



# Enerkem Produces a New Clean, Renewable Alternative Solution to Diesel Fuel for the Transportation Sector

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**Enerkem Inc.**

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Enerkem Inc. (<http://www.enerkem.com>), a world-leading waste-to-biofuels and chemicals producer, announced today that it has successfully produced a clean, renewable bio-dimethyl ether (Bio-DME), a by-product of biomethanol, that could help address global climate change efficiently by replacing the use of diesel fuel in the transportation sector.

Using the company's proprietary thermochemical technology, its innovation group has tested and validated the production of fuel-grade bio-DME made from unrecoverable carbon-rich municipal solid waste. More than 1,000 hours of operations at its Innovation Centre in Westbury, Quebec have been completed.

While Enerkem is currently focused on the commercial production of biomethanol and advanced ethanol as sustainable biofuels replacing gasoline, this new development reaffirms the company's continued innovation leadership as well as having the potential to expand the company's biofuels business for the transportation sector.

"Diesel fuels are three times more polluting than a waste-derived DME-based fuel", said Dr. Stéphane Marie-Rose, Director of Enerkem's Innovation Centre in Westbury. "According to the Intergovernmental Panel on Climate Change (IPCC) Climate Change Synthesis report, more than seven gigatonnes of CO<sub>2</sub> equivalent are attributed to the transportation sector globally. By replacing diesel fuel with a clean, renewable bio-based fuel alternative, such as bio-DME, we could significantly and instantly reduce greenhouse gas emissions."

Bio-DME offers a 20% higher cetane rating on average than diesel or bio-diesel fuels (cetane rating is to diesel engine what octane rating is to gasoline engine). Moreover, DME combustion does not produce sulfur oxide (SO<sub>x</sub>) or fine particles, and it contributes to lower emissions from other harmful residual pollutants such as nitrogen oxides (NO<sub>x</sub>) that are mainly produced from the combustion of fossil-based fuels.

In addition to the various environmental and economic advantages, there are many possible applications for waste-derived bio-DME fuel. For example, it could be used to replace diesel fuels used in cars, trucks, trains or even ships, while providing better, cleaner combustion.

Enerkem intends to further develop and optimize this latest innovation while evaluating its potential commercial applications.

## **About Enerkem**

Enerkem produces advanced biofuels and renewable chemicals from waste. Its disruptive proprietary technology converts non-recyclable, non-compostable municipal solid waste into methanol, ethanol and other widely-used chemicals. Headquartered in Montreal (QC), Canada, Enerkem operates a full-scale commercial facility in Alberta as well as an innovation centre in Quebec. Enerkem's facilities are built as prefabricated systems based on the company's modular manufacturing infrastructure that can be deployed globally. Enerkem's technology is a prime example of how a true circular economy can be achieved by diversifying the energy mix and by making everyday products greener while offering a smart, sustainable alternative to landfilling and incineration.