

# Regional Greenhouse Gas Initiative

an initiative of the Northeast and Mid-Atlantic States of the U.S.

## The Regional Greenhouse Gas Initiative (RGGI) Is....

- **The first mandatory cap-and-trade program in the United States for carbon dioxide (CO<sub>2</sub>), the principal human-caused greenhouse gas**
- **A ten-state cooperative effort to reduce greenhouse gas emissions from electric power generation**
- **Hosting the world's largest carbon auction, starting on September 25, 2008**

Under RGGI, ten northeastern and mid-Atlantic states have jointly designed cap-and-trade programs that cap power plants' CO<sub>2</sub> emissions, and then lower that cap by 10 percent. These programs allow market forces to determine the most efficient and cost-effective means of cutting emissions.

More than five years of planning, modeling and consultation have yielded a program which will reduce CO<sub>2</sub> emissions at the lowest possible cost, while encouraging development of a clean-energy economy. RGGI is expected to lower emissions without significantly affecting energy prices.

## What RGGI Will Accomplish

**Reduce CO<sub>2</sub> emissions.** The cap on emissions of CO<sub>2</sub> from power plants in the RGGI region will be 10 percent lower by 2018 than at the start of the RGGI program in 2009. Since electric power plants pump out more than one-fourth of the CO<sub>2</sub> emitted each year in the northeastern/mid-Atlantic region, RGGI is a key aspect of participating states' strategies to combat climate change.

**Support a green economy.** The ten states will use revenues from CO<sub>2</sub> allowance auctions to boost investment for energy efficiency and renewables, while creating green jobs and accelerating the regional shift to a clean-energy economy – at an estimated return on investment greater than 2:1. (For detailed information on auctions, see below.) Clean-technology innovation and deployment will increase energy independence, keep wealth in local economies and create green-collar jobs. RGGI will provide a market signal that the cost of emitting carbon must now be incorporated into energy pricing.

**Promote energy independence.** Americans are showing readiness to cut back on energy use. Under RGGI, participating states should be able to invest 50 percent more per capita in helping consumers use energy efficiently. Because the cheapest power plant is the one that never gets built, the resulting efficiencies will help keep electric rates down.

**Provide a model for a national program to reduce CO<sub>2</sub> emissions.** RGGI demonstrates that a national program to reduce CO<sub>2</sub> emissions can benefit both the environment and the economy. Innovative aspects of RGGI design are already being incorporated into congressional cap-and-trade proposals and may influence the future direction of the European Union Emissions Trading Scheme for CO<sub>2</sub> (EUETS) and other programs under development.

### RGGI QUICK FACTS

**Ten Participating States:** CT, DE, MA, MD, ME, NH, NJ, NY, RI, VT

**Coverage:** Fossil fuel-fired electric power plants 25 megawatts or greater in size (approximately 225 facilities region-wide)

**Regional CO<sub>2</sub> Cap:** 188 million tons for the ten states

**RGGI Effective Date:** January 1, 2009

**CO<sub>2</sub> Allowance Auctions:** Quarterly, beginning with pre-compliance auctions in September and December 2008

**Timing of CO<sub>2</sub> Reductions:** 2009-2014, cap stabilizes emissions; 2015-2018, cap reduces by 2.5 percent each year

**Total Reduction in CO<sub>2</sub> Emissions Cap:** 10 percent below 2009 levels

**Compliance Period:** Three years; first compliance period 2009 – 2011

**CO<sub>2</sub> Emission Offsets:** Greenhouse gas reduction projects outside the electricity generation sector will enable power plants to meet part of their compliance obligation.

## How RGGI Works

**The RGGI cap.** The RGGI regional cap establishes the limit on regional power plant CO<sub>2</sub> emissions. Each participating state's CO<sub>2</sub> budget trading program establishes its respective share of the regional cap, and each state will issue CO<sub>2</sub> allowances in a number equivalent to its portion of the regional cap. Each CO<sub>2</sub> allowance represents a permit to emit one ton of CO<sub>2</sub>. State control over the number of issued allowances ensures that total emissions in the region will not exceed the cap.

**Allowance market.** The RGGI states will distribute CO<sub>2</sub> allowances primarily through regional auctions. CO<sub>2</sub> allowances can also be traded on a secondary market, where power plants that obtain more allowances than they need - or that reduce their CO<sub>2</sub> emissions - can sell the excess allowances, and those needing additional allowances can buy them.

