European Commission

CHEMICALS

INNOVATION FUND

Deployment of net-zero and innovative technologies

GRAMLI: Green Ammonia Linz

The Innovation Fund is 100% funded by the EU Emissions Trading System

| Project Factsheet

The GRAMLI (Green Ammonia Linz) project will build a large scale Proton Exchange Membrane (PEM) electrolyser (60 megawatt (MW)), which will produce renewable hydrogen to be used in the production of renewable ammonia to decarbonise industrial processes. The primary aim of the project is to demonstrate the innovative and flexible large-scale PEM electrolyser. The electrolyser will be fully sourced with renewable energy and integrated into an ammonia plant. The renewable ammonia produced by the GRAMLI project will be fully compliant with relevant regulations and ready to supply melamine, fertilisers, and technical nitrogen products. The GRAMLI project's potential for relative greenhouse gas (GHG) emission is 156% compared to the reference scenario.

The project will be a reference for the integration of a large scale electrolyser with an industrial ammonia facility, planning to produce 7 000

COORDINATOR
VERBUND AG

LOCATION
Austria

CATEGORY
Energy intensive industries (EII)

SECTOR
Chemicals

AMOUNT OF INNOVATION FUND GRANT
EUR 48,500,000

EXPECTED GHG EMISSIONS AVOIDANCE
931,123 tonnes CO2 equivalent

STARTING DATE
01 April, 2023

ENTRY INTO OPERATION DATE
01 October, 2027

FINANCIAL CLOSE DATE
31 December, 2024

Updated on 02 December 2024

tonnes of renewable hydrogen and 40 000 tonnes of renewable ammonia per year. It will also establish an innovative business model that efficiently combines revenue streams from the production of ammonia, the provision of ancillary services to the power grid, and the utilisation of additional by-products such as oxygen and heat. The project will align with the electricity grid's emission intensity, with the facility's operation timed to use more electricity when the share of renewable electricity is high. This approach will prevent grid congestion, contribute to grid stability, and improve the project's financial viability, thereby paving the way for more renewable power in electrical grids. The project will contribute to an absolute avoidance of 931 000 tonnes CO2 equivalent of greenhouse gas emission savings over the first ten years of operation.

The Green Ammonia Linz will contribute to the Austrian Hydrogen Strategy and the EU energy and climate goals set in the REPowerEU Plan. In particular it will contribute to the target of reaching ten million tons of renewable hydrogen production domestically by 2030, by supporting the decarbonization of the hard-to-abate chemical industry, and by facilitating the integration of additional renewable energy generation into the power grid.

The project not only contributes to a significant CO2 emission reduction, but also supports the regional economy in Austria. The project is unique in its size and that it is the first implementation of green hydrogen in an industrial environment in Austria. The green ammonia value chain that will be established through the GRAMLI project also presents potential opportunities for other companies to benefit.

| Participants

VERBUND AG	Austria
LAT NITROGEN LINZ GMBH	Austria
VERBUND ENERGY4BUSINESS GMBH	Austria
VERBUND GREEN HYDROGEN GMBH	Austria