ExxonMobil Licenses Fluid Bed Methanol-to-Gasoline Technology to Aramco for synthetic fuel demonstration plant in NEOM, Saudi Arabia

Houston (October 24, 2023) – ExxonMobil Catalysts and Licensing LLC (EMCL) has licensed its advanced fluid bed Methanol-to-Gasoline (MTG) technology to Aramco for a demonstration scale unit to be located in NEOM’s Hydrogen Innovation and Development Center (HIDC).

- Aramco plans to use the ExxonMobil technology to convert renewable methanol into renewable synthetic gasoline.
- Renewable synthetic gasoline has the potential to reduce transportation greenhouse gas emissions.
- ExxonMobil’s fluid bed MTG design offers advantages related to capital expenditures, operating costs, operational reliability, and product quality versus a fixed bed process.

“Reducing greenhouse gas emissions across the transportation sector is an essential component of the global energy transition and requires a portfolio of solutions. ExxonMobil’s fluid bed MTG technology can play an important role in helping deliver in this area,” said Tricia L. DeLaney, President of EMCL.

Commissioning of the licensed MTG unit is expected in 2025. The unit is planned to utilize methanol feedstock derived from green hydrogen and carbon dioxide (CO₂) to produce a synthetic, high-octane, drop-in blend stock for potential use on/off road and in racing applications.

ExxonMobil scientists developed the methanol-to-gasoline chemistry in the 1970s. After years of studies and advancements, ExxonMobil analysis suggests that the fluid bed MTG process is advantaged in terms of capital expenditures, operating cost, operational reliability, and consistent product quality, when compared to a fixed bed process.

“We are excited that Aramco has selected ExxonMobil’s MTG technology for this important project which is another step towards a lower carbon emissions future,” said DeLaney.

“Aramco is exploring the production of low-carbon synthetic fuels that have CO2 reduction potential,” said Ali A. Al-Meshari, Aramco’s Senior Vice
President of Technology Oversight & Coordination. “By leveraging innovative technologies, like the fluidized-bed MTG, we aspire to develop drop-in synthetic fuels that can potentially be rolled-out seamlessly into existing vehicles.”

About ExxonMobil Catalysts and Licensing LLC
ExxonMobil works with refiners and petrochemical manufacturers to increase production capacity, reduce costs, improve margins and operate safe, reliable and efficient facilities. In its commitment to help customers implement best practices and achieve better results, EMCL offers cutting-edge proprietary catalysts and advantaged process technologies for refining, gas and chemicals applications.

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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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Contact: Media Line (972) 940-6007