Air Liquide and Siemens Energy form a joint venture for the European production of large-scale renewable hydrogen electrolyzers

Air Liquide and Siemens Energy announce the creation of a joint venture dedicated to the series production of industrial scale renewable hydrogen electrolyzers in Europe. With two of the global leading companies in their field combining their expertise, this Franco-German partnership will enable the emergence of a sustainable hydrogen economy in Europe and foster a European ecosystem for electrolysis and hydrogen technology. Production is expected to begin in the second half of 2023 and ramp-up to an annual production capacity of three gigawatts by 2025.

Air Liquide will take 25.1 percent, and Siemens Energy will hold 74.9 percent of the joint venture, which creation remains subject to approval of the competent authorities. This joint venture will be headquartered in Berlin. The joint venture multi-gigawatt factory that produces electrolysis modules (“stacks”) would be also located in the German capital, as announced earlier this year. This factory will supply stacks to both Groups for their respective broad range of customers and to serve the rapidly growing market. Based on proton exchange membrane (PEM) electrolysis technology, these stacks will feature a high degree of efficiency and are ideally suited to harvest volatile renewable energy. In addition, Air Liquide and Siemens Energy have agreed to dedicate R&D capacities to the co-development of the next generation of electrolyzer technologies within the framework of the partnership.

The strategic partnership will benefit from a portfolio of hydrogen projects combining both Air Liquide and Siemens Energy’s pipelines, targeting large industrial-scale hydrogen projects in collaboration with customers. This will create a solid basis for the required rapid ramp-up of electrolysis capacities and thus is expected to make competitive renewable hydrogen available sooner. One of the first projects is the Air Liquide Normand’Hy electrolyzer project, with a capacity of 200 megawatts (MW) expected in the first phase, located in Normandy, France. The assembly of the electrolyzer systems for this project is planned to be made in France.

François Jackow, Chief Executive Officer of Air Liquide, said: “The creation of this Franco-German joint venture is a major step towards the emergence of a leading European renewable and low-carbon hydrogen ecosystem. By scaling up the production of large scale electrolyzers, Air Liquide and Siemens Energy will be able to provide their customers with access to large amounts of competitive renewable hydrogen and to decarbonize their activities. In line with its Sustainable Development strategy, Air Liquide is more than ever committed to making hydrogen a driving force of the energy transition and of the fight against global warming.”

“We want to be a driving force in hydrogen technology,” said Christian Bruch, CEO, and President of Siemens Energy AG. “To make green hydrogen competitive, we need serially produced, low-cost, scalable electrolyzers. We also need strong partnerships. Together with Air Liquide as a pioneer in hydrogen for over 50 years, we look forward to implementing innovative solutions and collaborating to shape this new hydrogen market.”

The partners have and will apply for “large projects” funding under the EU’s Innovation Fund, Green Deal and Important Project of Common European Interest (IPCEI)-scheme for hydrogen, funded by the European Governments.
Air Liquide

A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 75 countries with approximately 66,400 employees and serves more than 3.8 million customers and patients. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the company's activities since its creation in 1902.

Taking action today while preparing the future is at the heart of Air Liquide's strategy. With ADVANCE, its strategic plan for 2025, Air Liquide is targeting a global performance, combining financial and extra-financial dimensions. Positioned on new markets, the Group benefits from major assets such as its business model combining resilience and strength, its ability to innovate and its technological expertise. The Group develops solutions contributing to climate and the energy transition—particularly with hydrogen—and takes action to progress in areas of healthcare, digital and high technologies.

Air Liquide's revenue amounted to more than 23 billion euros in 2021. Air Liquide is listed on the Euronext Paris stock exchange (compartment A) and belongs to the CAC 40, CAC 40 ESG, EURO STOXX 50 and FTSE4Good indexes.

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 91,000 people worldwide in more than 90 countries and generated revenue of €28.5 billion in fiscal year 2021.

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