

October 11, 2018

Grace Power, Energy Master Plan Committee Chair
New Jersey Board of Public Utilities
44 South Clinton Avenue, 3rd Floor, Suite 314
Post Office Box 350
Trenton, New Jersey 08625-0350

Madame Chairman and EMP Working Groups:

We are encouraged by the goals of the New Jersey Energy Master Plan Committee and the efforts of the state to mitigate the impacts of energy use. Decisive action is essential if we wish to guarantee a livable environment for future generations. By this letter I wish to introduce a technology that offers significant advantages in meeting the state's Clean and Renewable Power goals.

FACT: The methane produced by the major landfills in New Jersey contains enough renewable energy to provide the annual heating and air conditioning needs of an estimated 21,000 homes.

Each year more than thirty (30) landfills and numerous waste digesters throughout the state produce millions of tons of Green House Gasses (GHG's). The vast majority of this gas is managed as a waste and released back into the environment. Technology exists today to capture nearly 100% of the primary gas (methane) AND to also recover the secondary gasses that are so harmful to the environment (namely CO₂ and hydrocarbons) as usable products. The recovered methane, in the form of Renewable Natural Gas (RNG) can make a significant contribution to the Clean and Renewable Power goals by supplying needed fuel from biomass that does not release sequestered carbon to the environment.

If the state intends to reach its goal of 100 percent clean energy by 2050, the EMP should consider not just the methane from landfills and digesters across the state but also the adverse impact of the CO₂ emissions. These sources are either burning the methane gas as waste or using the methane for power generation; both of which produce excess CO₂, NO_x and SO_x that are released into the local environment.

We work in partnership with ARC Technology, which now holds worldwide patents that offer a practical and economic solution to eliminate these sources of air pollution. ARC manufactures high performance landfill/digester gas separation and recovery systems that operate at near-zero emissions. The system separates and purifies the valuable bio-methane so that it can be introduced into the local natural gas line grid or converted to CNG for transportation to displace petroleum fuels. CO₂ is also captured, which makes it possible to use the gas in applications that will again sequester the pollutant rather than release it directly to the atmosphere. The result of this process allows for the production of pipeline grade methane, liquefaction of the CO₂ and the hydrocarbons, and the sale of these products.

At this time, we are meeting with two major landfill operators in the state that have expressed an interest in better controlling their landfill emissions and recovering the gasses as salable products. We would be happy to meet with you or your staff to further explain how innovative technologies can be used to convert a state-wide air quality problem into a significant contribution to meeting the Clean and Renewable Power goals of the Energy Master Plan.

Please feel free to contact me at your convenience.

Respectfully,

A handwritten signature in cursive script that reads "George Bower".

C. George Bower, Ph.D.
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