



## State Staff Information Sharing “Surge” Call Summary

### “Wherefore Art Thou, Carbon Trading?”

February 6, 2017

NARUC’s Research Lab hosted a call on Monday, February 6, 2017 as part of our “surge” effort to help link state staffers to learn from each other on current events in energy regulation. The first call focused on smart inverters; the second was about enhanced oil recovery. This call discussed carbon trading.

Staff from the Nevada PUC introduced the speakers from the Maryland PSC and the California PUC. Maryland is a participant in the Regional Greenhouse Gas Initiative (RGGI) and California has a statewide carbon dioxide cap-and-trade program. As commission staff, our speakers have some administrative responsibility for their states’ carbon trading programs but share responsibilities with, in Maryland’s case, the Maryland Department of the Environment (MDE), and in California’s, the California Air Resources Board (CARB).

#### **Regional Greenhouse Gas Initiative**

Maryland is one of nine mid-Atlantic and northeastern states currently participating in RGGI. Most member states are partially or fully deregulated. The idea behind RGGI originated in the early 2000s, when governors came together to discuss climate change and evaluate the feasibility of a regional approach. A 2005 MOU setting up the program named seven initial member states; two subsequent amendments added additional states. States may pass laws authorizing their participation in RGGI, but

authorizing legislation is not required as some members participate through regulatory action or executive order from a governor.

The program starts by setting an overall cap on carbon dioxide emissions for the nine member states as a whole. Then, the cap is allocated among each state according to a formula negotiated in 2007 accounting for historic emissions and other state characteristics. Maryland receives 22% of allowed emissions; New York takes the largest

share. Every quarter, each state auctions its portion of CO<sub>2</sub> allowances to in-state generation sources 25 MW or larger. Out-of-state sources that sell electricity to RGGI

customers are not subject to the program. Following the auction, generation entities can trade allowances amongst themselves across RGGI member state lines.

While auctions occur quarterly, RGGI operates in three-year cycles. Generators need to be in compliance by the end of the three-year period. At the end of each period, the program undergoes a review where the CO<sub>2</sub> cap and other program characteristics are evaluated.

The Maryland PSC has a small but critical role in making RGGI run. There is only one PSC staffer assigned to work on RGGI, although her RGGI-related tasks do not require a burdensome level of effort and fits in with other duties. Across the program, state

RGGI’s current membership is Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont.

In 2016, the RGGI-wide cap was 86.5 million short tons of CO<sub>2</sub>; the cap will decline 2.5% annually until 2020.

commissions are heavily involved in the program review process, which sometimes requires expertise in electricity modeling that other state agencies do not possess. Commission staff review and approve the results of quarterly emission allowance auctions for public release. In the unlikely event of any actors or events adversely affecting the auction, staff would identify and help address the issue, although this has never happened in RGGI's history. The MDE and other environmental or air quality agencies conduct day-to-day compliance monitoring.

RGGI auctions are similar to those conducted by RTOs and ISOs: blind and stacked in order of quantity and price. Staff have no role in the auction process until reviewing the results afterwards. An administrative arm of RGGI Incorporated is funded by auction proceeds and administers the auction. Aside from that nominal amount sent to RGGI, Inc., member states collect the revenues earned from auctioning their allocations of allowances and each state determines how to spend those revenues. In 34 quarterly auctions, Maryland has received over \$544 million. Maryland PSC staff are not involved in the decision-making process regarding RGGI proceeds, but commission staff in other states are involved to varying degrees.

Revenue from the program is a crucial part of its longevity. The majority of RGGI states are presently under Republican governors, some of whom do not share the program's original goal of cutting CO<sub>2</sub> emissions. But when governors see how program proceeds are redistributed to ratepayers, they see the benefit.

While the majority of CO<sub>2</sub> allowances are distributed through the quarterly auction process, states can also distribute allowances through set-aside accounts devoted to state

priorities. Maryland, for example, sets aside some of its allocated allowances to be granted for free to in-state natural gas generators. RGGI also creates a cost containment reserve of allowances that releases a fixed number of allowances if the price of allowances exceeds a set trigger. The cost containment reserve is intended to mitigate short-term price spikes brought on by extreme weather events, short-term outages of large generation sources, or other unforeseen events that would have a broad detrimental effect on generation sources.

