

# Joint press release

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**Press release by Siemens Energy, ENGIE Solutions and Centrax**

## **First tests for Power-to-Hydrogen-to-Power HYFLEXPOWER demonstrator successfully completed**

ENGIE Solutions, Siemens Energy, Centrax, Arttic, the German Aerospace Center (DLR) and four European universities, together forming the Hyflexpower consortium, today announced the successful completion of the first stage of an innovative research project on renewable energy. Located at the Smurfit Kappa Saillat Paper Mill in Saillat-sur-Vienne (France), this program becomes the first industrial facility in the world to introduce an integrated hydrogen demonstrator.

The aim of the HYFLEXPOWER project is to demonstrate that green hydrogen can serve as a flexible means of storing energy which can then be used to power an industrial turbine. The hydrogen is produced on site with an electrolyzer and used in a gas turbine with a mix of 30-vol. % hydrogen and 70 vol.-% natural gas for power generation.

The project marks the implementation of the world's first industrial-scale power-to-X-to-power demonstration with an advanced turbine with high hydrogen content fuel. In 2023, trials will continue to increase the hydrogen ratio up to 100%.

While the large-scale availability of green hydrogen is still some way off, the members of the consortium are focused on looking beyond 2030 and trialing new technology, such as hydrogen, today. This project will allow the partners to understand the technical feasibility of using hydrogen while retaining much of the existing energy infrastructure. This demonstrator would open great perspectives for industry.

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This highly innovative project involves significant collaboration across several industries, academic bodies, and research institutes. The project was inspired by the European Commission's (EC) 'Hydrogen Strategy for a Climate-Neutral Europe' report, which outlines the essential role that hydrogen will play within the European Green Deal carbon neutrality and energy transition initiative.

The stakeholders involved in the project are ENGIE Solutions, Siemens Energy, Centrax, ARTTIC, German Aerospace Center (DLR), and Universities NTUA Athens (Greece), Lund (Sweden), Duisburg-Essen (Germany) and UCL (UK).

The project, first announced in 2020, involves significant funding by the European Commission, with two-thirds of the €15.2 million investment coming from the EU's Horizon 2020 Framework Programme for Research and Innovation\*. The next trials for the HYFLEXPOWER project are scheduled for Summer 2023.

Commenting on the end of the initial testing phase, Gaël Carayon, Project Director at ENGIE Solutions, said: "Ambitious projects like this one require taking partnerships to the next level and being united in a joint mission to make decarbonization a reality. Hydrogen will play a crucial role in the interaction between renewables and electricity storage and generation. ENGIE Solutions is proud to participate to this unique project."

Dr. Ertan Yilmaz, HYFLEXPOWER Global Director at Siemens Energy, said: "With the HYFLEXPOWER project we are showcasing that carbon-neutral and reliable power supply is possible - even for energy-intensive industries. Hydrogen-ready turbines will play a decisive role in climate-neutral energy, so it is very exciting to be looking forward to the next phase of testing."

\* This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 884229.

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Learn more about the project: [Hyflexpower](#)

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