**Supporting low-carbon solutions.** Proceeds from the sale of allowances will fund state programs that promote energy efficiency and projects for clean renewable energy, such as solar and wind power. These funds will reinforce the RGGI program's effectiveness in reducing greenhouse gas emissions.

**Using offsets.** An *offset* is a greenhouse gas emission reduction or carbon sequestration project at a source outside the electricity sector. The RGGI states have approved a carefully chosen group of offsets that power plants can use to meet up to 3.3 percent of their compliance obligations. Examples of approved offsets are landfill gas recovery and agricultural methane recapture, which reduce the potent greenhouse gas methane. Offsets impart significant environmental and economic benefits for sources of offset projects (such as landfill operators or farmers). They also increase flexibility for the electricity sector.

## Economics of RGGI

**Electric rates.** Economic modeling projects that RGGI will have a very modest effect on electric rates, probably retail rate increases of between one and three percent; price triggers built into the program allow flexibility if electric rates should rise higher than predicted. In fact, consumer benefits from the strategic reinvestment of CO<sub>2</sub> allowance auction proceeds are expected to largely offset the direct effect of RGGI on retail electricity prices. RGGI will drive substantial increases in investment for cost-effective energy efficiency, lowering energy demand and helping households and businesses control their energy bills.

**Market signals.** RGGI's phased approach, with initially modest emission reductions, will provide clear market signals and regulatory certainty without resulting in dramatic electricity price impacts.

**Charging for allowances.** Whether power plants are required to pay for CO<sub>2</sub> allowances or receive them free, the market value of these allowances will be passed through to consumers. Therefore, the cost of electricity will include as much of the cost of allowances as the law permits. By establishing a transparent price for allowances and accounting for CO<sub>2</sub> emissions in the region's electricity markets, RGGI auctions benefit the ratepayer by making the cost of allowances known to all.

## Stakeholder Process

The participating states designed RGGI using a transparent, five-year process that included active engagement with energy industry representatives, non-governmental organizations and other stakeholders, as well as with technical experts.

## The RGGI Auctions...

- **Will provide environmental and economic benefits to states in the RGGI region**
- **Are designed to promote a fair and open market for carbon**

Under RGGI, ten northeastern and mid-Atlantic states have agreed to use an auction of allowances (an allowance is a limited permission to emit one ton of CO<sub>2</sub>) as the means to distribute allowances to electric power plants regulated under coordinated state CO<sub>2</sub> cap-and-trade programs.

The RGGI cap-and-trade programs are the first to distribute nearly all allowances by auction, rather than free allocation.

## Environmental and Economic Benefits

**Emission Reductions.** Emission reductions from electricity generators are the first outcome of RGGI. To maximize the program's environmental and economic benefit, the states have agreed to dedicate revenues from the CO<sub>2</sub> allowance auctions to consumer energy efficiency, energy conservation, and clean energy development. Auction revenues will allow states to increase per capita support for consumer energy efficiency programs by more than 50 percent on average in the RGGI states.

**Cost Efficiency.** By auctioning allowances, the RGGI states are using market forces, rather than government mandates, to set a price for carbon. Establishing a market price for carbon will help power plants determine the most efficient and cost-effective means to cut CO<sub>2</sub> emissions. Investing auction revenue to reduce electricity demand and deploy clean energy technologies will reduce the cost of meeting the regional CO<sub>2</sub> cap and provide consumer benefits. RGGI is not expected to significantly affect consumer energy prices.

**Auction Design.** Auctions are proven market tools, and the RGGI auction design is based on a rigorous design study and stakeholder input. The RGGI auction design builds on the successful emissions market cap-and-trade systems currently used to control nitrogen oxides (NO<sub>x</sub>) and sulfur dioxide (SO<sub>2</sub>). RGGI's open auctions will establish a transparent cost for allowances and incorporate an accounting of CO<sub>2</sub> emissions into the electricity markets in the region. Since electric generators factor the cost of allowances into power prices whether the allowances are distributed free or for a charge, the ratepayer benefits when the price of allowances is known to all. By distributing allowances through auction, RGGI improves upon the established European Union carbon market, which faced problems with the free allocation of carbon allowances.

