RGGI & EPA Requirements:

A Model for Market-Based Compliance

March 19, 2015

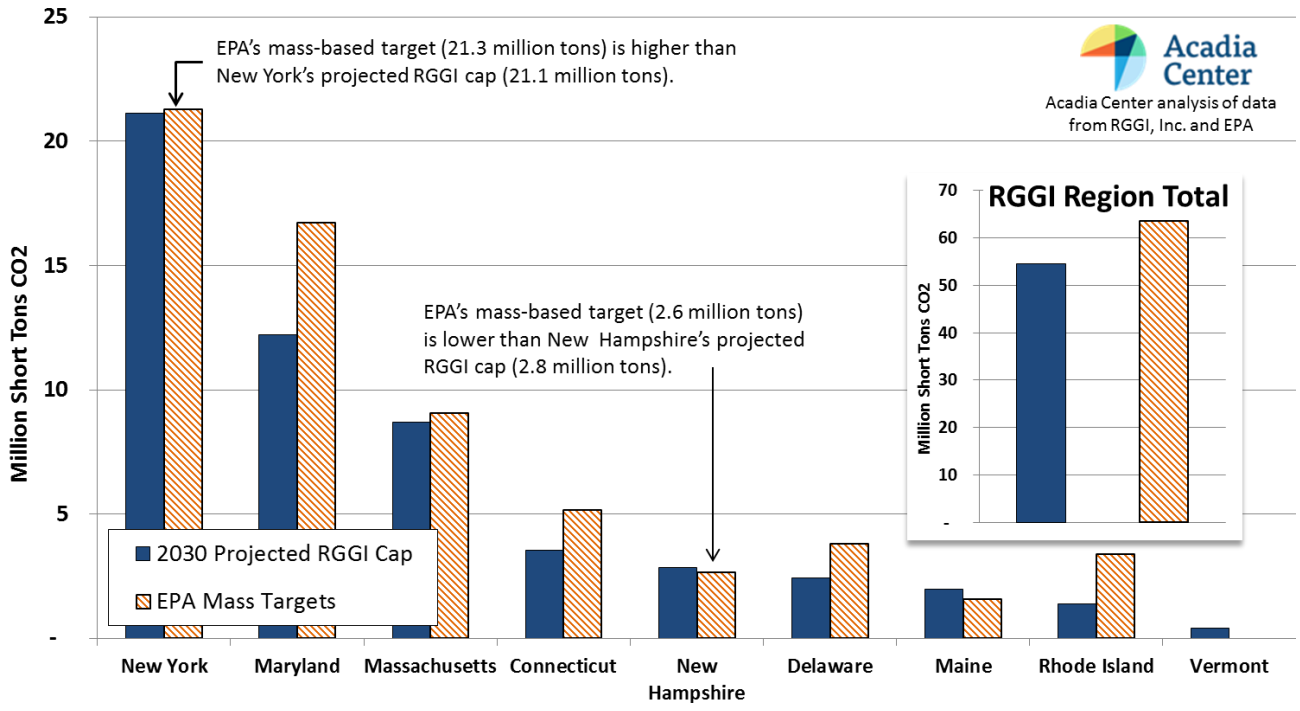
Acadia Center

Advancing the Clean Energy Future

On June 2, 2014 the EPA released its Clean Power Plan to regulate CO2 emissions from existing power plants. The Clean Power Plan has focused renewed attention on the Northeast and Mid-Atlantic states' Regional Greenhouse Gas Initiative (RGGI) as an effective program and flexible approach for states to meet EPA requirements. Comparing EPA's proposed mass-based targets[1] to RGGI shows that:

- **RGGI states are well positioned to meet EPA requirements** – The existing cap on emissions through 2020 places RGGI states as a group on a trajectory to achieve EPA's final (2030) targets.
- **RGGI's cap will have to be extended to 2030** – Extending the RGGI cap by ten years and returning to a fixed annual reduction trajectory will keep emissions in the RGGI states on a collective basis below EPA's final 2030 limits.
- **Modifications of RGGI's Cost Containment Reserve (CCR) may be required** – CCR allowances will likely have to be drawn from below the cap (rather than added to the cap) in order to maintain the legitimacy of RGGI's emissions targets.

The figure below illustrates how the extended RGGI program cap compares with the proposed Clean Power Plan targets for the RGGI states. The projected 2030 RGGI cap (54,600,000 short tons) falls below EPA's proposed mass-based target (63,554,861 short tons).



[1] EPA Technical Support Document: *Translation of the Clean Power Plan Emission Rate-Based CO2 Goals to Mass-Based Equivalents*, page 15: http://www2.epa.gov/sites/production/files/2014-11/documents/20141106tsd-rate-to-mass.pdf. This analysis focuses on EPA's proposed mass-based targets for existing and new units.

