CONTACTS: Esso Netherlands Media Relations +31 765291355
Fuel Cell Energy +1 2035465844

ExxonMobil to Build CCS Pilot Plant with FuelCell Energy Using Carbonate Fuel Cell Technology

- First time for carbonate fuel cell technology to be piloted for carbon capture in an industrial environment
- Captured CO_2 will be transported and stored via the Porthos project for permanent storage under the North Sea
- If successful, the technology would be commercialized to reduce emissions at ExxonMobil locations and other industrial sites to help customers reduce their emissions

ROTTERDAM, Netherlands and DANBURY, Conn., Dec. 18, 2023 – ExxonMobil's affiliate Esso Nederland BV plans to build a pilot plant at its Rotterdam Manufacturing Complex to test a breakthrough technology that could significantly reduce CO_2 emissions from key industries. The pilot plant aims to obtain data on performance and operability of the carbonate fuel cell (CFC) technology, jointly developed with FuelCell Energy. Additionally, the pilot aims to address potential technical issues that may occur in a commercial environment and better understand the costs of installing and operating a CFC plant for carbon capture.

Esso's Rotterdam integrated manufacturing site will be the first place in the world to pilot this technology. Pending a successful demonstration, ExxonMobil could deploy this technology at its manufacturing sites around the world.

Carbonate fuel cells have a unique ability to capture CO_2 emissions from industrial sources before they are released into the atmosphere, while also making valuable co-products. This feature increases the overall efficiency of the capture process and provides additional value streams that reduce the cost of carbon capture and storage.

CFC technology is also modular, potentially enabling carbon capture across a wide range of deployment scales. When the CFC technology is technically ready for broadscale implementation, it could potentially offer economical decarbonization solutions for customers from a wide range of industries and serve the broader social goal of working towards a net-zero future.

"The unique advantage of this technology is that it not only captures CO_2 but also produces low carbon power, heat, and hydrogen as co-products," said Geoff Richardson, SVP of Commercial and Business Development for ExxonMobil Low Carbon Solutions. "We are excited for the opportunity to pilot this innovation at our own Rotterdam facility."

"FuelCell Energy and ExxonMobil believe that capturing carbon at the source is an efficient way to decarbonize heavy industry. This technology can capture carbon and produce electricity simultaneously, making it a game-changer in the industry," said FuelCell Energy President and Chief Executive Officer Jason Few.

The pilot project is co-funded by the European Union under the Emissions Trading System Innovation Fund and by the Netherlands Enterprise Agency by means of a Demonstration Energy and Climate Innovation (DEI+) grant.

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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. ExxonMobil also owns and operates the largest CO2 pipeline network in the United States. In 2021, ExxonMobil announced Scope 1 and 2 greenhouse gas emission-reduction plans for 2030 for operated assets, compared to 2016 levels. The plans are to achieve a 20-30% reduction in corporate-wide greenhouse gas intensity; a 40-50% reduction in greenhouse gas intensity of upstream operations; a 70-80% reduction in corporate-wide methane intensity; and a 60-70% reduction in corporate-wide flaring intensity.

With advancements in technology and the support of clear and consistent government policies, ExxonMobil aims to achieve net-zero Scope 1 and 2 greenhouse gas emissions from its operated assets by 2050. To learn more, visit exxonmobil.com and ExxonMobil's Advancing Climate Solutions.

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The Rotterdam Manufacturing Complex is an integrated refining and petrochemical site. The refinery is one of the most energy-efficient refineries in Europe. It supplies the market with low-sulfur petroleum products, high quality basestocks for lubricants and feedstock for the chemical industry. The Rotterdam Manufacturing Complex is also integrated with an ultra-modern hydrogen plant of Air Products, located at the same site. The integration results in optimal energy efficiency and reduction of CO2 emissions.

In addition, ExxonMobil also has a lubricants plant in Pernis. The fuels and lubricants are sold under the Esso and Mobil brands.

About FuelCell Energy

FuelCell Energy, Inc. (Nasdaq: FCEL): FuelCell Energy is innovating to enable a world powered by clean energy through the decarbonization of power and production of hydrogen. The Company's technology is the only one on the planet capable of both capturing carbon from an external source while producing power, and of producing hydrogen, power, and water simultaneously. Global leaders such as ExxonMobil and Toyota count on FuelCell Energy as a trusted partner to help them achieve their clean energy goals.

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