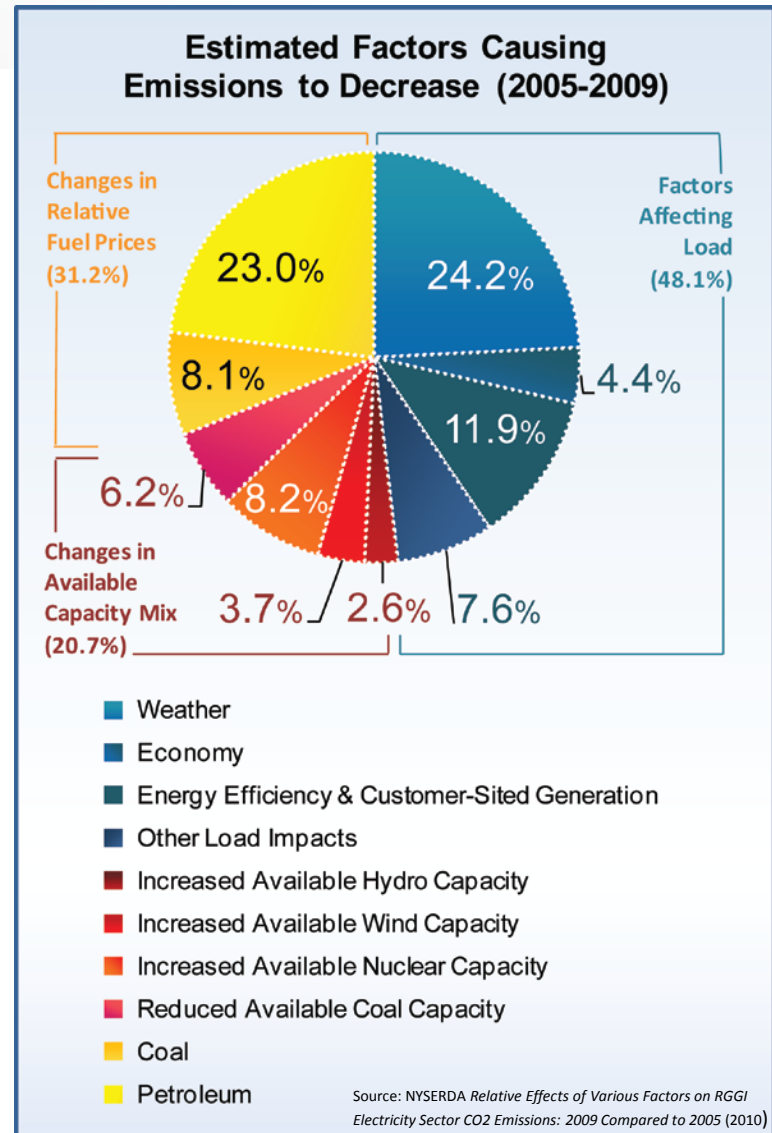
Second Control Period Auctions

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

Factors Driving GHG Reduction in the RGGI Region

- Key factor driving power sector emissions reductions (2005 vs. 2009) was the switch to natural gas
 - 31% was due to changes in relative fuel prices

- Other significant factors driving power sector emissions reductions include energy efficiency and renewable energy
 - 12% was due to Energy Efficiency
 - 6.2% was related to increase in Hydro/Wind Capacity



