

Mr. Francis J. Murray, Jr., President and CEO  
New York State Energy Research and Development Authority  
17 Columbia Circle  
Albany, New York 12203-6399

March 20, 2009

Dear President Murray,

Carr Street Generating Station, LP, a subsidiary of Brookfield Renewable Power, is pleased to submit these comments on the New York State Energy Research and Development Authority (NYSERDA) *Operating Plan for Investments in New York under the CO2 Budget Trading Program and the CO2 Allowance Auction Program* issued for public review and comment on February 25, 2009. Brookfield's comments will center on two areas of the Operating Plan, Section 5: Electric Power Supply and Delivery and; Section 6: Sustainable Agriculture and Bioenergy.

Brookfield notes that in the plan, as well as the presentations made on March 6, 2009 in New York City, that NYSERDA's rule (507.4d) states that proceeds from the sale of allowances will be used to:

“...promote and implement programs for energy efficiency, renewable or non-carbon emitting technologies, and *innovative carbon emissions abatement technologies with significant carbon reduction potential.*” (Emphasis added)

However having reviewed the Operating Plan and the presentations made in New York City by NYSERDA staff, there appears to be an opportunity to improve the Plan in a way that would both help meet NYSERDA's rule that stresses the use of innovative carbon emissions abatement opportunities and promotes greater economic growth in the agricultural areas of New York State. Section 5 of the Operating Plan addresses opportunities that focus on both short term and longer term programs to reduce greenhouse gas emissions. The Plan speaks of the formation of a multidisciplinary working group, the Electric Power Supply and Delivery Task Force, comprised of various stakeholders including generation companies, to assist in developing a comprehensive and coordinated program to reduce greenhouse gasses from the electric power sector by promoting *advanced power generation systems and technologies*, among others, the goal of which is to ensure a significant level of system reliability, safety and security.



We believe that there is an opportunity at hand that could meet these goals almost immediately, specifically the use of bio-diesel in existing aero-derivative turbines. Not only could this technology backstop intermittent renewable technologies (such as wind and PV), but could actually displace higher polluting technologies (such as coal and oil) with a carbon neutral environmentally sound solution that preserves system reliability and integrity. Because these turbines are dispatchable by the NYISO, unlike wind and PV, they could serve to balance the intermittent nature of existing renewables, and ultimately enable an increased penetration of wind and PV into the New York grid.

An October 2008 New York System Operator study entitled *Integration of Wind into System Dispatch-A New York ISO Whitepaper*, found that there is a need to better manage and understand how the development of New York's wind resources interact with New York's bulk power electricity system. Also the NYISO study notes the experience of other jurisdictions with large wind resources that reliance on thermal units to meet increased "regulation requirements" could actually increase emissions of CO<sub>2</sub>, NO<sub>x</sub> and other pollutants. Brookfield and GE Power Systems have done preliminary testing using B-100 biodiesel, in its 100MW Carr Street Combined Cycle Station in East Syracuse and found that as compared to petroleum based diesel fuel, the use of renewable fuels provides substantially lower emissions of NO<sub>x</sub>, SO<sub>x</sub> and particulate matter in a carbon-neutral manner.

Brookfield is also the recipient of a competitive grant from NYSERDA to further test biofuels at the site and to build the necessary infrastructure on site to use the fuels. However without a cost-competitive source of biofuels or further incentives to allow biofuels to compete with other renewable resources, that source of advanced power generation systems and technologies envisioned by the Operating Plan will not come to fruition.

Ultimately, a competitive bio-diesel supply chain centered in upstate NY would make bio-fueled generators like Carr Street cost competitive with fossil fueled generators such as oil, natural gas, and potentially coal. Not only would displacement of these fossil fuels have an enormous impact on the state's ability to achieve ambitious RPS and RGGI goals, but it would also be of great benefit to the health of New York State citizens living nearby these power stations, especially in Environmental Justice areas. Once bio-fuels become sustainable and competitive with fossil fuel, we will quickly see the conversion of generating stations similar to Carr Street throughout the state.

The use of bio-diesel in thermal units that can follow load (i.e. dispatched by the NYISO) should be included as eligible elements for incentive funding in Section 5 of NYSERDA's Operating Plan.

Under Section 6 of the Operating Plan, one of the activities that NYSERDA “may” undertake involves *Technology and Process Development*. Although the Operating Plan states that it will await the findings and recommendations from the “Renewable Fuels Roadmap”, Brookfield believes that there are near term opportunities to provide incentives to promote the use of locally grown, non-food based crops to address the “chicken and egg” situation involving the use of biofuels as a carbon mitigation strategy. In other words, there is enormous in-state bio-diesel supply potential to match enormous bio-diesel demand potential, but help is needed from the State to jump-start the industry. We believe that there is enough information regarding the use of biofuels currently and the need to provide farmers in New York with “cash crops” that funding in this category be increased and accelerated.

There are upwards of 30 generation sites in New York State, including a large number in the downstate metropolitan area that could benefit by substituting bio-fuels for diesel (fossil) fuel, providing a ready market for agribusinesses in New York State. It is estimated that there are upwards of 2 million acres of farmable land in New York State that sit idle and that a significant portion of the acreage could be put to use in growing non-food crops, such as pennycress (*Thlaspi perfoliatum*), to meet an increased demand for biofuels. For example, if the Carr Street Station was to commit to burning biodiesel 100 % of the time (i.e. baseload) it could require over 600,000 acres of land producing over 65 gallons of oil per acre to meet this demand. This in turn would stimulate thousands of farmers in New York to put idle land to work growing non-food based crops, and create dozens of jobs to support the crushing, refining and delivery of the biofuel. Brookfield Renewable Power’s Carr Street Station would be able to retain the existing jobs at the facility as well as employ additional jobs to support the biofuels operation at Carr Street.

We look forward to working with NYSERDA to improve the Operating Plan in a manner that stimulates economic growth in New York State and allows for the use of existing generation assets within the state to meet the Operating Plan’s goals. Please contact Bob Ricketts (Director of Regulatory Affairs, Brookfield Renewable Power) at 518 578-2476 or [Robert.Ricketts@brookfieldpwer.com](mailto:Robert.Ricketts@brookfieldpwer.com) if you need additional information or if you have any questions about this opportunity. Thank you for consideration of these comments.

Sincerely,



Daniel Whyte  
Vice President  
Brookfield Renewable Power

cc: Antonio Zarrella – General Manager - Carr Street Generating Station, LP