

**COMMENTS OF THE JAMESTOWN BOARD OF PUBLIC UTILITIES  
ON THE NYSERDA CONCEPT PAPER FOR OPERATING PLAN FOR  
INVESTMENTS IN NEW YORK UNDER THE CO<sub>2</sub> BUDGET TRADING  
PROGRAM AND THE CO<sub>2</sub> ALLOWANCE AUCTION  
(December 1, 2008)**

The Jamestown Board of Public Utilities (BPU or Jamestown BPU) appreciates this opportunity to provide comments on the New York State Energy Research and Development Authority (NYSERDA) *Concept Paper for Operating Plan for Investments in New York under the CO<sub>2</sub> Budget Trading Program and the CO<sub>2</sub> Allowance Auction Program* (Paper or Concept Paper).

The BPU commends NYSERDA on its effort to provide a structured and integrated approach to carbon reductions. In order to achieve significant carbon reductions, it will be important to achieve greenhouse gas (GHG) reductions across a broad range of industries, including power supply, transportation, electric end-use and agriculture/forestry/biofuels, and equally important to have a structured and consistent approach for evaluating carbon reductions across industries. The BPU also supports NYSERDA's goal to cluster development in a series of different industry sectors. Because of the uncertainties in the costs and effectiveness of carbon reduction measures at this time, it is important that demonstration projects be developed in a variety of areas and that the demonstration projects provide concrete feedback on the costs and benefits of GHG mitigation measures.

In response to NYSERDA's request for comment on certain aspects of the Concept Paper, the BPU offers the following suggestions:

- **The evaluation criteria should allow for consideration of carbon reduction potential beyond New York** since carbon is a global problem

and the most cost-effective solutions are the ones that demonstrate technologies which can be utilized nationally and globally;

- **Significantly more funding should go to long-term strategies, and substantial funding in the power supply and delivery sector should go to carbon capture and sequestration**, which is currently underfunded and has the potential to produce the most significant long term CO<sub>2</sub> reductions;
- **The criteria should include consideration of geographic distribution of benefits within New York**, i.e., NYSERDA should ensure that Upstate New York, which will make the most significant contribution to the RGGI revenues, receives adequate benefits from the program.

The BPU also supports NYSERDA's goal of ensuring a long term revenue stream for funded projects. Many of the investments discussed in the Concept Paper require significant funding and a long-term revenue stream. The BPU recommends a ten year or longer revenue stream, consistent with the Renewable Portfolio Standard (RPS).

### **BPU Background**

The BPU is the largest municipally-owned electric generating utility in New York and the only public power utility in New York with coal-fired generation. Located in Chautauqua County in western New York, the BPU is community-owned and has been providing electric service to the City of Jamestown and the surrounding area for more than one hundred years.

The power the BPU provides its customers has one of the lowest carbon emission rates in New York: over 80% of the BPU's power comes from carbon-free

hydroelectric energy. The BPU also self-generates part of its power. Jamestown owns and operates the Samuel Carlson Generating Station, which includes four small coal-fired boilers and a gas turbine.

The BPU is committed to replacing its aging coal plant in a way that will meet or exceed environmental requirements, striving for significant carbon reductions or carbon neutrality. The BPU in cooperation with Praxair, Inc., Dresser-Rand Group, Inc., Foster Wheeler, and the University at Buffalo School of Engineering and Applied Sciences, is proposing to construct an oxy-coal carbon capture and sequestration (CCS) demonstration project that will achieve 90% or higher carbon removal rates. Oxy-coal technology involves the combustion of coal in a mixture of oxygen and recirculated flue gas. Oxy-coal technology lowers the cost to capture carbon dioxide. Once captured, the CO<sub>2</sub> is compressed and transported by pipeline to an underground storage site.

### **Comments on the Concept Paper**

#### **The Evaluation Criteria Should Include National and Global Carbon Reduction Potential so Carbon Reductions from RGGI Revenues are Maximized**

The criteria, as listed in the Concept Paper, appear to allow for consideration of CO<sub>2</sub> reduction potential only in New York. While CO<sub>2</sub> reductions in New York are important, climate change is a global problem. New York carbon emissions are less than 1% of worldwide carbon emissions.<sup>1</sup> Investment in strategies that produce significant reductions nationally and internationally will have a more significant impact than focusing on reductions in New York. The evaluation criteria should be clarified to consider national and international impacts and to provide priority funding for

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<sup>1</sup> EIA, *International Energy Annual Report* (2005).

projects that could have significant impacts on national and international CO<sub>2</sub> emissions, particularly for projects with long-term impacts.

