

# POLICY MATTERS

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## RGGI in New Hampshire: The First Two Years

*By Grant Bosse*

In 2008, New Hampshire joined a ten-state regional compact designed to reduce greenhouse gas emissions through a cap-and-trade program on electric generation facilities. This report examines how that program has been implemented in New Hampshire over the past two years, how much revenue has been generated from the sale of carbon allowances, and how New Hampshire officials have spent that money.

### BACKGROUND

The Regional Greenhouse Gas Initiative is an agreement among ten Northeastern and Mid-Atlantic states to limit carbon dioxide emissions through a mandatory cap-and-trade scheme applying to fossil-fueled power plants. It is administered through a non-profit corporation, RGGI Inc., which contracts with private companies to administer and monitor quarterly auctions. RGGI includes Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont.<sup>1</sup>



Each state is allocated a number of carbon allowances based on the historic CO<sub>2</sub> emissions of electric power plants generating more than 25 megawatts that are fueled by coal, oil, or natural gas. In New Hampshire, five power plants meet these requirements: PSNH Plants in Newington, Bow, and Portsmouth, and AES Plants in Londonderry and Newington. Beginning in March 2012, these two companies will have to produce allowances for every ton of CO<sub>2</sub> they produced from 2009 through 2011. Covered utilities may purchase these allowances at the quarterly auctions administered by RGGI Inc., purchase them on the secondary market, or offset a portion of their obligation through offsets, such as planting trees to absorb atmospheric CO<sub>2</sub>.

In each three-year Control Period, the allocation for each state's carbon allowances will drop by 2.5%, cutting carbon emissions from covered sources by 10% by 2018.

As part of the transition from the previous regulatory regime, the Clean Power Act, New Hampshire officials have set aside 2.5 million out of the state's 8.62 million

allowances in RGGI's first year. These allowances will be credited towards the utilities obligation at no cost. Should a covered entity fail to secure enough allowances to match its emissions, it would face a three-to-one reduction penalty in the next three-year control period. For instance, if PSNH released 1,000 tons more CO<sub>2</sub> than it purchased for 2009-2011, it would be forced to purchase 3,000 additional credits for 2012-2014.

RGGI has so far conducted ten auctions, selling off nearly 310 million allowances across all ten states for the current Control Period, and an additional 15 million for Control Period 2012-2014. This has generated \$777.5 million for the ten-state compact.<sup>ii</sup> Bidders submit sealed bids for the maximum amount they are willing to pay for a set number of allowances. RGGI sets a Clearing Price at which all available allowances would be purchased, and all bidders pay this price. In order to prevent a collapse in the primary or secondary markets, RGGI has instituted a Reserve Price of \$1.86 per allowance, below which no bids will be taken.

Once sold at auction, carbon allowances are traded on the secondary market through the Chicago Carbon Futures Exchange (CCFE)<sup>iii</sup>, and futures contracts for RGGI allowances are available on the New York Mercantile Exchange (NYMEX)<sup>iv</sup>.