**A Model for Carbon Markets.** Other major carbon markets, notably the European Union Emission Trading Scheme, are moving toward allowance auctions for their electric sector. The RGGI auction design is serving as a model for CO<sub>2</sub> cap-and-trade programs under consideration in other regions and in the U.S. Congress.

### **RGGI AUCTION QUICK FACTS**

**Participating States:** All ten RGGI states will participate in regional auctions

**Pre-compliance Auction Schedule:** September 25 and December 17, 2008

**Ongoing Auction Schedule:** Quarterly

**Bidders:** Open to all qualified participants, with option to restrict in future auctions

**Economic Benefits:** Cost-effective emission reductions, transparent allowance cost for pricing electricity

**Environmental Benefits:** Lower CO<sub>2</sub> emissions; funding for energy efficiency, conservation, clean and renewable energy programs

**Return on Investment for Renewables and Energy Efficiency:** More than 2:1

## Promoting a Fair and Open Carbon Market

RGGI and other carbon programs are currently creating a new carbon market in the U.S. To promote fairness and transparency in this market, RGGI has adopted a well-tested auction format, with open and independent oversight and an ability to adjust auction eligibility and procedures as needed in the future. Several features of the RGGI auction design serve these fairness and transparency goals:

**Auction Structure and Format.** Allowances will be made available for sale on a quarterly basis in lot sizes of 1,000 allowances. The initial auction will offer allowances through a single-round, uniform-price, sealed-bid auction format. While the goal is to maintain a consistent auction format, RGGI will retain the option to transition to a multiple-round, ascending-price format if necessary.

**Allowance Sale Schedule.** Allowances will be identified with a vintage corresponding to the allowance's allocation year and will be offered for sale prior to the end of that three-year compliance period in which they were issued. Future allowance vintages also will be made available in auctions beginning in 2009.


**Participation.** All market participants will be eligible to participate in the initial auction, provided they meet qualification and participation requirements, which will include provision of financial security. The RGGI states retain flexibility to limit participant eligibility in subsequent auctions. Auction rules will limit the number of allowances that associated entities may purchase in a single auction to 25 percent of the allowances offered for sale in that auction.

**Reserve Price.** A reserve price of \$1.86 per allowance will apply to the first auction. After the first auction, a reserve price will be in effect that is the higher of \$1.86 (adjusted for inflation) or 80 percent of the current market price of the allowance vintage being auctioned. The reserve price will be publicized before each auction.

**Unsold Allowances.** Unsold allowances will be made available for sale in future auctions. In 2012, as part of the first program review, the participating states will decide whether to retire any unsold allowances from the first compliance period, or to offer these allowances for sale in subsequent auctions during the second compliance period.

**Notice and Results of Auctions.** Each auction will be noticed at least 45 days before its date on the RGGI web site, <http://www.rggi.org>. The notices will provide the date, time and location, categories of eligible bidders, requirements for qualification, quantity of allowances to be auctioned, and information and procedures for participation. After each auction, the participating states will publish the auction clearing price and the total amount of allowances sold in auction on the RGGI website.

**Auction and Market Oversight.** The RGGI states have retained a professional independent market monitor to oversee auctions and subsequent market activity. The monitor will observe the conduct of the auction qualification process and the conduct of the auction, and will report on whether the auction was conducted in accordance with the participating states' regulations and the noticed auction procedures and whether the auction results represented a competitive outcome. Specifically, these functions will be overseen by Potomac Economics, an experienced and independent market monitor.

 The logo for RGGI Inc. features the text "RGGI Inc." in a bold, blue, sans-serif font. Below the text is a stylized blue wave graphic consisting of two curved lines that sweep from left to right.	RGGI, Inc. is a nonprofit corporation created to provide technical and administrative services to the Regional Greenhouse Gas Initiative CO <sub>2</sub> budget trading programs of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island and Vermont.
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For more information and to obtain auction application materials, please visit [www.rggi.org](http://www.rggi.org), or contact Jonathan E. Schrag, Executive Director, Regional Greenhouse Gas Initiative, Inc., 90 Church Street, 4th Floor, New York, NY 10007. Email: [jonathan.schrag@rggi.org](mailto:jonathan.schrag@rggi.org) Tel: 646-591-8559.