

PRESS RELEASE

FASTER project to launch in 2025: sustainable energy storage with green ammonia

Milan, 2025/04/02 – The project on "<u>Flexible Ammonia Synthesis Technology for Energy</u> Sto<u>Rage</u> (FASTER), a collaborative venture between leading European universities and companies, was officially launched at the beginning of January. With a budget of €3 million funded by the European Union, this initiative will develop an innovative and sustainable method for storing green energy with the critical goal of: contributing to a cleaner future and strengthening Europe's energy security.

FASTER focuses on harnessing green energy, such as solar and wind power, which is unpredictable and often does not coincide with peak power demand. By converting this energy into ammonia, a substance that can be easily stored and transported as a liquid, the energy can be used at a later time. This is crucial for addressing seasonal fluctuations in energy production and consumption.

Liquid ammonia offers unique advantages as an energy carrier. It has a much higher energy density than liquified hydrogen and is easier and more cost effective to transport. Moreover, ammonia is already widely produced and used today, particularly in the fertiliser industry, meaning there are wellestablished protocols to handle and store it safely. Thanks to this existing infrastructure, FASTER can accelerate the transition to green ammonia without adding significant safety or environmental concerns.

In addition to energy storage, the technology also contributes to making fertiliser production more sustainable, a sector that currently relies heavily on fossil fuels. This not only helps to reduce CO_2 emissions but also decreases Europe's dependence on imported natural gas.

A STRONG INTERNATIONAL COLLABORATION – The project, coordinated by **Prof. Dr. Ir. Jimmy A. Faria** of the Faculty of Science and Technology (S&T) at the University of Twente, consists of eight partners from five countries, including the Netherlands, Germany, Switzerland, Italy and the United Kingdom. It brings together experts in catalysis (University of Twente, Cardiff University, Politecnico di Milano, and Umicore), process technology (Proton Ventures and Demcon Suster), lifecycle assessment (LCE), and energy generation equipment (WinGD).

"This project combines the knowledge and skills of Europe's top researchers and companies to provide a sustainable and cost-effective solution for long-term energy storage," says Prof. Faria.

"The consortium skills and competences grant the synergy among novel catalyst, reactor and process solutions, which is the core for developing new technologies for the energy transition," says **Gianpiero Groppi**, professor at the Department of Energy of Politecnico di Milano.



FASTER will play a vital role in achieving the European Green Deal objectives and combating climate change. The project not only offers a solution for energy storage but also contributes to economic growth and a more sustainable chemical industry.



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