

Press release

Abu Dhabi, January 18, 2021

Siemens Energy to drive the development of green hydrogen economy in the Middle East

- Siemens Energy and Mubadala join strategic partnership to accelerate green hydrogen capabilities in Abu Dhabi
- Siemens Energy to collaborate with Masdar and partners on developing clean hydrogen fuels

Siemens Energy is advancing the development of green hydrogen ecosystems in the UAE. Around the Abu Dhabi Sustainability Week, two Memorandums of Understanding (MoU) were signed with Mubadala Investment Company as well as with Masdar and other partners to jointly drive UAE's green hydrogen sector and the production of synthetic fuels.

Strategic Partnership with Mubadala

On 17 January, Siemens Energy and Mubadala Investment Company (Mubadala), the Abu Dhabi state-owned global investment firm, signed a Memorandum of Understanding (MoU) with the intention of creating a strategic partnership to drive investment and development of advanced technology, manufacture of equipment, and green hydrogen and synthetic fuel production. The initial focus of activity will be in Abu Dhabi and over time it is planned that this will be extended to other international markets.

"Mubadala is strongly committed to the development of the UAE's hydrogen economy, and we are pleased to be extending our relationship with Siemens Energy in this important emerging energy sector, said Musabbeh Al Kaabi, Chief Executive Officer of UAE Investments at Mubadala Investment Company. "Through this strategic partnership, we expect to be able to leverage Abu Dhabi's strong foundations for the production and sale of green hydrogen, prove a strong business case and attract investment for the development of new facilities, and establish Abu Dhabi as a reliable supplier of green hydrogen to emerging global markets."

Within the partnership the companies will work closely towards the following goals:

- Utilizing renewable energy to produce green hydrogen and derivatives, including synthetic fuels, providing clean and transportable energy to fuel new hydrogen-based ecosystems that are supplied from the UAE
- Establish Abu Dhabi as a world class player in green hydrogen and synthetic fuels
- Jointly advance technology and drive down the costs of green hydrogen and synthetic fuels production
- Enable Siemens Energy and Mubadala to access emerging hydrogen markets and create value for both parties

The first initiative under this agreement and the broader Abu Dhabi Hydrogen Alliance will be the consideration of a demonstrator plant located at Masdar City, to be developed under a specific agreement between Siemens Energy and Masdar, together partners.

Hydrogen demonstrator plant in Masdar City

Together with Masdar, one of the world's leading renewable energy companies, Siemens Energy announced that it is joining forces with the Abu Dhabi Department of Energy, Etihad Airways, German Lufthansa, Marubeni Corporation and Khalifa University on an ambitious project that will help pave the way for the development of the UAE's green hydrogen economy.

The organizations signed an MoU with the intent to establish a photovoltaic (PV) powered electrolyzer facility, to demonstrate state-of-the-art green hydrogen production technology and present sustainable fuel use cases.

The first phase of the demonstration program will focus on the production of green hydrogen for passenger cars and buses in the Masdar City area. In parallel, a kerosene synthesis plant will be built to convert the majority of the green hydrogen into sustainable aviation fuel. In the second phase of the program, the production of decarbonized fuels for the maritime sector will be explored. Through the program, the organizations involved can help to significantly reduce the UAE's carbon footprint, create domestic demand for sustainable fuels, and establish a local knowledge and industry base for their production.

"Green hydrogen has the potential to become the foundation fuel for a future clean economy, and will be a game-changer for decarbonisation strategies as we look to achieve climate goals and deliver a more sustainable future for all," said Mohamed Jameel Al Ramahi, Chief Executive Officer,

Masdar. "Masdar has been exploring hydrogen production and generation for more than a decade – today we believe the time is right to accelerate investment in this technology."

Thomas Bareiß, Parliamentary State Secretary at the Federal Ministry for Economic Affairs and Energy: "I am pleased to witness these cooperation agreements that underline the strategic partnership between Germany and the UAE in the field of hydrogen. It offers great potential for decarbonization and economic cooperation between our countries and companies. The new agreements are not only groundbreaking with regard to goals within the framework of our hydrogen strategy, they also underline the value of the German-Emirati energy partnership, which the Federal Ministry for Economic Affairs and Energy is supporting. Already since 2016, sustainable, efficient and renewable energy technologies and services have been actively promoted through bilateral exchanges."

"These significant agreements highlight the importance of collaboration with a strong and diverse group of partners across industrial sectors, to drive forward and realize the potential of green hydrogen in decarbonization," said Armin Schnettler, Executive Vice President of the New Energy Business at Siemens Energy. "The UAE's visionary leadership is creating the solid foundations for a successful green hydrogen economy and is the base for a new ecosystem."

"These agreements highlight the important of strong partnerships as well as the determination by the governments to invest in innovative technologies to drive sustainable growth and decarbonization," said Dietmar Siersdorfer, Managing Director Siemens Energy Middle East. "We are proud that Siemens Energy is being recognized as the partner of choice, having pioneered this space, generating green hydrogen from renewable energy using proton exchange membrane electrolysis. We look forward to developing and leveraging the many applications of green hydrogen throughout the value chain."

Background on Hydrogen

Hydrogen, the most abundant element in the universe can be blended with, or used as a substitute for, fossil fuels in a wide variety of applications. Green hydrogen – produced through renewable energy – is likely to play a critical role in decarbonization strategies in several industries. Siemens Energy is a pioneer in Green Hydrogen technology, using Proton Exchange Membrane (PEM) technology to convert electricity from renewables into 'green' hydrogen and oxygen. There's no waste, or CO₂ emissions. The hydrogen can then be stored for use in fuel-cell cars, as an industrial gas or even to fuel a power plant.

Contact for journalists

Iain Packham

Phone: +971 549 934 561

E-mail: iain.packham@siemens.com

This press release is available at www.siemens-energy.com/press

Follow us on Twitter at: www.twitter.com/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 more than 90,000 people worldwide in more than 90 countries and generated revenue of around €27.5 billion in fiscal year 2020. www.siemens-energy.com.