

## **REGIONAL GREENHOUSE GAS INITIATIVE – OVERVIEW**

### **What is a Cap-and-Trade Program?**

A cap-and-trade program controls the right to emit by setting an emissions cap, but allows companies to trade emissions permits (known as allowances). The total number of emissions allowances issued by the regulatory agencies in the participating states adds up to the total emissions cap for the region.

- The ability to trade allowances provides flexibility to companies with differing abilities to reduce emissions in a cost-effective manner. This enables the program to achieve reductions at least cost.
- For example, if Company A has a variety of low-cost emissions reduction opportunities, it may have surplus allowances available to sell. Company B, however, may not have enough allowances to account for its expected emissions. Company B may choose to purchase surplus allowances on the market to cover excess emissions. At the end of the year, allowances are submitted to the regulatory agency. The requirement to reduce CO<sub>2</sub> emissions creates a demand for allowances and therefore an allowance price.

### **Applicability**

- The program will apply to fossil fuel-fired electric generators 25 megawatts (MW) and larger

### **Program Start**

- The first compliance period would begin on January 1, 2009.

### **RGGI Cap and Scheduled Reductions**

- Regional emissions would be capped at 121.3 million short tons of CO<sub>2</sub> through 2014, and reduced to 10% below this level in 2018.
- The initial cap is approximately equivalent to 1990 emissions.

### **Emissions Budget**

- Each state will receive an emissions budget (each state's share of the regional budget, or cap), but the cap will apply regionally.
- Emissions budgets for each of the participating states are set forth in the Memorandum of Understanding.

**Projected Retail Price Impacts**

- Projected retail electricity price impacts would be modest under the “best estimate” scenario, ranging from an increase of 0.3% to 0.6% in 2015, across all rate classes.
- Under a “high emissions” reference case scenario, projected retail electricity price impacts range from 1.7% to 3.2% in 2015, across all rate classes.

Package Scenario (best estimate)

	Residential		Commercial		Industrial	
	2015	2021	2015	2021	2015	2021
MA	0.3%	0.6%	0.3%	0.7%	0.4%	0.8%
CT	0.2%	0.7%	0.3%	0.8%	0.3%	1.0%
ME	0.3%	0.6%	0.3%	0.7%	0.5%	0.9%
NH	0.2%	0.4%	0.3%	0.5%	0.3%	0.6%
RI	0.3%	0.6%	0.4%	0.7%	0.4%	0.8%
VT	0.2%	0.4%	0.2%	0.5%	0.3%	0.7%
NY	0.3%	0.6%	0.3%	0.6%	0.8%	1.5%
DE	0.4%	0.7%	0.5%	0.9%	0.8%	1.3%
NJ	0.3%	0.5%	0.4%	0.6%	0.4%	0.6%

High Emissions Scenario

	Residential		Commercial		Industrial	
	2015	2021	2015	2021	2015	2021
MA	1.2%	1.5%	1.3%	1.7%	1.5%	1.9%
CT	3.3%	3.9%	3.8%	4.5%	4.7%	5.6%
ME	2.2%	4.5%	2.5%	5.2%	3.3%	6.9%
NH	1.3%	1.6%	1.5%	1.9%	1.7%	2.2%
RI	1.4%	1.9%	1.7%	2.2%	1.8%	2.4%
VT	1.1%	1.6%	1.3%	1.8%	1.8%	2.6%
NY	2.2%	1.7%	2.4%	1.8%	5.3%	4.1%
DE	0.9%	0.7%	1.2%	0.8%	1.7%	1.2%
NJ	0.5%	4.1%	0.6%	4.7%	0.7%	5.4%

Wgt Avg	0.3%	0.6%	0.3%	0.7%	0.6%	1.1%
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Wgt Avg	1.7%	2.4%	1.9%	2.7%	3.2%	4.0%
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**Projected Household Bill Impacts**

- Projected direct electricity bill impacts due to RGGI range from \$3 - \$16 per average household annually in 2015.<sup>1</sup>
- Improvement in end-use energy efficiency over time<sup>2</sup> is projected to produce average household bill savings that exceed the price impact of the RGGI program (see “Explanation of Projected Retail Impact Analysis” for details).<sup>3</sup>

