DEMO4GRID

DEMONSTRATION OF 4MW PRESSURIZED ALKALINE ELECTROLYSER FOR GRID BALANCING SERVICES

Project ID	736351
PRR 2024	Pillar 1 – Renewable hydrogen production
Call topic	FCH-02-7-2016: Demonstration of large-scale rapid response electrolysis to provide grid balancing services and to supply hydrogen markets
Project total costs	EUR 7 736 682.50
Clean H_2 JU max. contribution	EUR 2 932 554.38
Project period	1.3.2017–31.8.2023
Coordinator	Diadikasia Business Consulting Symvouloi Epicheiriseon AE, Greece
Beneficiaries	FEN Sustain Systems GmbH, Fundación para el Desarrollo de las Nuevas Tecnologías del Hidrógeno en Aragón, IHT Industrie Haute Technologie SA, Instrumentación y Componentes SA, MPREIS Warenvertriebs GmbH

www.demo4grid.eu/

PROJECT AND GENERAL OBJECTIVES

The main aim of project Demo4grid was the commercial set-up and demonstration of a technical solution utilising pressurised alkaline electrolyser technology that is better than the state of the art to provide grid-balancing services in real operational and market conditions. The final goal was to provide grid-balancing services to the transmission system operator (primary and secondary balancing services). The electrolysis plant was installed in Völs near Innsbruck.

PROGRESS AND MAIN ACHIEVEMENTS

The pressurised alkaline electrolyser was installed and has been producing hydrogen since 22 March 2022.

FUTURE STEPS AND PLANS

The project has finished.

PROJECT TARGETS

Target source	Parameter	Unit	Target	Achieved to date by the project	Target achieved?	SOA result achieved to date (by others)	Year for reported SOA result
Project's own objectives	H_2 production electrolysis, hot start from minimum to maximum power	seconds	2	N/A		60	2015
	Start-up time KPIs from cold to minimum part load for alkaline electrolysers	minutes	20	4–6 hours depending on thermal conditions		30	2015
	Ramp down	% (full load)/s	10	2		10	N/A
	Minimum part-load operation targets for alkaline electrolysers	% (full load)	20	N/A		30	2015
	Ramp up	% (full load)/s	7	3		7	N/A

Clean Hydrogen Partnership
Co-funded by the European Union