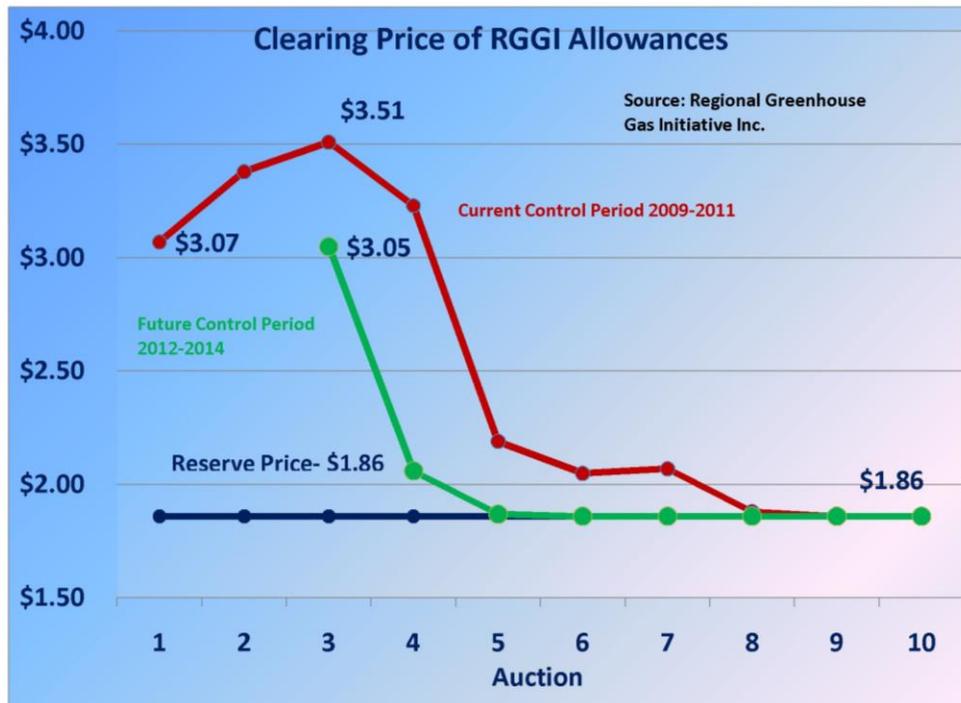
### CO<sub>2</sub> AUCTIONS

Six states, not including New Hampshire, participated in the first RGGI auction on September 25, 2008. Bidders scooped up 12.5 million allowances at a Clearing Price of \$3.07<sup>v</sup>. New Hampshire first entered into the second RGGI auction on December 17, 2008, offering just under 1.2 million allowances into the pool of 31.5 million. At a Clearing Price of \$3.38, this auction generated just over \$4 million for New Hampshire, and \$106 million overall.

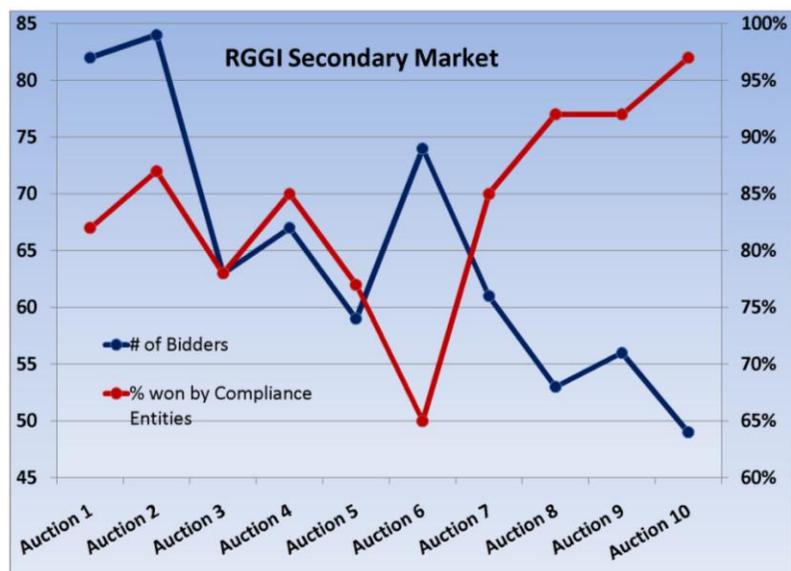


New Hampshire has participated in each of the next RGGI auctions, selling off just over 11 million allowances from its 2009-2011 allocation of 17,850,000. It has also sold nearly 600,000 in allowances from future Control Period 2012-2014. Total auction proceeds for New Hampshire total over \$28 million.

The carbon allowance Clearing Price peaked at \$3.51 during Auction 3, held on March 18, 2009. Since then it has fallen sharply, and reached the Reserve Price of \$1.86 during Auction 9 on September 10, 2010. Since that time, there have not been enough bidders willing to pay above the Reserve Price to sell all available allowances.



As the Clearing Price for carbon allowances has dropped to the Reserve Price, the secondary market for RGGI allowances has thinned. According to RGGI Inc., the number of bidders in each auction has dropped from over 80 in each of the first two auctions to under 60 in each of the last three. For the first seven auctions, over one-quarter of all RGGI allowances were won by bidders not covered under RGGI. These bidders were hoping to buy allowances cheap at auction, and sell them for profit to utilities needing to meet their obligations in March 2012. But interest from outside bidders has fallen dramatically in the last three auctions, as compliance entities have bought over 90% of the allowances sold. As of February 9, 2011, the price of a RGGI allowance has fallen to \$1.90, just over the Reserve Price.