### California

California's carbon trading program is based on AB32, a 2006 state law. The law called for the state to cut emissions back to 1990 levels by 2020 and empowered CARB to study, propose, and implement a program, market-based or otherwise. CARB considered a number of potential programs and found that a market-based solution, specifically a cap-and-trade program, would be the most efficient and flexible option. The program was instituted in 2012 with the goals of setting a price on carbon, sending that price signal to the market, and letting the market decide how to identify and implement the most efficient emission reductions. In contrast to RGGI's obligation on in-state generation sources only, AB32 dictates that every entity that delivers electricity to California's transmission grid must comply with the program.

Cap-and-trade is a small but rapidly growing portion of California's emission reduction portfolio. The state has an aggressive renewable portfolio standard (RPS) and stringent energy efficiency goals that together account for the majority of emission reductions in a state emissions plan covering the 2011 - 2020 decade.

Maryland legislation directs at least 50% of revenues to limited-income bill assistance and no more than 20% to renewable energy, 20% to energy efficiency, and 10% to program administration.

Auctions take place quarterly and had been fully subscribed prior to 2016. The most recent price of an allowance was near the floor of \$12. Similar to RGGI's cost containment reserve, California's program includes strategic reserve allowances that can be released in the event prices climb too high.

To date, CO<sub>2</sub> allowance auctions have generated \$4 billion for California. The legislature determines how proceeds are spent. So far, the state has appropriated \$3 billion of this revenue, with \$1 billion targeted to greenhouse gas reduction measures in disadvantaged communities. California's investor-owned utilities have also returned their proceeds from the allowances the state grants them for free to ratepayers via the Climate Credit program, intended to offset higher bills as a result of the program. This revenue adds up to another \$4 billion.

The California PUC staff noted that CARB staff may evaluate and change some aspects of program design and allocation strategies during a scheduled review in 2020. California's cap-and-trade program linked with Quebec Province in 2014 and will soon link with Ontario Province. After Ontario officials expressed interest, CARB sent an official letter to Governor Jerry Brown on January 30 requesting Ontario's entry into the program. The attorney general's office evaluated the proposal and found that it met the state's conditions for linkage, and Governor Brown granted CARB's request on March 16. Now approved, the linkage is expected to begin in January 2018.

Cap-and-trade imposes an economic cost of approximately 0.5 percentage points of GDP growth between 2012 and 2030 compared to business as usual during that period. The program's benefits include substantial

emission reductions and revenue for low-income ratepayers and other programs.

### **The Future of Carbon Trading**

New Jersey withdrew from RGGI in 2011. However, none of the nine current members have shown any inclinations to withdraw. California shows no signs of slowing its cap-and-

trade program and has expressed willingness to expand into Oregon, Washington, and Canada. The debate over expanding California's regional energy market through CAISO and the Western Energy Imbalance Market may bring additional generation sources into compliance with the program if western states decide to pursue increased regional integration.

Regarding other states, the outlook is uncertain. No other state has a cap-and-trade program like those discussed in this call. However, experiences from Maryland and California are largely positive and demonstrate (1) a low level of commitment on behalf of commission staff, (2) broad public and bipartisan support, and (3) abundant revenues that states can devote to achieving additional energy and environmental policy goals. With the Clean Power Plan being unwound, we may see more states consider market-based policies to decrease greenhouse gas emissions in the absence of federal actions. Existing regional integration structures such as the Midcontinent ISO may help states make the initial jump to regional cap-and-trade programs. Before making any policy decisions, however, states would be wise to closely examine California's program and RGGI in debating the efficiency and effectiveness of carbon trading.

Have a question you'd like to convene state staff to explore? Please contact Miles Keogh, NARUC's Lab Director, 202-898-2217 [mkeogh@naruc.org](mailto:mkeogh@naruc.org)

Under the 2020 plan, cap-and-trade is expected to make up between 12% and 22% of California's emission reductions. By 2030, the state expects cap-and-trade to account for 27 - 50% of reductions and transportation to account for 27 - 32%, primarily through widespread electrification.