RGGI 2.0: The 2014 RGGI Program Changes

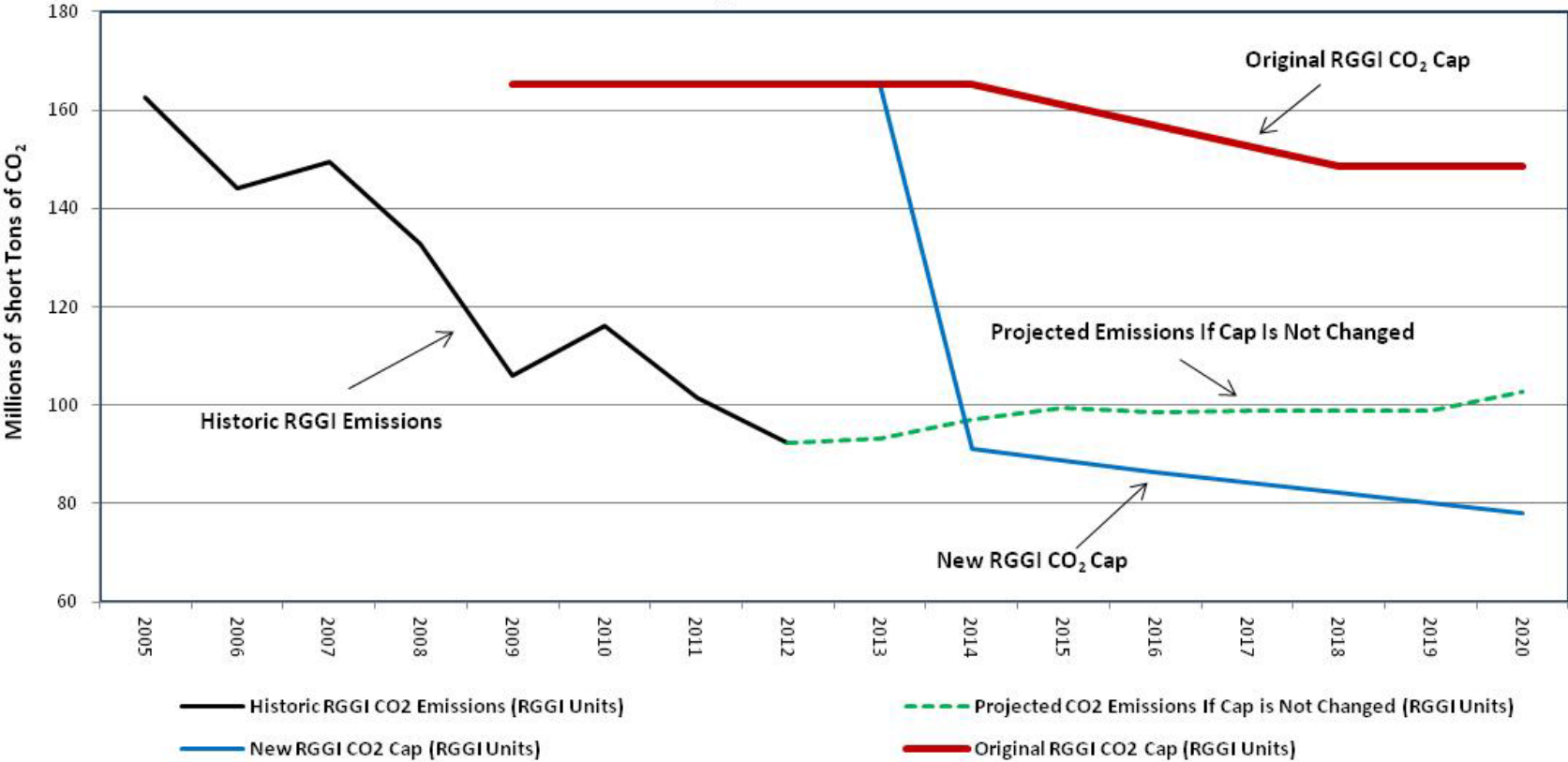
- February 7, 2013 RGGI states released an updated Model Rule
- January 13, 2014 RGGI states announced revisions to their individual CO₂ Budget Programs complete
- Reduces regional RGGI cap from 165 million short tons to 91 million short tons for 2014
- Adds interim adjustments to the state CO₂ allowance budgets to account for banked allowances
 - First control period adjustment from 2014-2020
 - The first control period adjustment is 57.4 million CO₂ allowances for 2014-2020, with an interim adjustment each year of 8.2 million
 - Second control period adjustment from 2015-2020
 - The second control period adjustment is 82.1 million CO₂ allowances for 2015-2020, with an interim adjustment each year of 13.7 million

RGGI 2.0: The 2014 RGGI Program Changes

- 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
- First auction of 2014 held March 5, 2014

RGGI 2.0: The 2014 RGGI Program Changes: New Cap and Projected CO₂ Emissions

RGGI Projected CO₂ Emissions and RGGI Caps



Sources: RGGI COATs (2013) and RGGI, Inc. IPM Analysis of RGGI Model Rule Scenario (2013)



