

SUPPORT VOLUNTARY PURCHASES OF CLEAN, SAFE, 21ST CENTURY ENERGY

With an Off-the-Top Rule Under Cap and Trade

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Cap-and-trade programs are one strategy policymakers have embraced to reduce the air pollution associated with climate change.

Cap-and-trade programs require those regulated to hold a tradable permit (known as “allowances” in the parlance of cap and trade) to cover their emissions. Within the electricity sector, utilities and other generators or sellers of electricity will be required to hold allowances to account for the pollution associated with burning fossil fuels. Homeowners and small businesses will not be required to hold allowances. Cap-and-trade programs reduce the amount of pollution over time by lowering the number of allowances made available, thereby reducing the cap. They also impose a pollution penalty by putting a price on emissions.

The importance of the voluntary market. Without careful design, cap and trade could hinder the voluntary market for renewable energy where individuals and businesses choose to buy clean, safe energy from domestic sources that never run out, like the sun and wind (or build their own clean energy generation capacity). The latest report on the green power market from the National Renewable Energy Laboratory shows that the amount of renewable energy purchased through the voluntary market has exceeded the amount purchased from new clean energy generators for compliance purposes (i.e. to comply with state renewable portfolio standards) over the time period 2003–2008.¹ This is not to dismiss the importance of potential direct regulations such as a national Renewable Electricity Standard (RES)—these are crucial and increasingly important—but to point out that the voluntary market can continue to be a useful driver of new clean energy development.

Cap and trade with off the top. The voluntary market has played an important role in advancing clean energy development in large part because socially responsible organizations and individuals want to help fight global warming. Cap and trade should include an “off-the-top” rule to account for voluntary renewable

energy purchases so that voluntary renewable energy purchases continue to contribute in the fight against global warming. An off-the-top approach involves setting aside and retiring allowances equivalent to the amount of carbon dioxide emissions avoided due to voluntary clean energy purchases. In this way, voluntary action will continue to produce additional reductions in overall heat-trapping emissions. The Regional Greenhouse Gas Initiative, a cap-and-trade program encompassing ten Northeastern states, allows participants to adopt an off-the-top approach, and 9 of 10 states have done so.

Cap and trade without off the top. Without proper accommodation for voluntary renewable purchases in cap-and-trade design, there is a danger that these investments in clean energy will cease making a real difference. Without an accommodation like off the top, voluntary renewable energy purchases would simply free up allowances for someone else to use to pollute more because emissions will occur up to the level of the cap. Each voluntary purchaser of renewable energy that chooses to clean up their electricity supply would just allow more polluting activity elsewhere. As organizations and individuals realize their purchases are not achieving additional emission reductions, but instead are simply shifting the costs away from those regulated under cap and trade and onto those taking voluntary action, voluntary purchases of renewable energy may dwindle. How would this cost-shifting occur? Those making voluntary purchases of clean energy shoulder some cost, but without off the top, the voluntary action pays for reductions that would have been required anyway of those regulated under cap and trade. On the back page of this issue brief, we illustrate several scenarios under a cap-and-trade program with and without off the top to illustrate the different treatment of voluntary purchases of renewable energy.

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NOTES

1. Lori Bird, Claire Kreycik, and Barry Friedman, “Green Power Marketing in the United States (11th Ed.),” National Renewable Energy Laboratory, October 2008. www.nrel.gov/docs/fy09osti/44094.pdf.

The authors explain why it makes sense to compare voluntary purchases to new renewable energy generation as follows: While RPS (Renewable Portfolio Standard) policies generally allow pre-existing renewable energy sources (i.e. those installed prior to the adoption of the RPS) to meet their targets, the estimates presented here reflect only the amount of new renewable energy generation that these policies are expected to stimulate. These figures are compared to the voluntary market estimates because voluntary markets primarily support generation from new renewable energy projects (i.e. those installed after voluntary green power markets were established).

WITHOUT OFF THE TOP: Emissions remain constant despite voluntary action

10 TONS

In the base scenario (right), we sketch a hypothetical cap-and-trade system that creates 10 allowances and in which no voluntary action occurs.



Voluntary renewable energy purchases can reduce emissions, but without a reduction in the cap, emitters will "fill in" the now-available tons, leading to no overall reduction in emissions.



...and more voluntary renewable energy purchases are made, but without an off-the-top provision, overall emissions are still not reduced.



WITH OFF THE TOP: Emissions are reduced by voluntary action

10 TONS

9 TONS

8 TONS

KEY

Allowances

Voluntary purchases of RE

Voluntary purchases of RE with allowance retirement



Voluntary renewable energy purchases lower the cap with off the top. When the cap is lowered for voluntary renewable energy purchases, overall emissions are reduced.



...and more voluntary renewable energy purchases lower the cap further. When the cap is lowered for voluntary renewable energy purchases, overall emissions are reduced even more.