Recipient <sup>vi</sup>	Amount
<b>Weatherization Set-Aside</b>	<b>\$1,200,000</b>
Business Finance Authority	\$2,000,000
DRED-LRCC	\$174,000
Home Builders and Remodelers Association of NH	\$178,169
Plymouth Area Renewable Energy Initiative	\$99,350
Retail Merchants Association of NH	\$1,372,028
Southern New Hampshire RC&D Area Council	\$87,000
TRC Companies	\$499,948
UNH- Carbon Challenge NE	\$813,402
UNH- Carbon Solutions NE	\$139,945
<b>Award Group 1 Total</b>	<b>\$5,363,842</b>
Clean Air Cool Planet	\$400,000
Crotched Mountain Rehabilitation	\$176,531
Fraser Papers	\$470,000
LighTec	\$316,000
Public Service Company	\$7,646,020
SAU 46- Merrimack Valley School District	\$83,685
Gorham Fire Department	\$26,000
<b>Award Group 2 Total</b>	<b>\$9,118,236</b>
Enfield Shaker Museum	\$51,354
NH Community Development Finance Authority	\$1,500,000
North Country RC&D Area Council	\$43,850
Propell Energy	\$49,885
Stonyfield Farm	\$148,927
Town of Hancock	\$8,500
Town of Jaffrey	\$16,250
<b>Award Group 3 Total</b>	<b>\$1,818,766</b>
City of Rochester	\$394,000
Dartmouth College	\$330,936
NH Institute of Art	\$146,060
Town of Fremont	\$8,000
Town of Temple	\$332,100
Town of Walpole	\$138,345
Town of Warner	\$11,150
<b>Award Group 4 Total</b>	<b>\$1,360,591</b>
Business Finance Authority	\$2,000,000
Retail Merchants Association	\$2,000,000
DRED- LRCC	\$400,000
TRC Energy Services	\$5,000,000
NH Community Loan Fund	\$2,000,000
NH Housing Finance Authority	\$2,000,000
<b>2010 Award Total</b>	<b>\$13,400,000</b>
<b>General Fund Transfer</b>	<b>\$3,100,000</b>
<b>Total Expenditures</b>	<b>\$35,361,435</b>

## **SPENDING RGGI REVENUES**

Proceeds from RGGI auctions are deposited into the Greenhouse Gas Emissions Reduction Fund (GHGERF), which is administered by the Public Utilities Commission (PUC). When the Legislature entered into RGGI in 2008, it set aside the first \$1.2 million in anticipated auction proceeds for the state's weatherization program.<sup>vii</sup>

Future revenues are awarded by the PUC for projects designed to lower future carbon emissions, lower energy demand, and improve energy efficiency. However, like any dedicated fund, the Legislature can always transfer money back into the state's General Fund.

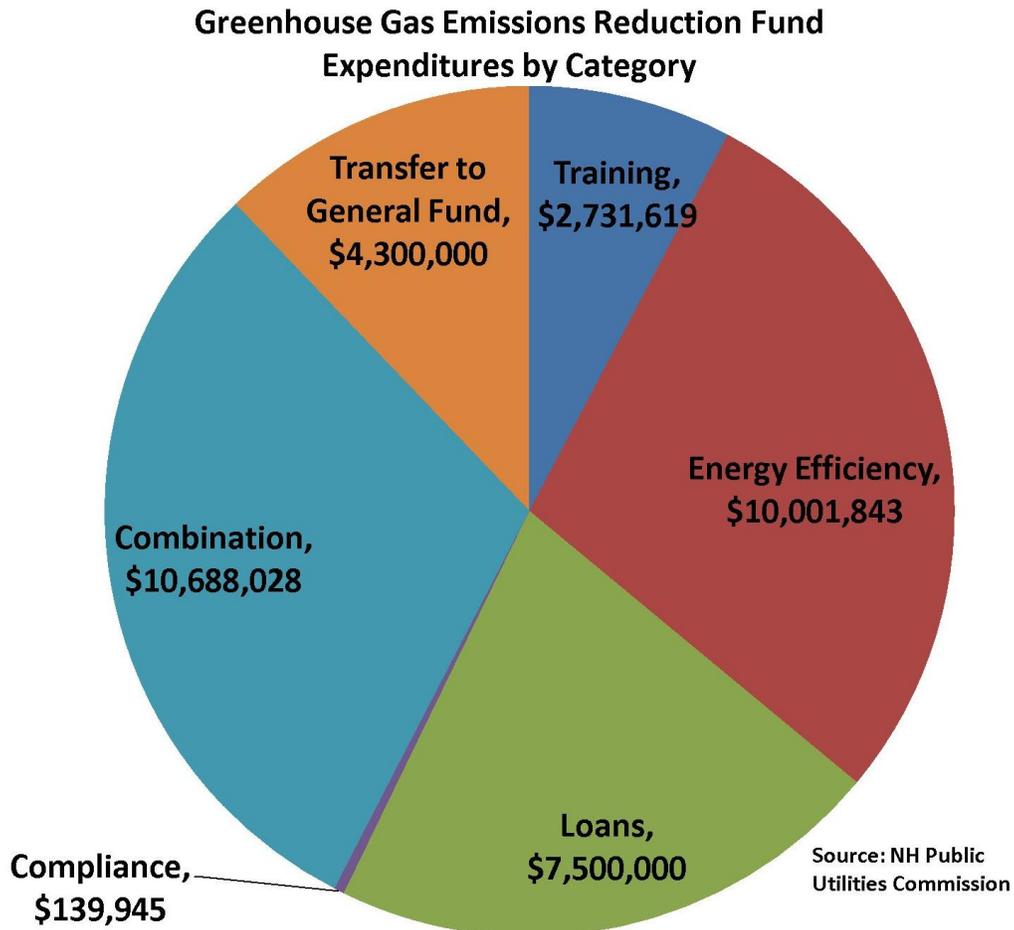
That's exactly what happened in June of 2010, when Governor John Lynch gained Legislative approval to transfer \$3.1 million from the GHGERF as part of a \$290 million package addressing the state's pending budget shortfall.

