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# CREATING A U.S. CARBON MARKET

by Alex Hoover\*

President Obama's recent budget proposal is a strong indication that the current Administration will take the first real steps towards realizing a nationwide cap-and-trade system in the United States.<sup>1</sup> Examining existing cap-and-trade systems such as the European Union Emissions Trading Scheme ("EUETS"), the Regional Greenhouse Gas Initiative ("RGGI"), and the New South Wales Greenhouse Gas Abatement Scheme ("NSW Scheme") illustrates the value of two increasingly common features that the United States should consider: auctions and offset mechanisms. As this article shows, these mechanisms can address major concerns with cap-and-trade by mitigating price distortion and encouraging technological advances.

The EUETS consists of thirty member states<sup>2</sup> and targets carbon-fuel power plants and other industrial facilities.<sup>3</sup> The system has been widely criticized due its failure to prevent market price distortions in part because it uses an emission allocation distribution system which allows nations to directly distribute carbon allowances.<sup>4</sup> However, in 2013 the EUETS will enter Phase III (it is currently in Phase II)<sup>5</sup> which will include a shift from the current distribution system to an auction system.<sup>6</sup> It will also implement a single allowance allocation system that sets common emissions caps for all member states, rather than the current "national allocation plans."<sup>7</sup>

RGGI consists of ten northeastern U.S. states and targets carbon dioxide emissions from power plants.<sup>8</sup> RGGI requires a ten percent reduction in GHG emissions from power plants by 2018.<sup>9</sup> Individual states sell the majority of the carbon credits offered through quarterly auctions.<sup>10</sup> In addition to buying credits, installations may receive allowance offsets by undertaking projects that reduce or sequester GHG.<sup>11</sup>

The NSW Scheme sets an emissions baseline and distributes certificates for power generators that reduce GHG emissions.<sup>12</sup> Power generators earn a certificate for each ton of emissions reduction through low-emission electricity generation, activities that reduce electricity consumption, and carbon sequestration through forestry.<sup>13</sup> These generators may then sell their certificates to other generators.<sup>14</sup>


In designing a national cap-and-trade system, U.S. lawmakers should learn from these examples to avoid market distortion and encourage innovation. For example, an allowance auction could create revenue to fund targeted tax breaks to mitigate price distortion. The choice of allowance distribution is generally between auctions and direct distribution. In auctions, the government collects the price of each bid as revenue. Under a direct distribution system, the government gives companies carbon allowances, which they could potentially sell on the market for a profit. The EUETS illustrated the problems of a direct distribution system<sup>15</sup> where companies do not generally pass their

savings to the consumer.<sup>16</sup> Instead, they collect the difference between the free carbon allowances and the market price as profit.<sup>17</sup> The EUETS's Phase II leaves the value of the initial carbon allowances unavailable to correct potential price distortions.<sup>18</sup>

The use of auction revenue to fund targeted tax breaks addresses the criticism that auctions would burden consumers through increased carbon prices passed on by companies.<sup>19</sup> For instance, the European Commission will use the revenues from Phase III auctions to invest in renewable energies that companies may utilize to improve energy efficiency and address the impact of energy price increases to consumers.<sup>20</sup> Effective use of tax policy could significantly offset the costs of investing in new technology or paying higher energy prices.

A U.S. cap-and-trade system should also include an offset mechanism, like those in RGGI and the NSW Scheme, to encourage investment in efficient technologies. An offset mechanism allows a company to earn allowances by undertaking projects that reduce or sequester carbon emissions.<sup>21</sup> The offsets can act as subsidies when companies that earn offsets sell them on the market to recover some of the project costs.<sup>22</sup>

Critics argue that an offset mechanism could increase emissions if the government distributes allowances for projects that companies would have done even without the allowances.<sup>23</sup> RGGI's offset mechanism addresses this problem by disqualifying projects encouraged by other government action.<sup>24</sup> For instance, a company may not receive offset credits for projects that the law already requires or receive funding or assistance from other programs.<sup>25</sup> Under the NSW Scheme's Metered Baseline Method ("MBM"), the government determines baseline energy use for each facility based on its historical energy use.<sup>26</sup> To ensure that offset allowances truly reduce emissions, the MBM does not consider efficiency projects undertaken during the baseline period or projects anticipated while the facility was collecting offset allowances.<sup>27</sup>

Examining policies and challenges of existing systems provides valuable, real-world lessons for implementing a cap-and-trade program. As policymakers proceed with President Obama's ambitious charge, they must create an efficient system that promotes the country's best interests. As this article illustrates, including auctions and offset mechanisms to mitigate price distortions, encourage true reductions in GHG emissions, and support the development of efficient technology will be an important aspect of any national cap-and-trade program. 