RGGI 2.0: The 2014 RGGI Program Changes

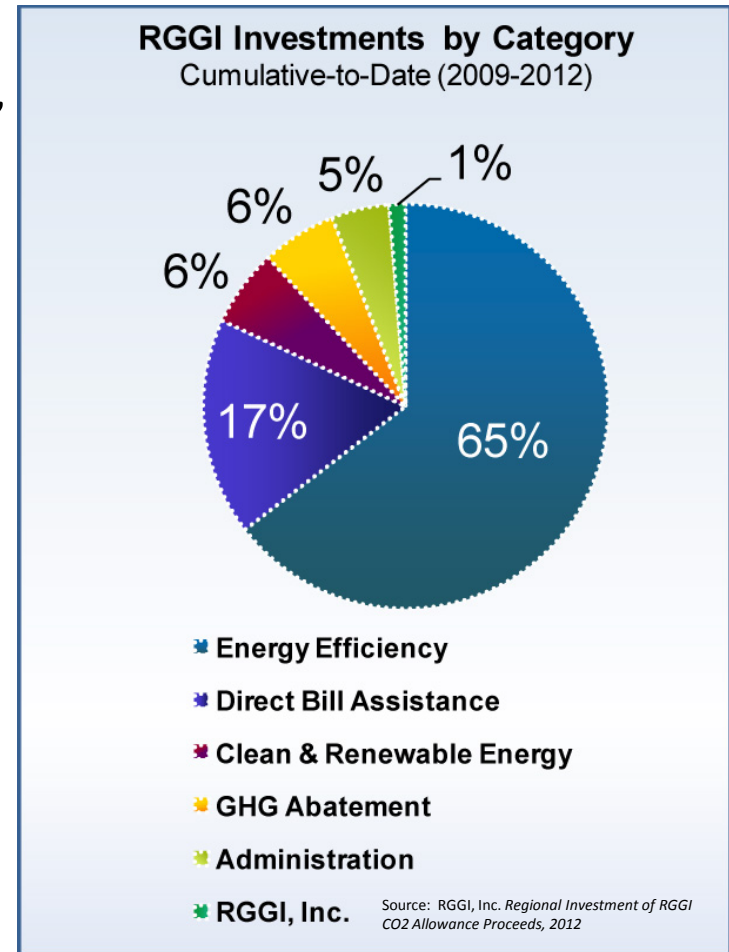
Analyses indicate that program changes will:

- 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 is Driving Clean Energy Investments

- Invested more than \$700 million of auction proceeds in range of clean energy, direct bill assistance, GHG abatement, and climate change adaptation programs
- 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



Analysis Group Report Conclusion

RGGI Delivers Results: Savings, Value, Jobs



1.6
BILLION
in net economic
benefit to region¹

1.3
BILLION
in energy bill
savings across
the region¹

16
THOUSAND
job-years created¹

RGGI Auction Proceeds Investment: Energy Efficiency in Maine

Efficiency Maine — Wyman's of Maine



- Family-owned company with expertise in growing and marketing wild blueberries
- \$1.4 million upgrade to its cold storage refrigeration system
- Efficiency Maine supported the upgrade with a \$260,000 incentive
- Expects to save more than 1 million kWh a year.

