GREEN WASTE ENERGY INC.

Kevin M. Dailey, CEO
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Re: Request for Comments – Proposed NJCEP Fiscal Year 2022 True-Up Budget, Budget Revisions and Program Changes

US Department of Energy Comments on Waste-to-Energy

Wet waste, solid waste, and gaseous waste streams are potential high-impact resources for the domestic production of biofuels, bioproduct precursors, heat, and electricity. Wastes represent a significant and underutilized set of feedstocks for renewable fuel and product generation.

DC Water's Blue Plains Advanced Wastewater Treatment Plant. Photo courtesy of DC Water.

These streams are available now without land-use change and in many cases their utilization helps to address the unique and local challenges of disposing of them. These resources are unlikely to diminish in volume in the near future, and as a result (in the short and medium term), they represent a potentially low-cost set of feedstocks that could help justify broader investment.

The U.S. Department of Energy (DOE) Bioenergy Technologies Office (BETO) is interested in the area of converting waste-to-energy—specifically the potential of the following waste streams:

- Commercial, institutional, and residential food wastes, particularly those currently disposed of in landfills
- Biosolids, organic-rich aqueous streams, and sludges from municipal wastewater-treatment processes
- Manure slurries from concentrated livestock operations
- Organic wastes from industrial operations, including but not limited to food and beverage manufacturing, biodiesel production, and integrated biorefineries, as well as other industries such as pulp and paper, forest products, and pharmaceuticals
- Biogas derived from any of the above feedstock streams, including but not limited to landfill gas.

Beyond its interest in these traditional organic waste streams, BETO is interested in promoting novel, non-photosynthetic carbon-cycling strategies that would support the valorization of inorganic carbon oxides, such as carbon dioxide and carbon monoxide, found in industrial gaseous waste emissions and biogas. In general, BETO's efforts aim to improve waste-stream management by closing waste loops and generating additional value streams from waste.

PRODUCTION POTENTIAL

Drawing on the workshops listed below, BETO published a report in January 2017, titled *Biofuels and Bioproducts from Wet and Gaseous Waste Streams: Challenges and Opportunities*. The report found that the United States has the potential to use 77 million dry tons of wet waste per year, which would generate about 1.079 quadrillion British thermal units (Btu) of energy. Gaseous feedstocks (which cannot be "dried" and therefore cannot be reported in dry tons) and other feedstocks assessed in the report could produce an additional 1,260 trillion Btu of energy, bringing the total to more than 2.3 quadrillion Btu annually. For perspective, in 2015 the United States' total primary energy consumption was about 97.7 quadrillion Btu.

https://www.energy.gov/eere/bioenergy/waste-energy

Please include funding in the Clean Energy Program to support new technologies to process waste into energy that have very clean emissions. Thank you.

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