**Endnotes:** Creating a U.S. Carbon Market  
*continued on page 73*

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<sup>1</sup> See Jackie Calmes, *Obama Plans Major Shifts in Spending*, N.Y. TIMES, Feb. 26, 2009, at A1; *see also* President Barack Obama, Remarks of President Barack Obama – As Prepared for Delivery Address to Joint Session of Congress (Feb. 24, 2009), [http://www.whitehouse.gov/the\\_press\\_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress/](http://www.whitehouse.gov/the_press_office/Remarks-of-President-Barack-Obama-Address-to-Joint-Session-of-Congress/) (“So I ask this Congress to send me legislation that places a market-based cap on carbon pollution and drives the production of more renewable energy in America.”) (last visited Feb. 28, 2009).

<sup>2</sup> The EUETS currently consists of twenty-seven EU member states plus Iceland, Liechtenstein, and Norway. EUROPEAN COMMISSION, EU ACTION AGAINST CLIMATE CHANGE: THE EU EMISSIONS TRADING SYSTEM 25 (Office of Official Publications of the European Communities 2008), *available at* [http://ec.europa.eu/environment/climat/pdf/brochures/ets\\_en.pdf](http://ec.europa.eu/environment/climat/pdf/brochures/ets_en.pdf) (last visited Feb. 28, 2009).

<sup>3</sup> See Kevin Doran & Elaine Ginnochio, *United States Climate Policy: Using Market-Based Strategies To Achieve Greenhouse Gas Emission Reductions*, 3 ENVTL. & ENERGY L. & POL’Y J. 31, 61 (2008); *see also* Council Directive 2003/87/EC, annex 1, 2003 O.J. (L 275) 32, 42, *available at* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:275:0032:0046:EN:PDF> (last visited Feb. 22, 2009).

<sup>4</sup> See Cameron Hepburn et al., *Auctioning of EU ETS Phase II Allowances: How and Why?*, 6 CLIMATE POL’Y. 137, 140 (2006). *See e.g.* J.P.M SIJM ET AL., ENERGY RESEARCH CENTER OF THE NETHERLANDS, THE IMPACT OF THE EU ETS ON ELECTRICITY PRICES (ENERGY RESEARCH CENTER OF THE NETHERLANDS 2008), *available at* <http://www.ecn.nl/docs/library/report/2008/e08007.pdf> (last visited Feb. 28, 2009).

<sup>5</sup> EUROPEAN COMMISSION, *supra* note 2, at 12.

<sup>6</sup> *Id.* at 17.

<sup>7</sup> *Id.* at 12.

<sup>8</sup> Regional Greenhouse Gas Initiative, Inc. [RGGI, Inc.], Participating States, <http://rggi.org/states> (last visited Feb. 22, 2009).

<sup>9</sup> RGGI, Inc., About RGGI, <http://rggi.org/about> (last visited Feb. 22, 2009).

<sup>10</sup> RGGI, Inc., CO<sub>2</sub> Auctions, <http://rggi.org/co2-auctions> (last visited Feb. 22, 2009).

<sup>11</sup> REGIONAL GREENHOUSE GAS INITIATIVE MODEL RULES § XX-10.1 (2008) [hereinafter MODEL RULES], *available at* <http://rggi.org/docs/Model%20Rule%20Revised%2012.31.08.pdf> (last visited Feb. 22, 2009). Offset projects include methane capture from landfills and carbon sequestration from power plants. *See id.* § XX-10.3.

<sup>12</sup> See NEW SOUTH WALES GOVERNMENT, INTRODUCTION TO THE GREENHOUSE GAS REDUCTION SCHEME 4 (2008), *available at* <http://www.greenhousegas.nsw.gov.au/documents/Intro-GGAS.pdf> (last visited Feb. 22, 2009).

