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Biogas in Canada, USA and Australia

Canadian AD Guideline

The Canadian Biogas Association (CBA) has prepared the Canadian Anaerobic Digestion (AD) Guideline to assist stakeholders in siting, design, approval, and operations of AD facilities that process food and other organic waste materials in Canada. Biogas and digestate are by-products of the AD process that have demonstrated beneficial use in local communities. The AD Guideline describes recommended control measures for land use planning considerations, such as site selection considerations, and best management practices for the design and operation of food and organic waste AD facilities. The AD Guideline reflects current legislation and describes best management practices in Canada. The content of the AD Guideline was developed by technical and subject matter experts in the biogas industry through practical and informed experience.

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Suez inks biomethane plant deal with City of Montreal, Canada

French waste management company Suez has signed a deal with the City of Montreal to create an organic waste treatment center. The new plant will convert 60,000 tonnes of organic waste material into biomethane, providing enough renewable gas to power around 3,600 households.

The €115 million contract covers a two-year construction period followed by five years of operations. Currently, waste is taken to a facility around 50km northeast of Montreal; the new plant will reduce the distance travelled. The resulting biomethane produced at the plant will also be non-polluting and locally-produced, contributing to a cleaner environment. The facility is expected to be commissioned in 2022.

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Smithfield Foods completes ‘manure-to-energy’ project in US

US pork processor Smithfield Foods has completed a major ‘manure-to-energy’ project in Missouri. The firm has constructed a pipeline from one of its pig farms in the state to the natural gas mainline. It connects a low-pressure natural gas transmission with the city of Milan’s pipeline, allowing renewable natural gas produced at the farm to be directly injected into the line. The project is part of Smithfield Renewables’ nationwide expansion to implement manure-to-energy projects across 90% of its pig farms in North Carolina, Utah, Virginia and Missouri over the next 10 years. Smithfield hopes to reduce its carbon emissions by 25% by 2025. Manure-to-waste is just one of the ways Smithfield has ramped up its carbon reduction efforts in recent years. In early 2019, the firm installed infrastructure to capture methane emissions from its northern Missouri farms and convert them into pipeline-quality gas. This initiative, in partnership with Roeslin Alternative Energy, has the potential to produce 1.3 million dekatherms of renewable natural gas annually, equivalent to taking 130,000 petrol vehicles off the road.

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DTE Biomass opens RNG processing and injection sites in Wisconsin

DTE Biomass Energy has opened its first combined dairy renewable natural gas (RNG) processing and interstate injection facility. The renewable natural gas dairy processing and injection site, located in Newton, Wisconsin, processes raw biogas piped from nearby partner farms into RNG, and also receives RNG trucked in from other dairy farm-based DTE facilities. From here, pipeline-quality RNG is injected directly into the interstate pipeline. DTE began dairy RNG processing operations at Dairy Dreams LLC in spring 2019, a dairy farm located in Casco, Wisconsin. Meanwhile they are processing biogas produced at five farms into RNG at three DTE-owned and operated RNG facilities. Nearly 20,000 cows throughout Wisconsin are contributing to these projects. DTE is currently constructing four more RNG facilities in Wisconsin. The projects expect to begin processing RNG in early 2020. DTE Biomass will have seven DTE-owned and operated RNG facilities when these projects are completed.
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U.S. RNG market analysis

A market analysis of renewable natural gas (RNG) for transportation in the U.S. by Bates White Economic Consulting found that between 2015 and 2018 the production doubled to 300 million ethanol gallons equivalent (EGE), with a 30% annual growth rate, while the total natural gas demand for transportation was about 1,000 million EGE. There is substantial technical potential for increased RNG production, with an estimate of an additional 5,000 million EGE from landfills, wastewater, and other organic wastes. RNG use in transportation is growing because it is increasingly economic, especially for medium and heavy-duty vehicles like refuse trucks, parcel carriers, transit buses, and long-haul trucks. The broad availability of RNG in combination with the RFS RIN credit value enhances the economic benefit of converting trucks, busses and fleets from diesel to natural gas. RNG provides significantly enhanced emissions benefits, including an 85 percent reduction of CO2 emissions relative to diesel fuel, according to analysis by Argonne National Labs, considering RNG sourced from landfills only. Based on that estimate, the approximately 300 million EGE of current annual RNG production reduces CO2 emissions by at least 1.04 million metric tonnes. NGVs fueled with RNG out-perform electric vehicles in CO2 emissions reduction when accounting for emissions from electricity generation in the U.S.
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Australia's largest meat processor to use biogas at new plant

Australia's largest meat processor and exporter is switching to biogas for its plant expansion, according to a report by AU Manufacturing. Teys Australia revealed that its new Teys Naracoorte Beef Processing Facility had captured biogas from a covered anaerobic lagoon which is part of its waste treatment facilities. Until now, the facilities had leaked harmful gases into the environment. Now, it will be used to fuel its brand new plant. The covered anaerobic lagoon project will deliver several environmental benefits including reducing greenhouse gas emissions such as methane. It forms part of a $30 million upgrade to the Narcoote plant to boost beef output by 20%.
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