



European Commission



MANUFACTURING OF COMPONENTS FOR PRODUCTION OF RENEWABLE ENERGY OR ENERGY STORAGE

INNOVATION FUND

Deployment of net-zero and innovative technologies

ELYAS: Smart ElectroLYsis Module manufacturing – upscaling with Automotive production technology with a Sustainability focus

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

| Project Factsheet

The ELYAS project (smart ElectroLYsis module manufacturing – upscaling with Automotive production technology with a Sustainability focus) takes a significant step towards a cost- and resource-efficient proton exchange membrane (PEM) stack production, by meeting the highest quality standards for secured long-term running. It is expected that 100% relative greenhouse gas (GHG) emission avoidance will be achieved compared to the reference scenario.

After starting the production of its new ElectroLYsis (ELY) stack in 2025, BOSCH will industrialise the novel Smart Electrolysis Module (SEM). This combines the ELY stack with cost-efficient, robust and highly available automotive-based power electronics, control unit and sensors, including global service offerings. This unique, pre-assembled and ready-to-use cloud connected system will reduce commissioning efforts of large-

COORDINATOR

ROBERT BOSCH GMBH

LOCATION

Germany

CATEGORY

Renewable Energy (RES)

SECTOR

Manufacturing of components for production of renewable energy or energy storage

AMOUNT OF INNOVATION FUND GRANT

EUR 51,926,000

EXPECTED GHG EMISSIONS AVOIDANCE

22,622,263 tonnes CO2 equivalent

STARTING DATE

01 January, 2024

ENTRY INTO OPERATION DATE

30 November, 2025

FINANCIAL CLOSE DATE

31 July, 2024

scale electrolysers by up to 80%. It will also significantly increase their operating efficiency and availability. The ELYAS project is designed for rapid scale-up, and the revenue model has been combined with a cloud based digital AIoT (Artificial Internet of Things) service model. It aims to achieve an absolute GHG emission avoidance of 23.6 million tonnes CO2 equivalent over the first ten years of operation.

The innovative production scheme of the ELY stack and the Smart ELY Module is an active and important contribution to climate change technology. The ELYAS project will contribute to the widespread implementation of electrolysis technology which will lead to a significant decrease in fossil fuels dependency.

| Participants

ROBERT BOSCH GMBH

The first main industrialisation site will be BOSCH's Bamberg plant, which is ready for transformation from automotive to hydrogen products involving experienced and trusted local suppliers. The regional economy of the Bamberg region is largely based on automotive suppliers (this industry provides almost 15 000 jobs in the region). Many of the local companies produce components for combustion engines. Accordingly, in the Bamberg region, the success of the ELY Stack ramp-up has significant potential for the regional economy. The ELYAS project will accelerate the development of a local supply chain for ELY stack manufacturing. Thus, ELYAS will contribute to job creation and generate local added value for the North Bavarian economy.

Germany