By way of example, emissions from coal and fossil-fuel fired plants are a significant source of carbon dioxide emissions nationally and internationally. Nationally, 50% of electricity is generated by coal and 80% is generated from fossil-fuels. Recent analysis from the Electric Power Research Institute (EPRI) as presented to NYSERDA concluded that on a national basis, the majority of carbon reductions will come from coal plants.

The worldwide impacts of coal plants on carbon emissions are even more significant. Projections indicate that coal emissions world-wide, particularly internationally and in developing countries, will increase significantly over time. Globally, the most significant increase in carbon emissions is likely to come from new coal plants, particularly in developing countries. The Intergovernmental Panel on Climate Change estimates that as much as three quarters of the projected increase in energy-related carbon dioxide emitted between now and 2030 will occur in developing economies. Coal-based carbon emissions from developing countries are estimated to triple from 4.2 billion metric tons in 1990 to 12.2 billion metric tons in 2030.<sup>2</sup> China's coal-related carbon dioxide emissions alone are projected to grow from **3.8 billion** tons in 2004 to **8.8 billion tons** in 2030.<sup>3</sup> Put another way, China is building two new 500 MW coal plants each week, a capacity comparable to the entire United Kingdom power grid each year. Each of these new plants emits three million tons of carbon dioxide.

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<sup>2</sup> The Future of Coal, MIT (2007) at 7, citing *International Energy Outlook 2006*, DOE, EIA.

<sup>3</sup> *Id.*

Developing technology to reduce coal plant emissions is critical to reducing global GHG levels. The BPU requests that the important potential national and international impacts of CO<sub>2</sub> and control strategies be considered in evaluating investments from the RGGI program. A demonstration carbon capture and sequestration plant in New York, for example, has the potential to reduce not only its own emissions, but also has the potential to significantly reduce international carbon emissions by providing a model for international energy development.

**Significantly More Funding Should Go to Long-Term Carbon Abatement Strategies Generally, and Substantial Funding in the Power Supply Sector Should Go to Carbon Capture and Sequestration**

The Concept Paper proposes to utilize “the majority of funds . . . to cost-effectively reduce CO<sub>2</sub> in the near term.” The Paper also states that “at least 25% [of the funds] will address areas that may require longer investment horizons.” CCS is included in the category of long-term strategies.<sup>4</sup> NYSERDA requested comment on whether the proposed portfolio balance of near-term and long-term investment strategies is reasonable.

More than 25% of funds should be invested in long-term strategies. Long-term strategies offer the most significant potential for CO<sub>2</sub> reductions. If New York were to successfully demonstrate a long-term strategy that is replicated elsewhere, the RGGI auction funds would have the most significant impact on GHG emission reductions.

Further, as discussed in more detail below, many short-term strategies are already funded

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<sup>4</sup> The BPU notes that the Concept Paper does not provide an explanation of the qualifying criteria for short-term or long range initiatives. While the Concept Paper listed specific measures as either short-term or long-term, the listing is conclusory and the Paper fails to provide criteria for determining how measures were put into one category or another. The BPU requests further explanation on how measures were classified. The BPU also requests NYSERDA to consider whether carbon capture is a short-term measure, whether carbon pipelines should be identified as a separate measure and whether sequestration is a long-term measure.

by New York and the Federal government, while long-term strategies are in need of additional funding.

The BPU is particularly concerned that funding in the power supply and delivery category appears to over-emphasize short term efforts and renewable technology, and is not well balanced to achieve the objectives of the Program. The short-term power supply strategies identified in the Concept Paper are almost entirely renewables. The Concept Paper identifies near term measures as “demonstration projects to diversify the portfolio of renewable resource options available for electric power production; and targeted incentives to increase market penetration and performance of direct renewable energy conversion systems, such as wind and low-impacts hydroelectric power plants.” The entire short term funding is targeted at renewables except for “innovative energy efficiency strategies to improve the overall efficiency of existing power plants.” The BPU is unclear what this latter category is, or whether there is anything in the category other than renewable investment.<sup>5</sup>

In the Concept Paper, renewables can qualify not only for short term projects but can also qualify for long-term funding related to power supply. Half of the categories in the long-term mitigation measures are related to renewables, including “research, development, and demonstration of promising, innovative technologies including tidal, solar, wave, and off-shore wind” and “advanced energy storage systems used to dampen the intermittent power characteristics of renewable resource generation.” Funding in a third category, the power grid, is intended “to facilitate greater penetration

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<sup>5</sup> The BPU is interested in better understanding what is included in this latter category and requests clarification from NYSERDA. Given the current status of EPA’s New Source Review Rules (NSR), which no longer allow for an exclusion from NSR for pollution control measures, it is unlikely that fossil-fuel plants generating carbon will be willing to undertake energy efficiency since energy efficiency could subject them to the NSR requirements.

of renewable resources and demand management technologies.” The only other identified long-term power supply option is CCS.