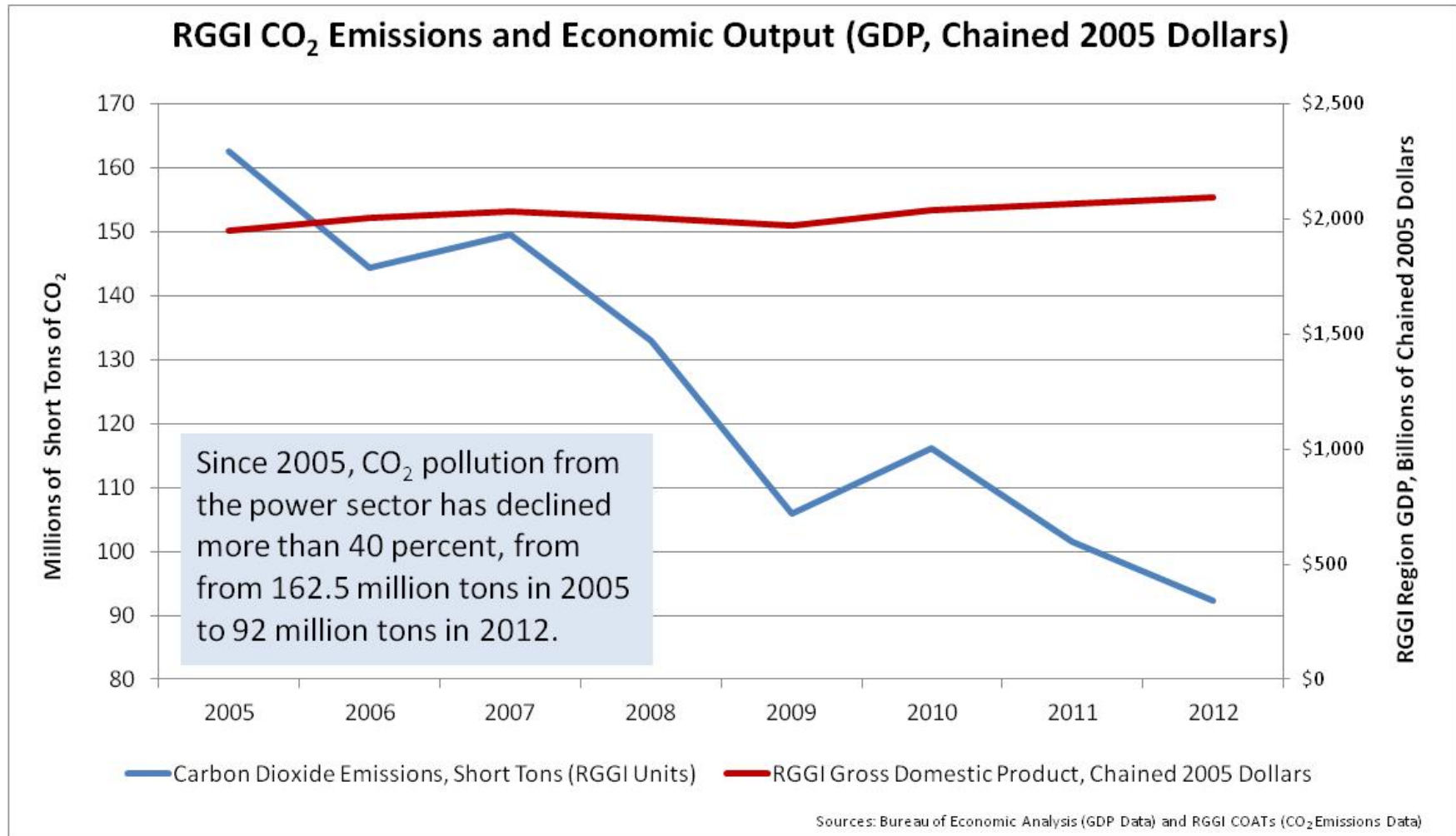
*“Our cold storage system is as energy-efficient as anyone can design.”
—Bob Stanley, Director of Engineering at Wyman's of Maine*

EPA Proposed Carbon Rule for Existing Power Plants-111(d)