<sup>13</sup> *Id.*

<sup>14</sup> *See, e.g., id.* at 8.

<sup>15</sup> Doran & Ginnochio, *supra* note 3, at 62. *See also* EUROPEAN COMMISSION, *supra* note 2, at 17.

<sup>16</sup> EUROPEAN COMMISSION, *supra* note 2, at 25.

<sup>17</sup> *Id.*

<sup>18</sup> See Cameron Hepburn et al., *Auctioning of EU ETS Phase II Allowances: How and Why?*, 6 CLIMATE POL’Y. 137, 140 (2006). *See e.g.* J.P.M SIJM ET AL., ENERGY RESEARCH CENTER OF THE NETHERLANDS, THE IMPACT OF THE EU ETS ON ELECTRICITY PRICES (ENERGY RESEARCH CENTER OF THE NETHERLANDS 2008), *available at* <http://www.ecn.nl/docs/library/report/2008/e08007.pdf> (last visited Feb. 28, 2009).

<sup>19</sup> *Northeast Carbon Auction Kicks Off* (WNPR- Connecticut Public Radio aired Sept. 25, 2008), available at <http://www.cpbm.org/program/episode/regional-greenhouse-gas-initiative-ready-auction-carbon-dioxide> (last visited Feb. 28, 2009).

<sup>20</sup> *Commission Proposal for a Directive of The European Parliament and of The Council Amending Directive 2003/87/EC*, at 9, COM (2008) 16 Final (Jan. 23, 2008), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0016:FIN:EN:PDF> (last visited Feb. 28, 2009).

<sup>21</sup> See REGIONAL GREENHOUSE GAS INITIATIVE, OVERVIEW OF RGGI CO<sub>2</sub> BUDGET TRADING PROGRAM 9 (2007), available at [http://rggi.org/docs/program\\_summary\\_10\\_07.pdf](http://rggi.org/docs/program_summary_10_07.pdf) (last visited Feb. 28, 2009).

<sup>22</sup> See FEDERAL MINISTRY FOR THE ENVIRONMENT, NATURE CONSERVATION AND NUCLEAR SAFETY, RENEWABLE ENERGY AND THE CLEAN DEVELOPMENT MECHANISM: POTENTIAL, BARRIERS AND WAYS FORWARD A GUIDE FOR POLICY-MAKERS 13 (Meike Söker & Ellen von Zitzewitz eds., 2007) (explaining that the CDM, an offset mechanism, encourages the use and development of renewable energy technology), available at [http://www.ren21.net/pdf/virtual\\_lib\\_local/CDM-EE-Netz.pdf](http://www.ren21.net/pdf/virtual_lib_local/CDM-EE-Netz.pdf) (last visited March 1, 2009).

<sup>23</sup> Mark C. Trexler et al., *A Statistically-Driven Approach to Offset-Based GHG Additionality Determinations: What Can We Learn?*, SUSTAINABLE DEV. L. & POL'Y, Winter 2006 at 30, 31, available at [http://www.wcl.american.edu/org/sustainabledevelopment/2006/sdlp\\_winter\\_2006.pdf](http://www.wcl.american.edu/org/sustainabledevelopment/2006/sdlp_winter_2006.pdf) (last visited Feb. 28, 2009) (explaining that the concept of additionality means that offsets would not reduce emissions because an offset allowance would allow a company to emit more GHG while not encouraging reductions beyond what the company would have done without the offset).

<sup>24</sup> THE CLIMATE TRUST, 2007 RFP: ADDITIONALITY & BASELINE GUIDANCE (2007), available at [http://www.climatetrust.org/solicitations\\_2007\\_Additionality.php](http://www.climatetrust.org/solicitations_2007_Additionality.php) (last visited Feb. 28, 2009).

<sup>25</sup> *Id.*

<sup>26</sup> Electricity Supply Act, as amended 2003, art. 10 (N.S.W.), available at <http://www.greenhousegas.nsw.gov.au/documents/Rule-DSA-Dec08-Gazette.pdf>.

<sup>27</sup> *Id.*