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Although the region-wide cap appears to be low enough to meet the requirements of the Clean Power Plan – thus allowing all participating states to use RGGI for compliance – individual states' portions of the regional cap (called allowance budgets) come in both above and below EPA's requirements. As illustrated in the figure above, EPA's proposed targets for New York, Massachusetts, Maryland, Connecticut, Delaware and Rhode Island are higher than those states' individual RGGI allowance budgets. The other RGGI states (New Hampshire, Maine and Vermont) would have lower emissions under EPA's approach than their projected RGGI allowance budgets.

Since RGGI states will likely demonstrate compliance as a group, this discrepancy between states should not be an obstacle to utilizing RGGI as a compliance mechanism. Rather, RGGI offers flexibility to accommodate different targets and varying levels of emissions reduction potential among participating states.

Necessary Modifications

While RGGI states are well positioned to comply with EPA requirements, they will have to 1) extend the cap to 2030, 2) adjust the rate at which the cap declines, and 3) modify the Cost Containment Reserve to draw allowances from under the cap.

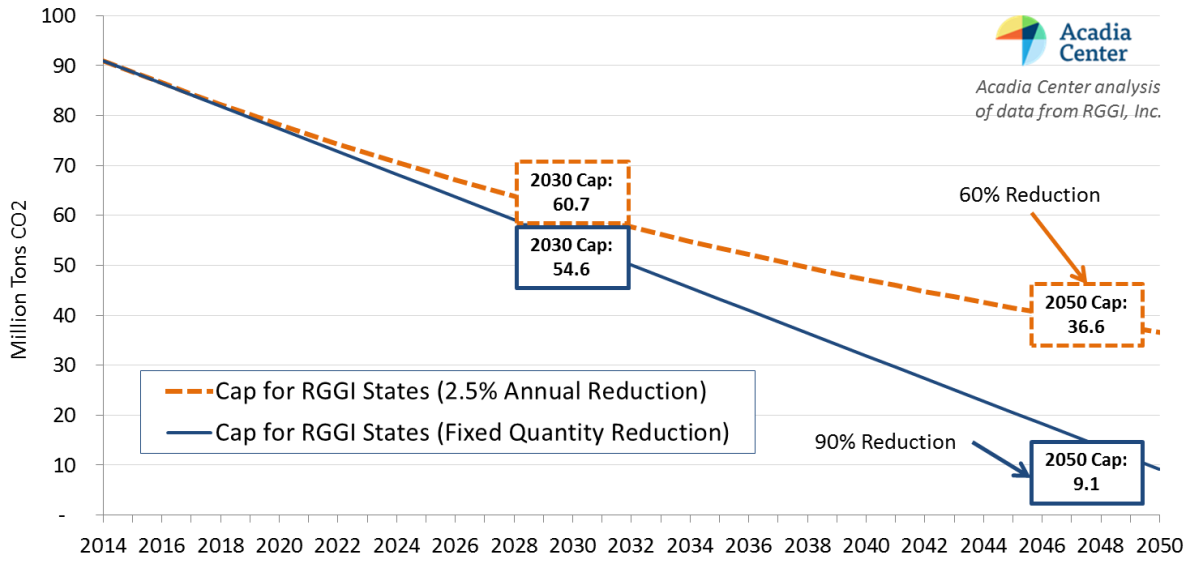
1) RGGI Cap Extension

The RGGI cap only extends to 2020, and the RGGI states must extend the cap to 2030 to be consistent with EPA's final targets. The RGGI cap was restructured in 2013 to reflect actual regional CO2 emissions, with allowances apportioned to each participating state, consistent with the proportion of allowances that each state received at the start of the program. We assume that the states will agree to preserve these proportions of the total RGGI budget, but apportionment of the RGGI cap among states could be modified so long as the total cap does not increase.

2) Trajectory of the Cap Decline

The manner in which RGGI's cap declines will require revision to ensure achievement of long-term emissions reduction objectives. RGGI's new cap declines by 2.5% annually, but instead of declining by a fixed quantity of allowances, the yearly step-down is based on a percentage of the prior year's cap. By 2030 the difference between these two means of reducing the cap is significant. The proper, fixed quantity approach leads to a regional cap of 54.6 million tons while the current, percentage-based approach leads to a regional cap of 60.7 million tons. By 2050, the current approach would allow four times the emissions of the fixed quantity approach. RGGI's initial cap required an annual reduction of 2.5% from the baseline year, so returning to this approach would be consistent with RGGI's intent, and would support states' efforts to achieve deep emissions reduction targets by 2050.[2] For these reasons, our "2030 Projected RGGI Cap" is based on the annual fixed quantity reduction approach.

