A Pioneering Approach to Carbon Markets

How the Northeast States Redefined Cap and Trade for the Benefit of Consumers

Executive Summary

In 2009, ten Northeast states launched the Regional Greenhouse Gas Initiative (known as “RGGI”), to reduce emissions of carbon dioxide (“CO_2”) from existing and new power plants. RGGI was a groundbreaking effort on multiple fronts. *A Pioneering Approach to Carbon Markets* details the chronology, historical context, stakeholder process, and analysis that influenced the decision-making processes of those involved in the development of the multi-state RGGI program and the all-important decision to auction rather than allocate allowances.

RGGI is a pragmatic, market-based approach launched by a group of states to tackle carbon emissions and accelerate investment in energy efficiency and clean energy.

The cap-and-trade approach had been used to control other air pollutants, but RGGI was the first cap-and-trade program in the United States to limit CO_2 emissions from power plants. What was innovative and groundbreaking about RGGI was that the states opted to sell carbon allowances through an auction, rather than give them to industry for free.[1] That way they could invest the auction proceeds directly back into the states to benefit consumers.

Since the program’s inception, the RGGI states have sold nearly all emission allowances on a quarterly schedule through a regional auction platform administered by a third party. Each state has developed its own custom plan to invest the bulk of auction proceeds into the following areas: energy efficiency, renewable energy, bill assistance, and other consumer benefit programs.

These programs are spurring innovation in the clean energy economy, reducing CO_2 emissions, and creating employment opportunities in the RGGI states. After more than six years of RGGI implementation, retrospective analysis suggests that the RGGI states have achieved significant economic benefits from the investment of auction proceeds. Across the RGGI region, GDP increased by eight percent as emissions fell by 45 percent.

The decision by a bipartisan coalition of states to auction allowances was aimed at maximizing benefits for Northeast residents, businesses and consumers.

The novel choice by the states to auction allowances in RGGI was motivated by a number of factors. Chief among them was the recognition that the program created a new commodity in the form of emissions allowances with substantial financial value. The decision the RGGI states faced was who would receive the allowance value–the affected generators or electricity ratepayers.

Given the restructured electricity markets in the RGGI region, generators would include the value of the allowance in their market bid prices (increasing wholesale electricity prices) regardless of whether allowances were initially distributed at no cost or auctioned.[2] Furthermore, evidence was offered suggesting that if states used the allowance

[1] Under the RGGI program, allowances are permits that allow the release of one ton of CO_2 to the atmosphere. The number of allowances in circulation is limited under a cap-and-trade program to enforce the emissions cap.

[2] In a competitive power market, fossil-fired power plants will reflect the cost of allowances in their wholesale electricity market bid prices even if they receive them for free because of their “opportunity cost”.

value for consumer benefit through investments in energy efficiency, this would reduce demand for electricity, reduce emissions, and reduce customer bill impacts. As auction proceeds are invested by the states in energy efficiency, renewables, and consumer benefit programs, these investments reduce overall energy demand and reduce emissions while lowering consumer and business electricity bills -- propelling a cycle of ongoing benefits.

Ultimately, the auction decision came from extensive input from diverse stakeholders (state leaders, advocates, industry, and consumers) and collaboration on the best way to implement RGGI and benefit the most people. Program development was based on multi-year negotiations among energy and environmental regulators on program design, a robust stakeholder process, and targeted economic analyses on the impacts of allowance allocation on electric generating companies, electricity markets, prices and ultimately consumers.

RGGI has won over even skeptics and the auction decision has been recognized by experts as the most important and innovative design choice the states made.

While neither the RGGI states nor stakeholders had an expectation at the outset that there would be a substantial allowance auction, all of the states have come to embrace the approach to capture the allowance value for consumers who pay the bulk of program costs through their electricity rates. In addition, many have come to see the auction approach as the most efficient method of releasing allowances into the market without picking winners and losers.

As the RGGI program moves forward, the auction has evolved into a widely accepted approach even among affected electric generating companies and other market participants. Stakeholders, across the spectrum, view the RGGI allowance auctions as a transparent and fair process. In addition, a robust secondary market for allowances has also emerged, providing market participants with opportunities to buy and sell allowances.

RGGI has now held four quarterly auctions every year since 2009 that have generated over $2.6 billion in revenue for the states to invest in their jurisdictions. Strategic expenditures in energy efficiency, renewable energy, other greenhouse gas reduction programs and education/worker training also result in broad economic benefits throughout the region. Comprehensive program reviews conclude that several energy efficiency and renewable energy programs in the RGGI states show $3-$4 in benefits for every $1 invested.[3]

This paper is based on an extensive review of archived RGGI program design materials, and interviews with key stakeholders and policymakers involved in the formative years of the RGGI program. The video interviews capture first-hand accounts of the thinking that went into the RGGI program design.

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A Pioneering Approach to Carbon Markets (and companion video) is available at: www.mjbradley.com/rggi-market

[3] Hibbard P. et. al., The Economic Impacts of the Regional Greenhouse Gas Initiative on Ten Northeast and Mid-Atlantic States. Review of the Use of RGGI Auction Proceeds from the First, Three-Year Compliance Period, November 15, 2011.