Renewables, however, already receive significant subsidies from New York State and the Federal government. Approximately three quarters of a billion dollars of utility and New York State funds is currently committed under the Renewable Portfolio Standard alone to subsidize renewable investments through 2013.<sup>6</sup> These investments have produced only part of the RPS-goals. The cost of the RPS has ranged as an annual average from \$15-22/MWh for units contracted to date. The costs of additional RPS investments are likely to be significantly higher than the more than three quarters of a billion dollars spent to date.<sup>7</sup> Further, substantial federal funding is already available for renewables. In fiscal year 2007 alone, the federal government provided \$4.9 billion in subsidies to renewable energy.<sup>8</sup>

Despite this, the majority of funding in the current RGGI power supply and delivery category appears to be targeted at renewables. Rather than further investing exclusively or predominantly in renewables, the objectives of the program will more likely be achieved by complimenting the current investment in renewables with funding for CCS, which has potential for significant state, national and global carbon reductions.<sup>9</sup>

The BPU wants to emphasize that its comments should not be interpreted as being unsupportive of renewables. The BPU believes that renewable technologies have an important role in reducing CO<sub>2</sub> emissions and is looking to add a renewable

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<sup>6</sup> NYSERDA, *RPS Annual Report (2007)*

<sup>7</sup> Additional State renewable subsidies are available through the systems benefit charges and programs targeted at specific technologies, including photovoltaics.

<sup>8</sup> EIA, [http://tonto.eia.doe.gov/energy\\_in\\_brief/images/charts](http://tonto.eia.doe.gov/energy_in_brief/images/charts).

<sup>9</sup> NYSERDA, in evaluating CCS, should consider the benefits of CCS for not only coal plants but also gas plants. With sufficiently high carbon reductions, CCS will be required for not only coal plants, but also gas plants.

technology, namely, biomass, to make its CCS project carbon neutral or negative. The BPU merely desires that the State diversify its RGGI power supply investments and that the State maximize carbon reductions for the amount of State money invested. The BPU questions spending 75% or more of RGGI funding in the power supply category to finance renewable projects that the State is already providing over three quarters of a billion dollars of funding for. Funding additional renewable projects is essentially funding projects that are not economic even with the existing New York State funding and approximately \$5 billion in federal funding.

The BPU encourages NYSERDA to diversify RGGI power supply investments beyond renewables and emphasize projects that produce the most cost-effective and significant carbon reductions for the State expenditures. Complimenting the current investment in renewables with funding for CCS, which has potential for significant state, national and global carbon reductions, would achieve this goal.

**The Evaluation Criteria Should Include Consideration of the Geographic Distribution of Benefits Within New York**

The BPU requests that NYSERDA consider the geographic impacts of its investment strategy within New York in allocating revenues. The criteria listed in the Concept Paper fail to identify geographic distribution of benefits as an evaluation criteria.

The majority of RGGI auction proceeds will be collected from the fossil-fuel plants in Upstate New York.<sup>10</sup> The NYSERDA investment criteria do not allow for consideration of the geographic distribution of benefits within New York, including whether Upstate areas would receive adequate benefits from these investments or whether the benefits would be commensurate with an area's investment in RGGI. Many

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<sup>10</sup> See, e.g., *Emissions & Generation Resource Integrated Database*, prepared for U.S. Environmental Protection Agency (September 2008).



of the criteria suggest that substantial investments could be made in Downstate. However unintentional, the RGGI auction revenues should not be utilized as another way to redistribute significant revenues from Upstate to Downstate. The BPU encourages NYSERDA to include geographic equity in its evaluation criteria; at minimum, NYSERDA should include consideration of the geographic distribution of benefits in its evaluation criteria.

The Jamestown Board of Public Utilities is pleased to have this opportunity to participate in NYSERDA's development of an Operating Plan for investments associated with the Regional Greenhouse Gas Initiative auction proceeds. The BPU commends NYSERDA on its effort to provide a structured and integrated approach to carbon reductions. The BPU encourages NYSERDA to modify its evaluation criteria to reflect the factors discussed above. The BPU looks forward to continuing to work with NYSERDA on this important plan and requests that NYSERDA consider adding a representative of Carbon Capture and Sequestration plants to the Advisory Group.

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