

State-Of-The-Art Regional Anaerobic Digestion Facility One Step Closer to a Reality in Minnesota

Posted November 18, 2024 – News Release

Ramsey/Washington Recycling & Energy and Dem-Con HZI BioEnergy, LLC (DCHZI) have reached a final agreement on a feedstock supply contract for a proposed regional anaerobic digestion facility. This unique public-private partnership offers an environmentally sustainable solution for managing food scraps and organic wastes, while generating carbon-negative renewable energy and combating climate change. If approved by Scott County, this project will be the first of its kind in the country.

The proposed anaerobic digestion facility would be located in Louisville Township in Scott County and is designed to process up to 75,000 tons of organic waste each year. Food scraps collected from the twin cities metropolitan area, including through Ramsey and Washington counties' Food Scraps Pickup Program, would be processed at the facility.

Anaerobic digestion of food waste is relatively new in the United States, but it's been used in Europe for decades. It is a proven, effective solution to reduce greenhouse gas emissions while creating valuable renewable products from wasted food and organics.

At the facility, food scraps and other organic materials would be placed in a digestion unit, a large, airtight tank without oxygen where microbes break the organic materials down. The anaerobic digestion process creates two products: biogas and digestate. The biogas will go through a biogas upgrader to create renewable natural gas (RNG). The digestate would go through a gasification process to make biochar. The proposed facility would create two valuable recycled products:

- RNG This is a carbon negative renewable natural gas produced from food scraps, not fossil fuels. The facility would create RNG for utility companies to utilize in their systems as a renewable energy source for homes, businesses, industry and vehicles.
- Biochar Biochar is renewable product that can be used for remediation projects, filtration or as a soil amendment to retain moisture and nutrients. It also sequesters carbon from the environment, helping to reduce our overall carbon footprint.

The process of making biochar and the use of biochar in remediation have also shown promise in reducing per- and polyfluoroalkyl substances (PFAS) – the "forever chemical" – a class of toxic chemicals that are notoriously difficult to manage.

This proposed facility would be a vital part of the region's efforts to reduce waste and combat climate change. Food scraps make up more than 20% of residential trash in Ramsey and Washington counties, and this facility would help keep this material out of landfills and incinerators. The Minnesota Pollution Control Agency's Metropolitan Solid Waste Management Policy Plan requires curbside organics collection to be offered in all metro area cities with a population over 5,000 by 2030.

"This is a momentous step toward reimagining how we manage waste in the region. This project is integral in helping us reduce waste and fight climate change," said Ramsey County Commissioner Victoria Reinhardt, who serves as vice-chair on the Ramsey/Washington Recycling & Energy Board.

"Dem-Con, along with our project partners Kanadevia Inova, are excited to be one step closer to bringing an innovative and sustainable solution to manage food waste and organics in Minnesota, helping to meet our state's sustainability and recycling goals," said Bill Keegan, President of Dem-Con Companies.

The project is currently going through the local permitting phase with Scott County and Louisville Township. Once permitting is completed, the facility will take two years to construct, after which it would begin producing RNG and biochar.