Masdar, TotalEnergies, Siemens Energy and Marubeni to certify a novel pathway to make Sustainable Aviation Fuel (SAF) from methanol

Abu Dhabi, United Arab Emirates - January 25, 2023: The consortium of Masdar, TotalEnergies, Siemens Energy and Marubeni announced today that the Masdar-led initiative focused on green hydrogen to produce sustainable aviation fuel (SAF) is actively working with licensors to certify a new production pathway for sustainable aviation fuel (SAF) from methanol. This novel pathway will provide one more option to address the global need to produce and make SAF available globally and help the aviation industry decarbonize.

The consortium has been collaborating with the Abu Dhabi Department of Energy, Etihad Airways, Lufthansa Group, and Khalifa University of Science and Technology, on a demonstration initiative for e-SAF. Since January 2021, the partners in the initiative have completed a range of evaluations on technology suppliers, feasibility studies and conceptual designs, while working closely with regulators on compliance issues. The consortium has now zoned in on the methanol to jet (MTJ) pathway as its chosen technology route.

The Alcohol to Jet Synthetic Paraffinic Kerosene pathway (ATJ-SPK) has been certified in 2016 as meeting international standards for jet fuel. This pathway covers several alcohols like ethanol and iso-butanol. The objective of the consortium is to widen the range of alcohols covered in this pathway by getting methanol, a key building block in the chemical industry, included in its remit. Although the individual components of the MTJ pathway are for the most part mature technologies, they have not yet been integrated as the purposes of making SAF and this route is not yet certified. The consortium will now work together with licensors of the MTJ technology, to get this novel pathway certified at the earliest.

Sustainable Aviation Fuel (SAF): Sustainable aviation fuel is an immediately available solution for significantly reducing the CO2 emissions of air transportation. It can be used as a drop-in fuel without modifying existing storage and refueling infrastructure, aircraft or engines. Gradual incorporation worldwide should help significantly lower the CO2 emissions of air transportation since, on average, biojet fuel produces 80% fewer CO2 emissions over its lifecycle when produced from waste and residue.

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About Masdar
Abu Dhabi Future Energy Company (Masdar) is the UAE’s clean energy champion and one of the largest companies of its kind in the world, advancing the development and deployment of renewable energy and green hydrogen technologies to address global sustainability challenges. Established in 2006, Masdar is today active in over 40 countries, helping them to achieve their clean energy objectives and advance sustainable development. Masdar is jointly owned by Abu Dhabi National Oil Company (ADNOC), Mubadala Investment Company (Mubadala), and Abu Dhabi National Energy Company (TAQA), and under this ownership the company is targeting a renewable energy portfolio capacity of at least 100 gigawatts (GW) by 2030 and an annual green hydrogen production capacity of up to 1 million tonnes by the same year.

About Siemens Energy
Siemens Energy is one of the world’s leading energy technology companies. The company works with its customers and partners on energy systems for the future, thus supporting the transition to a more sustainable world. With its portfolio of products, solutions and services, Siemens Energy covers almost the entire energy value chain – from power generation and transmission to storage. The portfolio includes conventional and renewable energy technology, such as gas and steam turbines, hybrid power plants operated with hydrogen, and power generators and transformers. More than 50 percent of the portfolio has already been decarbonized. A majority stake in the listed company Siemens Gamesa Renewable Energy (SGRE) makes Siemens Energy a global market leader for renewable energies. An estimated one-sixth of the electricity generated worldwide is based on technologies from Siemens Energy. Siemens Energy employs around 92,000 people worldwide in more than 90 countries and generated revenue of €29 billion in fiscal year 2022.


About Marubeni
Marubeni Corporation and its consolidated subsidiaries use their broad business networks, both within Japan and overseas, to conduct importing and exporting (including third country trading), as well as domestic business, encompassing a diverse range of business activities across wide-ranging fields including lifestyle, ICT business & logistics, food, agri business, forest products, chemicals, metals & mineral resources, energy, power, infrastructure project, aerospace & ship, finance, leasing & real estate business, construction, industrial machinery & mobility, next generation business development and next generation corporate development. Additionally, the Marubeni Group offers a variety of services, makes internal and external investments, and is involved in resource development throughout all of the above industries.

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About TotalEnergies
TotalEnergies is a global multi-energy company that produces and markets energies: oil and biofuels, natural gas and green gases, renewables and electricity. Our 105,000 employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible. Active in more than 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people.

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