[2] All RGGI states, with the exception of Delaware, have mandated GHG emissions reduction targets. For additional details on state emissions reduction targets see: http://www.c2es.org/what_s_being_done/targets

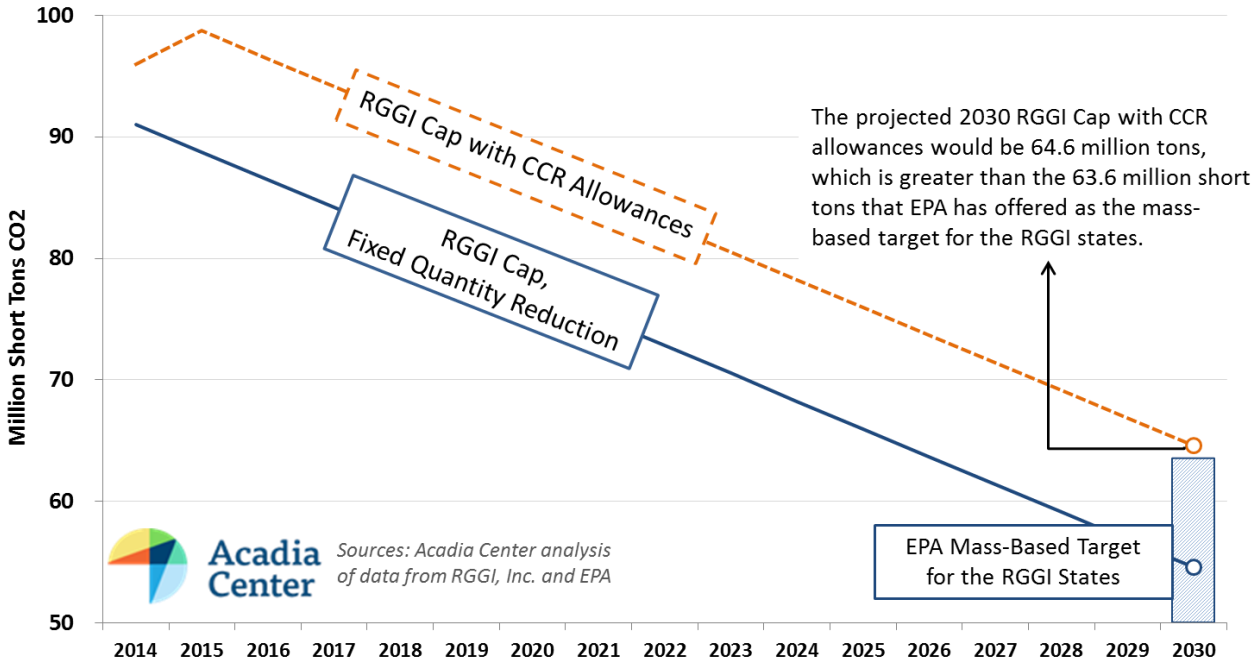


3) Cost Containment Reserve

In order to mitigate price volatility, RGGI states established a Cost Containment Reserve (CCR) that mints additional allowances when price thresholds are reached. That price threshold was reached in the first RGGI allowance auction of 2014, and all five million available CCR allowances were purchased, thus increasing the effective 2014 cap by five million tons of CO_2. In each year from 2015 to 2020, ten million additional CCR allowances will be available if price thresholds are met, thereby increasing the potential cap by ten million tons of CO_2 each year. From 2014-2020, the CCR allowances could permit 65 million tons of CO_2 emissions in addition to the nominal cap—almost a whole year's worth of emissions.

As the following figure shows, these CCR allowances could increase the cap to the point that the RGGI program would not be as stringent as EPA's proposed mass-based targets in 2030. The approach to cost containment currently being used by the California emissions trading program offers a solution to this problem. Like the RGGI CCR, in California's program additional allowances become available for purchase when price thresholds are met. Unlike the RGGI CCR, about 4% of California's original number of allowances from the capped budget is held back in the allowance price containment reserve. If this reserve of allowances is exhausted, there is limited "borrowing" allowed from the latest program years, and therefore the cumulative supply of allowances – and permissible emissions – is not increased.[3]

[3] Explanation of California's Allowance Price Containment Reserve: http://www.arb.ca.gov/regact/2010/capandtrade10/capv3appg.pdf



Conclusion

RGGI has proven an effective market mechanism to reduce greenhouse gas emissions on a regional basis, and should prove an effective mechanism for current RGGI states – and additional participants – to meet EPA requirements. The RGGI experience is consistent with other cap and trade programs that capture the lowest cost emissions reductions first, such as the acid rain trading program. Other states should consider the advantages of working with their neighbors to achieve carbon emissions reductions at the lowest possible cost through programs like RGGI, which can enhance flexibility and produce lower cost emissions reductions than individual states acting alone.

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