Collaboration between Porsche and ExxonMobil on Renewable Road Fuel

Background

- ExxonMobil and Porsche are testing advanced biofuels and eFuels to find pathways toward potential future consumer adoption
- The two companies are teaming up to use renewable, low-carbon fuels at a major international motorsports event – the Porsche Mobil 1 Supercup
- A key focus of the collaboration is on developing and testing an eFuel that could achieve up to 85% greenhouse gas emissions reduction when used in existing and future vehicles.[1]
- In support of this collaboration, ExxonMobil will participate in a pilot project in southern Chile by providing the technology to convert renewable methanol to gasoline

Project Overview

- The project is called Highly Innovative Fuels (HIF) and is owned by Chilean company AME
- With the support of other international players including Siemens, Porsche, ExxonMobil, and Global Thermostat, AME's HIF project will
    - Generate renewable electricity from wind power. The location has one of the best wind profiles globally, enabling nearly continuous operations, and reducing costs
    - Split water by electrolysis to produce renewable hydrogen
    - Combine renewable hydrogen with carbon dioxide from direct air capture to produce renewable methanol
- ExxonMobil technology will convert the methanol to gasoline (MTG) through ExxonMobil's proprietary chemical processes
- As the fuel's primary user, Porsche is planning in the first phase to use the eFuels from Chile in beacon projects, after further blending. These include using eFuels in Porsche's motorsport fleet

[1] The GHG emissions reduction stated here relates to the comparison of the calculated carbon footprint of product (CFP) for the renewable components in the PMSC race fuel versus a 94 grams CO2e/MJ of EU Renewable Energy Directive II baseline comparator. Emissions reduction of up to 85% from renewable components vs. conventional are based on carbon footprint of product calculations conducted under ISO 14067 methodology, effectively referenced as a well-to-wheels boundary, taking into account the feedstock, production, transportation, and combustion related emissions to manufacture the blend of renewable components mentioned here. A functional unit of 1 MJ of fuels was used for the comparison.