

PAVING THE WAY FOR GREEN AMMONIA PRODUCTION

The EU project DARE2X “Decentralised Ammonia production from Renewable Energy utilising novel sorption-enhanced plasma catalytic Power-to-X technology” has officially started.



DARE2X consortium gathered during the kick-off meeting in Copenhagen, at the Danish Technological Institute (DTI), in October 2022.

Copenhagen (Denmark) – October 2022. The consortium of the new European-funded project DARE2X gathered for a two-day meeting on the 19th October 2022. The meeting took place in the Danish Technological Institute (DTI) facility, Denmark, and it aimed to **start the new research activities for the sustainable production of ammonia**. At the meeting, the **DARE2X** partners presented their first research activities and developed a collaborative plan to ensure a successful outcome at the end of the three-year project. The consortium also set goals for the developed technology to be competitive, scalable and relevant for the market.

Ammonia is the second most produced primary chemical in the world and its centralised production is called the Haber-Bosch process, which is based on the transformation of natural gas (fossil fuel) at high pressure and temperature. Replacing the Haber-Bosch process with a sustainable alternative for the production of NH_3 , will contribute to decarbonising the European industry, helping the European Union’s goal of a competitive economy with net-zero greenhouse gas emissions by 2050.

DARE2X aims to develop a new approach for decarbonizing NH_3 production, enabling future applications such as energy storage as a green fuel. The proposed technology will be based on a sorption-enhanced plasma-catalytic synthesis, which will be validated at Technology Readiness Level (TRL) 4.

The DARE2X project is coordinated by the **Danish Technological Institute (DTI, Denmark)** that set a strong, multidisciplinary collaboration with: **Hulteberg Chemistry & Engineering (HB, Sweden)** that will focus on the development of sorption materials; **University of Liverpool (UoL, UK)** specialists in plasma driven catalysis; **National Institute of Chemistry (NIC, Slovenia)** for the catalysts candidates modelling and screening. To quantify environmental and economic impacts for the business case, **Enso Innovation (ENSO, Spain)** will conduct the Life Cycle Assessment (LCA) and Life Cycle Costing (LCC), supported by **LOMARTOV (LOM, Spain)**, which will perform techno-economic and social readiness studies, together with dissemination activities.



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DARE2X is funded by the Horizon Europe Research and Innovation programme of the European Commission, allocating € 2.3M to the European partners, and by the UK Research and Innovation (UKRI) allocating € 570k to the University of Liverpool. The project is part of a larger initiative to make green ammonia production cost-competitive and to create more EU know-how and innovation excellence, all aimed at building a robust infrastructure for research and manufacturing, as well as creating new job opportunities.

The project consortium is excited to start collaborating and working towards the very first results.

Stay connected to the project and visit the website www.dare2x.eu available soon.



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Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union.



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