

Kanadevia Inova's Innovative Project Sets a New Standard for Clean Energy in Minnesota USA

Zurich, Switzerland / Louisville Township, MN, USA – Kanadevia Inova, a global leader in waste-to-energy and renewable gas solutions, announced the official groundbreaking of the Louisville Township Renewable Gas Project, a pioneering large-scale anaerobic digestion facility located in Louisville Township, Minnesota, USA. With all key project details finalized, Kanadevia Inova's North America team and its partners are launching one of the most advanced organic waste-to-renewable gas projects in the region and establishing a new benchmark in circular waste management and renewable energy production. The site will begin receiving organics for processing in 2027.

"This cutting-edge facility will convert the organic fraction of municipal waste from surrounding counties into renewable energy through anaerobic digestion, biogas upgrading, and advanced gasification. In addition to biomethane, it will be the first facility of its kind to produce biochar, a carbon-sequestering byproduct that reduces the plant's carbon intensity and creates valuable applications for agriculture and industry."

--Heath Jones, Regional President North America, Kanadevia Inova.

Supporting Minnesota's Circular Economy and Climate Goals

The Louisville Township project was born due to policy goals set by the State of Minnesota and local municipalities aiming to reduce greenhouse gas (GHG) emissions, divert a portion of landfill waste, and produce renewable energy. Once operational, the DCHZI Bioenergy facility will process up to 75,000 tons of organic materials per year and convert them into valuable renewable resources. The plant is expected to produce approximately 200,000 MMBtu of renewable natural gas (RNG) annually, while also generating around 8,000 tons of biochar each year. By diverting organic waste from disposal, the project will reduce landfill volumes and create enough to power 2,700 U.S. homes year-round on average, and significantly lower greenhouse gas emissions, playing a key role in supporting Minnesota's circular economy.

Organic waste diverted from landfill includes both source-separated organics (SSO) collected in compostable bags and organic material recovered from the biodegradable fraction of municipal solid waste (MSW). National average household waste consists of 24% food waste. That is more than any other single material and when it ends up in a landfill and if untreated, it decomposes, and the decay emits methane and CO₂ into the atmosphere, two powerful greenhouse gases (GHG).

Strong Partnerships Driving Project Success

The project is being realized through a strong collaboration between public and private partners, each contributing essential expertise and capabilities. The primary feedstock supplier is Ramsey/Washington Recycling & Energy (R&E). R&E is a public joint powers organization serving Ramsey and Washington counties which operates the R&E Center, and is dedicated to advancing vibrant, waste-free communities.

The DCHZI Bioenergy facility is a partnership between Kanadevia Inova and Dem-Con Companies, LLC, combining Kanadevia Inova's advanced technology with Dem-Con's decades of experience as a third-generation, Minnesota-based waste and recycling company. The Minnesota Natural Gas Innovation Act allows for CenterPoint Energy, Inc., and Xcel Energy, Inc. to support the project through the offtake and utilization of the renewable natural gas produced, ensuring that the energy generated is effectively integrated into the regional energy system.

A First-of-Its-Kind Integrated Technology Approach

The DCHZI Bioenergy project represents a major milestone for Kanadevia Inova by uniquely combining high-solids anaerobic digestion (HSAD) with gasification technology. This integrated solution addresses one of the most complex challenges in MSW management: the treatment of impure organic waste streams.

While anaerobic digestion is an effective solution for organics, compostable bags and residual contaminants cannot be fully treated through digestion alone. Kanadevia Inova's approach resolves this challenge by following HSAD with gasification, enabling the complete conversion of residual materials into valuable byproducts.

The Process of HSAD

The concept is anaerobic digestion, a biological process in which bacteria break down organic material in a giant airtight tank without oxygen, producing the byproduct of biogas. Biogas is composed of about 60% methane and 40% carbon dioxide. The biogas will next enter a purification process that removes the CO₂ and other impurities and in turn produces "pipeline-quality natural gas". The produced digestate is converted into biochar through a gasification process.

Gasification & Biochar

Biochar is a 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, leaving nothing to waste. The gasification process of making biochar and the use of biochar in soil remediation have also shown promise in reducing perfluoroalkyl and polyfluoroalkyl substances (PFAS), a class of toxic chemicals that are notoriously difficult to manage and often referred to as “forever chemicals.”

Overall Benefits

This entire process offers multiple advantages, including considerable waste volume reduction, nutrient stabilization to mitigate pollution, effective odor control, and a marked reduction in pathogens present in organic waste materials.

“The Kanadevia Inova/Dem-Con facility underscores Kanadevia Inova’s long-standing commitment to deliver cleaner energy solutions and support customers on their decarbonization journeys. It also marks the development of Kanadevia Inova’s first renewable gas biochar facility, further strengthening its leadership in innovative waste-to-energy technologies. The groundbreaking of the Kanadevia Inova/Dem-Con facility marks a significant step toward a more sustainable and resilient waste and energy infrastructure in North America. Kanadevia Inova extends its sincere thanks to all partners, stakeholders, and employees whose dedication and collaboration have brought this project to life.” --Fabio Dinale, Executive Vice President, Head of Business Development, Kanadevia Inova

Funding for this project was provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR). This project was also made possible by a grant from the Minnesota Department of Commerce and through the Minnesota State Competitiveness Fund (SCF), Matching Funds Program.

Attachment: [1] picture



[Groundbreaking_Louisville_Township.jpg]: The groundbreaking ceremony in Louisville Township, MN, USA.

About Kanadevia Inova

Kanadevia Inova, formerly Hitachi Zosen Inova, is a global green-tech leader that pioneers innovative solutions for the energy transition, the circular economy and decarbonisation.

Headquartered in Zurich and employing over 3,500 people in 17 countries, Kanadevia Inova specialises in Waste to X (WtX) and Renewable Gas (RG), delivering turnkey plants and system solutions that transform waste and biogenic residues into valuable resources.

As part of Kanadevia Corporation, our mission is to bring long-term value to society and contribute to a future free of wasted waste. We take a holistic approach – from project development, engineering, procurement and construction (EPC) to service throughout a plant's life cycle. By

integrating advanced technology and continuous research and development, we ensure that each project is designed to achieve optimal performance.

With more than 2,000 reference projects completed globally, our team delivers innovative, customer-centric solutions to both established market leaders and partners in emerging markets.

Find out more about our company at www.kanadevia-inova.com.

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