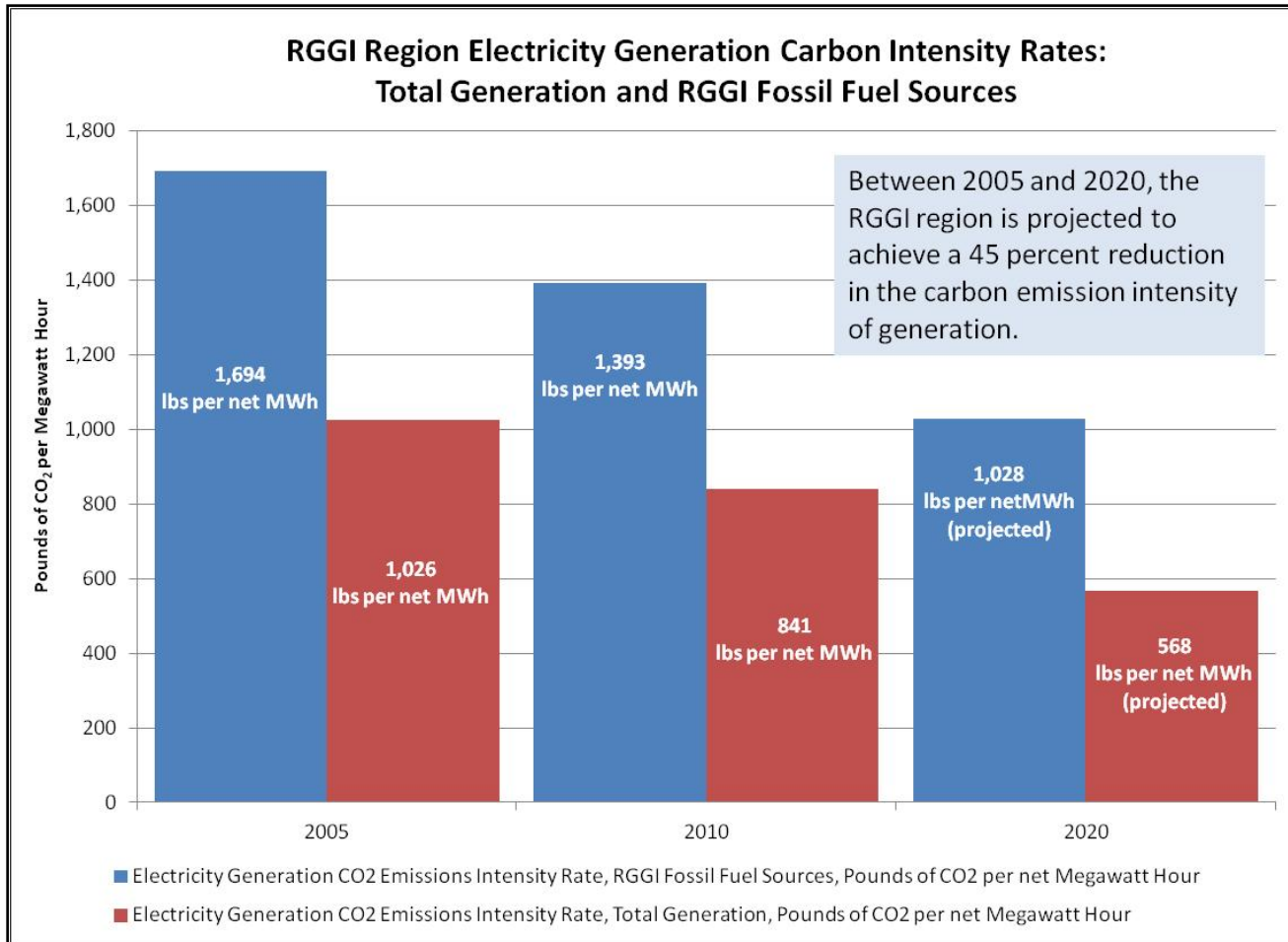
- EPA scheduled to publish draft carbon pollution rules for existing power plants in June 2014
- RGGI states recommend that EPA:
 - View the RGGI success story--reducing carbon dioxide emissions by approximately 40 percent since 2005 as the regional economy has grown more than 7%--as a benchmark for national action
 - Recognize the RGGI model as an effective system of emission reduction for GHG emissions from the power sector – combining various policy tools with an enforceable cap
 - Empower states to develop market-based GHG emission reduction programs designed to work for their region(s)



RGGI Experience: RGGI CO₂ Emissions and Economic Output



RGGI Regional Electricity Carbon Intensity Rates



RGGI Renewable Portfolio Standards/Goals

State	Target Renewable Portfolio Standard or Goal	Target Year
Connecticut	27%	2020
Delaware	25%	2025
Maine	40%	2017
Maryland	20%	2022
Massachusetts	15%	2020
New Hampshire	24.8%	2025
New York	30%	2015
Rhode Island	16%	2019
Vermont	20%	2020

RGGI as Compliance Mechanism for Proposed EPA Carbon Rule for Existing Power Plants

- It is a proven model
- It is extremely cost-effective
- It provides economic benefits
- It aligns with the regional nature of the electricity grid and fosters regional cooperation
- It is a simple, transparent, and verifiable compliance system

State and Industry Comments on EPA Proposed Carbon Rule

- 15 states (the RGGI States, CO, CA, IL, MN & OR) recommend that EPA:
 - Establish the performance level of the standard based on a “best system of emission reduction” that reflects the full range of approaches that states have successfully demonstrated can cost-effectively reduce carbon pollution from the electricity system as a whole
 - Establish the form of the emission guideline in a way that equitably recognizes the different starting points and circumstances of different states, including the pollution reductions achieved by states through climate and clean energy programs
 - Allow for a variety of rigorous state compliance options, including options for compliance through participation in regional emission budget trading programs and state portfolio programs.

State and Industry Comments on EPA Proposed Carbon Rule

- The RGGI EPA Rules Collaborative, which represents several environmental organizations and utilities, also recommends that EPA recognize RGGI as a compliance mechanism under the new carbon pollution rules



State and Industry Comments on EPA Proposed Carbon Rule

- In addition, NYISO and ISO/RTO Council have provided comments supporting regional carbon programs and/or RGGI as compliance mechanisms
 - The New York Independent System Operators (NYISO) supports RGGI as a compliance mechanism under 111(d) and recommends regional approaches in general
 - The ISO/RTO Council supports coordinated regulatory programs among states as a cost effective and efficient means of implementing the 111(d) program



*Delivering the energy
needs of today and beyond...*



Thank you