In 2009, the PUC made four rounds of awards to 30 recipients totaling \$17.66 million. \$7.65 million, the largest single grant by far, went to PSNH itself to pay for energy efficiency improvements.

Several more grants were given out to private sector non-profit groups to promote energy efficiency and conduct "energy audits" across New Hampshire, but did not directly fund any reductions in CO<sub>2</sub> emissions.

\$3.5 million was allocated to a pair of Revolving Loan Funds, administered by the Business Finance Authority and the NH Community Development Finance

Authority. These funds provide capital to private businesses looking to improve their energy efficiency. Such upgrades can pay for themselves through lower energy bills over several years. The revolving loans give small businesses the ability to cut future costs, enabling them to pay back the loans. The loan fund is then replenished to help another business, leveraging precious dollars to help more than one recipient.



The PUC also made direct grants to pay for energy efficiency improvements, such as \$83,000 for a new biomass heating plant for the Merrimack Valley School District, \$51,000 for a new ventilation system at the Enfield Shaker Museum, \$149,000 for Stonyfield Yogurt to upgrade four energy systems at its plant, and \$331,000 to Dartmouth College. Unlike the revolving loan fund, these direct grants are not repaid. These grants represent a subsidy from New Hampshire ratepayers to the recipient, who then benefits indefinitely with lower utility bills.