Before Energy Efficiency Savings	Household Bill Impact (\$/yr)		After Energy Efficiency Savings	Household Bill Impact (\$/yr)			
	2015	2021		Participating Households*		If all EE savings distributed equally across all households	
Direct Impact of RGGI due to retail price change			Impact of RGGI after assumed Energy Efficiency resulting in reduction in household energy usage	2015	2021	2015	2021
<b>Package Scenario (best estimate)</b>	2.90	5.45	<b>Package Scenario (best estimate)</b>	-92.54	-153.67	-30.51	-50.24
<b>High Emissions Scenario</b>	16.02	22.44	<b>High Emissions Scenario</b>	-86.15	-147.43	-19.74	-37.02

\* Assumes 35% Participation rate across households reached over

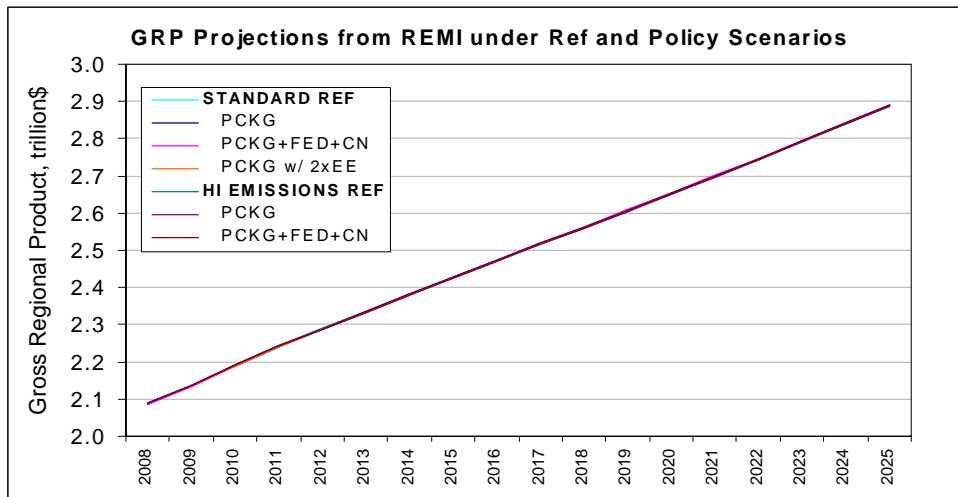
<sup>1</sup> Based on a weighted average of projected household bill impacts across the RGGI region.

<sup>2</sup> Due to RGGI design, such as the consumer allocation – strategic energy provision, and other state clean energy policies.

<sup>3</sup> Available at [http://www.rggi.org/docs/rggi\\_household\\_bill\\_impacts12\\_12\\_05.ppt](http://www.rggi.org/docs/rggi_household_bill_impacts12_12_05.ppt)

**Impact on Regional Economy**

- RGGI would have a negligible impact on the growth of the regional economy (as measured by Gross Regional Product, Real Personal Income, and Private Sector Jobs).
- The best estimate is that RGGI would have a very small positive effect on the regional economy (due primarily to the impact of investment in energy efficiency technologies) – ranging from a one hundredth to two-hundredth of one percent change (0.01% - 0.02% positive change in economic growth).<sup>4</sup>
- Under a “high emissions” scenario, RGGI would have a very small negative impact on economic growth – ranging from a one-hundredth to eight-hundredths of one percent reduction in economic growth, with the higher impacts seen post 2020 (0.01% - 0.08% reduction in economic growth).<sup>5</sup>
- The general impact of RGGI on economic growth trends for Gross Regional Product is outlined below .



- The projected impact of RGGI on the nine-state regional economy (RGGI participating states) is outlined below in more detail.

