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## Newsroom

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2023.04.13




# LG Chem to jointly develop bio-propylene with US-based company Gevo



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## LG Chem to jointly develop bio-propylene with US-based company Gevo

■ **LG Chem to sign a Joint Development Agreement (JDA) with Gevo, Inc., a North American renewable fuel company**

 **LG Chem** (main/index)    
sugarcane

Develops raw materials for bioplastic with bio-ethanol produced from corn and  
 Targeting 90% or greater of carbon reduction effect compared to existing  
products when  
bio-based raw materials are used

## ■ Noh Kug-Lae, President of Petrochemicals Business

“LG Chem will continue to expand sustainable and eco-friendly future businesses  
by  
reinforcing business portfolio centered on bio-based raw materials.”

LG Chem will jointly develop the technology that creates 100% bio-based plastic from renewable sources of carbohydrates such as corn, with Gevo, a North American eco-friendly renewable fuel company.

Through the joint development agreement (JDA), the companies expect to produce bio-propylene with bio-ethanol produced from carbohydrates including corn and sugarcane.

Under the terms of the agreement, Gevo will provide LG Chem with the source technology, ETO (Ethanol to Olefins), required for production of propylene from ethanol, and together with Gevo, LG Chem will verify and advance the technology through technical scale-up, pilot research, and commercialization.

Except for the commercialization of a technology that produces bio-ethylene with bio-ethanol, there hasn't been a commercialized case where bio-propylene is delivered with ETO technology.

The companies plan to lead the emerging bioplastic market by successfully promoting technology development in a short time.

According to an industry source, bio-based plastic production in 2022 marked 4.5 million tons, with an expected compound annual growth rate of 14% up until 2027. Bio-propylene can be used as an eco-friendly raw material for various plastic products, and is expected to play a pivotal role in the rapid growth of the bioplastic market.

Once bio-propylene is developed, products based on fossil fuels, such as automobile interiors and exteriors,

flooring, and diapers, can be entirely replaced and produced with bio-based raw materials. Furthermore, compared to the existing products, up to 90% or greater carbon reductions are expected using Gevo's technology.

Dr. Paul D. Bloom, Chief Carbon and Innovation Officer of Gevo, mentioned "Our partnership with LG Chem is a great example of how we intend to accelerate development and commercialization of our innovative ETO technology to enable renewable chemicals with our world class partner while Gevo plans to deploy the technology to lower the cost and carbon intensity for sustainable aviation fuel (SAF) and other drop-in fuels like renewable diesel."

Noh Kug-Lae, President of LG Chem's Petrochemicals Business, stressed that "This JDA with Gevo helps LG Chem to expand sustainable and eco-friendly future businesses by reinforcing our business portfolio centered on bio-based raw materials."

On top of its bio-based raw materials businesses, LG Chem has been accelerating new businesses to strengthen its eco-friendly business portfolio, including the establishment of a joint venture for a biomass power plant as well as the construction of a hydrogen plant for clean fuel production and pyrolysis oil plant that uses recycled raw materials.

Gevo's mission is to transform renewable energy and carbon into energy-dense liquid hydrocarbons that can be used for drop-in transportation fuels such as gasoline, jet fuel and diesel fuel. These when burned have potential to yield net-zero greenhouse gas emissions when measured across the full life cycle of the products.

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