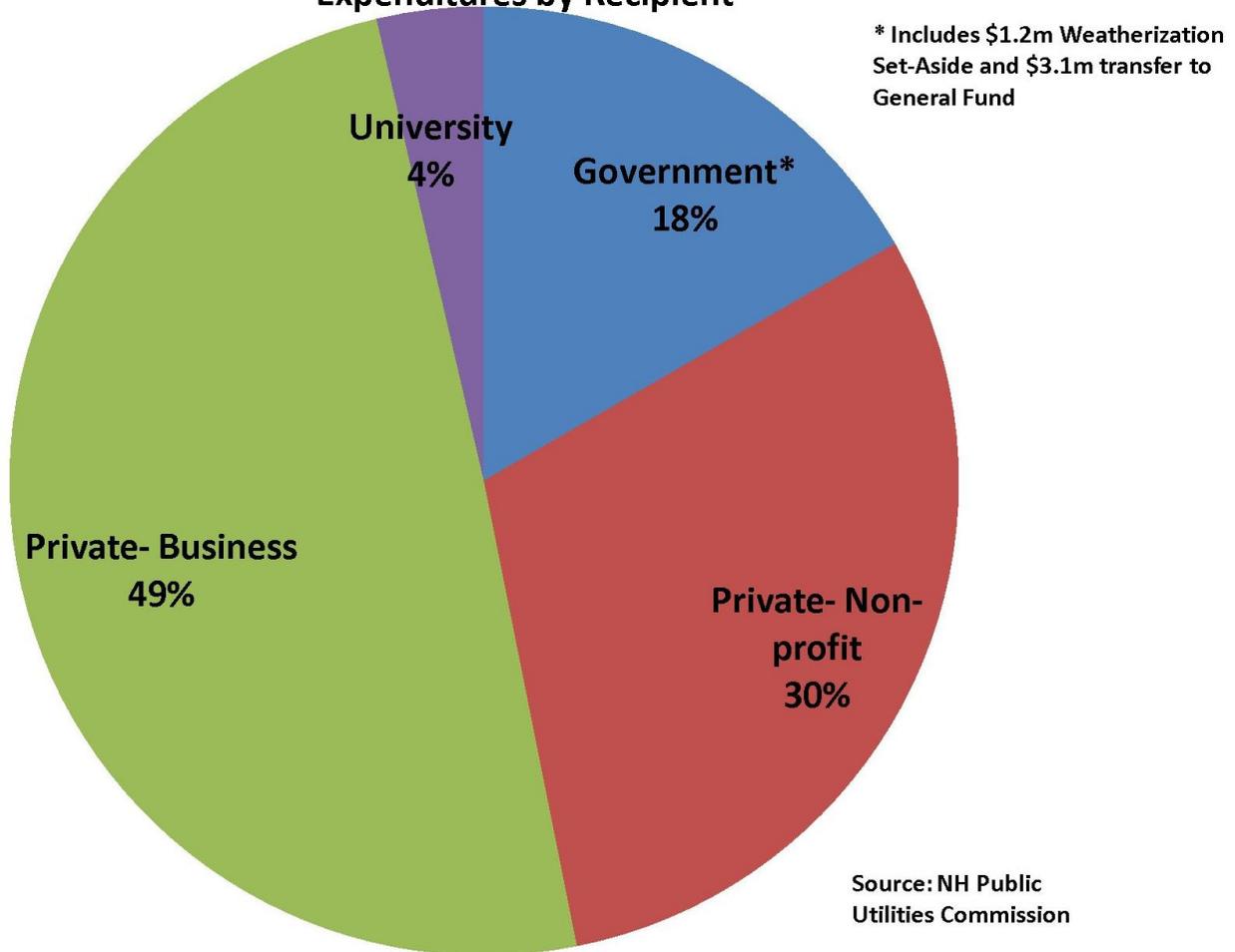
UNH Carbon Solutions New England also received \$140,000 to track the GHGERF for two years.

In 2010, the PUC concentrated its awards, handing out \$13.4 million to just six recipients. The Business Finance Authority and Retail Merchants Association were given \$2 million each to continue programs first funded in 2009. The Department of

Resources and Economic Development received an additional \$400,000 for its partnership with Lakes Region Community College.

New awards included \$5 million to TRC Energy Services to establish an energy efficiency program for large commercial and industrial facilities, and \$2 million each for the NH Community Loan Fund and NH Housing Finance Authority.

### Greenhouse Gas Emissions Reduction Fund Expenditures by Recipient



Including the \$1.2 million in weatherization funds set aside at the program's inception and the \$3.1 million transferred to the General Fund in June of 2010, nearly \$6.3 million or 18% of the total funds allocated from the GHGERF have gone to a branch of state or local government. \$10.7 million, or 30%, has gone to private sector non-profits groups. \$17.5 million, or just a shade under half of the fund, has gone to private sector business, both for training programs and direct energy efficiency improvements. \$1.3 million, representing 3%, has gone to universities, two grants to climate change groups at UNH and one to Dartmouth College to upgrade its energy systems.

## **PROJECTIONS**

New Hampshire has sold off just over 11 million of the nearly 18 million CO<sub>2</sub> allowances it was allocated for 2009 through 2011, generating just under \$27 million from the 2009-2011 Control Period. Additionally, it has also sold off nearly 600,000 allowances from the future 2012-2014 Control Period, accounting for \$1.23 million in revenue.<sup>viii</sup>

But the Legislature and Public Utilities Commission have already committed \$7.5 million more in grants from the Greenhouse Gas Emissions Reduction Fund than has been generated at auction.

Over the next year, New Hampshire must sell off up to 6,780,778 remaining allowances for the current Control Period. If the price of CO<sub>2</sub> allowances remains at the Reserve Price of \$1.86, we can expect revenues of \$12,612,247 from the sale of the state's remaining 2009-2011 allowances. This would leave just \$5.1 million for future awards, and only if all allowances can be sold by the end of the year.

The PUC could also use the proceeds of any future Control Period allowances included in the next four auctions. Demand for future allowances dropped quickly, and has remained at the reserve price since December 2009. By law, 1% of the state's allowances have been reserved for residential homeowners who install renewable electricity, and another 1% for utilities forced to meet peak energy demands, but if unclaimed, these allowances may be put back into the state's future auction pool. Putting these set-aside allowances into a future auction could augment RGGI revenues slightly.