Impacts on 9-State Region		2009	2015	2021
Package Scenario (best estimate)	Total GRP (Bil Fixed 96\$)	0.01%	0.01%	0.01%
	Real Pers Inc (Bil Fixed 96\$)	0.00%	0.01%	0.02%
	Private Sector Jobs	0.01%	0.02%	0.02%
Impacts on 9-State Region		2009	2015	2021
High Emissions Scenario	Total GRP (Bil Fixed 96\$)	-0.01%	-0.05%	-0.07%
	Real Pers Inc (Bil Fixed 96\$)	-0.03%	-0.06%	-0.08%
	Private Sector Jobs	-0.01%	-0.04%	-0.05%

<sup>4</sup> Cited results are for the referenced economic metrics over a range of modeling years through 2021.

<sup>5</sup> See note 4.

### **Key RGGI Design Components**

- **Compliance period:** Three-year compliance periods, beginning in 2009.
  - Emissions are reported annually.
  - Sources “true-up” allowances and emissions at the end of each three-year compliance period.
  
- **Consumer Benefit Allowance Allocation:** A minimum of 25% of each state’s emissions budget will be allocated to support consumer benefit purposes. These allowances will be sold in the market and the revenue will be used to support consumer benefits, such as increased support for end-use energy efficiency programs.
  - A 25% consumer allocation – strategic energy allocation is projected to produce average annual regional revenue of between \$50 million and \$185 million through 2020.
  
- **Emissions Offsets:** Project-based emissions reductions or carbon sequestration achieved outside of the capped electric power sector may be used for compliance.

#### *Geographic Eligibility:*

- Projects/actions will be required to occur within the seven-state RGGI region, or the rest of the U.S. states, with certain restrictions.
  
- Offsets from the seven-state RGGI region will be awarded offsets allowances for certified reductions on a one ton-to one ton basis. Offsets from the rest of the U.S. will only be awarded one offsets allowance for every two tons of certified emissions reduction.

#### *Eligible Offsets:*

- ◆ Landfill gas – methane capture and destruction
- ◆ Sulfur hexafluoride (SF<sub>6</sub>) – reduction in fugitive emissions from electricity transmission and distribution equipment
- ◆ End-use energy efficiency – addressing natural gas/oil/propane consumption
- ◆ Afforestation – transition of land from non-forested to forested state
- ◆ Farming operations – avoided methane emissions
- ◆ Natural gas transmission and distribution (T&D) – avoided fugitive emissions from T&D equipment

#### *Offsets Limits:*

- ◆ Electric generators subject to RGGI may use offsets for compliance, up to a limit equivalent to 3.3% of their reported emissions in any compliance period.

**Price Mitigation Triggers:**

Multiple mechanisms are built into the program to help ensure that program costs do not spike. These mechanisms will provide additional flexibility during potential episodes of high allowance prices while maintaining the compliance obligation of regulated sources and the overall environmental integrity of the program.

- ◆ Offsets Trigger. The offsets limit, and the geographic scope of eligible offsets, will be expanded if the RGGI allowance price equals or exceeds \$7.00/ton (2005\$) for twelve months (following an initial 14-month “market settling” period at the beginning of each compliance period).
  - ◆ During the compliance period in which the trigger is hit, offsets allowances may come from projects located in North America on a one allowance - to one ton certified reduction basis (1:1).
  - ◆ Electric generators subject to RGGI may use offsets for compliance in this period up to a limit equivalent to 5.0% of their reported emissions.
  - ◆ Beginning in the next compliance period, offsets eligibility will revert to the original offsets limits and eligibility prior to the trigger event.
- ◆ Safety Valve. If the RGGI allowance price equals or exceeds \$10/ton (2005\$) for twelve months (following an initial 14-month “market settling” period at the beginning of each compliance period), the compliance period will be extended for one year, up to a total three-year extension. (The trigger price will escalate at 2% per year, beginning in 2006.)
  - ◆ This means that regulated sources will have additional time to “true-up” their emissions and allowances, but their compliance obligation will not change.
  - ◆ Offsets Safety Valve. If after two years of the compliance period extension allowance prices are still above the \$10 trigger price, regulated sources will be able to cover up to 20% of their reported emissions with offsets in the 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> years of the extended compliance period. The geographic scope will also be expanded to offsets from international trading programs.
  - ◆ In the subsequent compliance period, offsets limits and eligibility will revert to the original program requirements.