

ExxonMobil methanol to jet technology to provide new route for sustainable aviation fuel production

Houston (June 20, 2022) – ExxonMobil today announced a unique process technology to enable the manufacture of sustainable aviation fuel (SAF) from renewable methanol.

- ExxonMobil is focused on growing its lower-emission fuels business by leveraging technology and infrastructure.
- ExxonMobil is engineering proprietary methanol to jet technology that will produce SAF when renewable methanol is used as feedstock.
- This expands upon ExxonMobil's suite of technology solutions that are engineered to manufacture SAF from other biofeeds.

"SAF produced from renewable methanol can play an important role in helping the aviation industry achieve the transition to a net-zero future. Reaching that goal by 2050 will require a multi-faceted approach, including advancements in aircraft-related technology, changes to infrastructure and operations, and a dramatic increase in SAF supply. Our process technology can be an important step in this direction," said Russ Green, ExxonMobil's lower-emission fuels venture executive.

Proprietary Methanol to Jet Technology

ExxonMobil has a long history of developing advantaged proprietary process technologies and catalysts to make energy products that society needs. ExxonMobil is leveraging its core capabilities to develop a solution that converts methanol to SAF.

Methanol derived from the gasification of biomass and waste, as well as from lower-carbon hydrogen and captured carbon dioxide (CO₂), can be converted into SAF using ExxonMobil's methanol to jet proprietary process technology and catalysts. Preliminary estimates by ExxonMobil suggest that this solution has a higher yield of jet fuel than other options. The ExxonMobil solution also provides the flexibility to use a mix of alcohols as feedstock and produce renewable diesel and lower-carbon chemical feedstocks.

"Methanol to jet technology is scalable and suitable for the conversion of methanol produced from today's world-scale plants. The work necessary to qualify the resulting renewable jet fuel pathway has already started," said James Ritchie, president of ExxonMobil Catalysts and Licensing LLC.



Technology to Convert Other Biofeeds to SAF

Additionally, ExxonMobil has process technology and catalysts that are available to customers today which convert other renewable biofeeds, such as used cooking oils, animal fats, and vegetable oil, into renewable jet fuel. Our analysis shows that our BIDW™ isomerization catalyst provides a jet fuel yield advantage versus alternatives currently available.

Decarbonization and Hydrogen Solutions

ExxonMobil is evaluating opportunities to deploy these process technology solutions within a portfolio of options to help the aviation industry to decarbonize.

"ExxonMobil is advancing integrated solutions to extend our Carbon Capture & Storage (CCS) and Hydrogen capabilities to support the decarbonization objectives of our biofuels customers and partners," said Siva Ariyapadi, bioenergy global business manager.

About ExxonMobil

ExxonMobil, one of the largest publicly traded international energy and petrochemical companies, creates solutions that improve quality of life and meet society's evolving needs.

The corporation's primary businesses - Upstream, Product Solutions and Low Carbon Solutions - provide products that enable modern life, including energy, chemicals, lubricants, and lower-emissions technologies. ExxonMobil holds an industry-leading portfolio of resources, and is one of the largest integrated fuels, lubricants and chemical companies in the world. To learn more, visit exxonmobil.com and the Energy Factor.

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