However, the remaining auctions are not guaranteed to sell New Hampshire's remaining allowances, even at the Reserve Price. At Auction 9, only 75% of the available allowances were sold. At Auction 10, just 57% cleared at the Reserve Price. The next auction, scheduled for March 9, 2011 will see nearly 42 million allowances up for sale. Unless bidders come forward to purchase most or all of these allowances, New Hampshire and its partner states may not be able to count on finding willing buyers for their unsold allowances.

## **CONCLUSIONS**

The stated purpose of the Regional Greenhouse Gas Initiative is to reduce carbon dioxide emissions from fossil-fuel burning power plants in the ten-state region by 10% by 2018. But the program's structure makes it impossible to judge its effectiveness for at least another year. The five covered power plants in New Hampshire don't need to account for their carbon emissions until March of 2012. But even after the books are closed on the 2009-2011 Control Period, it will be difficult to determine whether any decrease in CO<sub>2</sub> emissions should be credited to the RGGI, or if it is just another symptom of a slow economy.

The deep and sustained recession hitting the nation, and in the ten states that make up RGGI, has lowered overall demand for electricity. Lower demand leads to fewer fossil fuels being burned, regardless of any government program.

RGGI provides both carrots and sticks to encourage lower fossil fuel usage. By putting a price on the privileging of release a ton of CO<sub>2</sub> through the smokestack, covered utilities have an incentive to find ways to reduce emissions. This can be done through carbon sequestration, more efficient power plants, cleaner fuels, or switching to less carbon-intensive sources of energy. The elegance of a cap-and-trade program is that allows the market to drive innovation towards lower emissions.

<b>RGGI Auction Revenues</b>	
<b>State</b>	<b>Proceeds to Date</b>
<b>Connecticut</b>	<b>\$44,900,580.31</b>
<b>Delaware</b>	<b>\$18,858,578.06</b>
<b>Maine</b>	<b>\$23,544,204.45</b>
<b>Maryland</b>	<b>\$147,530,362.71</b>
<b>Massachusetts</b>	<b>\$123,229,477.57</b>
<b>New Hampshire</b>	<b>\$28,215,274.35</b>
<b>New Jersey</b>	<b>\$90,913,275.27</b>
<b>New York</b>	<b>\$282,272,683.09</b>
<b>Rhode Island</b>	<b>\$12,340,208.64</b>
<b>Vermont</b>	<b>\$5,701,535.27</b>
<b>Total</b>	<b>\$777,506,179.72</b>

But RGGI veers far from this market-based approach in how it allocates cap-and-trade auction revenues. The collapse of the secondary market means that almost all RGGI costs will be borne by utilities, and passed along to ratepayers. In New Hampshire, the PUC has doled out nearly half of RGGI grants to private businesses who have no obligation to repay the money. A multi-billion dollar university like Dartmouth College and an international conglomerate like Stonyfield parent company Group Danone could surely afford to pay for their own energy efficiency upgrades, or at the very least pay back ratepayers out of their lower electric bills.

The Legislature might consider revoking the PUC’s grant-making authority, making such decisions accountable to an elected body. Or it could dedicate all auction proceeds to a revolving loan fund. Or it could simply direct those revenues to the General Fund, forcing would-be beneficiaries to compete with other state priorities.

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<sup>i</sup> New Hampshire Watchdog, “Getting to Know Reggie”, December 19, 2008, <http://newhampshire.watchdog.org/76/getting-to-know-reggie/>

<sup>ii</sup> Regional Greenhouse Gas Initiative, Auction Results, [http://www.rggi.org/market/co2\\_auctions/results](http://www.rggi.org/market/co2_auctions/results)

<sup>iii</sup> Chicago Carbon Futures Exchange, <http://www.ccfex.com/>

<sup>iv</sup> Carbon Finance Report, “NYMEX to launch RGGI Carbon futures contract”, <http://www.carbonfinancereport.com/nymex-to-launch-rggi-carbon-futures-contracts/>

<sup>v</sup> Ibid, RGGI.

<sup>vi</sup> NH Public Utilities Commission, Greenhouse Gas Emissions Reduction Fund, <http://www.puc.nh.gov/Sustainable%20Energy/GHGERF.htm>

<sup>vii</sup> New Hampshire Watchdog, “Latest RGGI Auction nets \$3 million for New Hampshire”, June 11, 2010, <http://www.puc.nh.gov/Sustainable%20Energy/GHGERF.htm>

<sup>viii</sup> Ibid, RGGI.