Demo4Grid

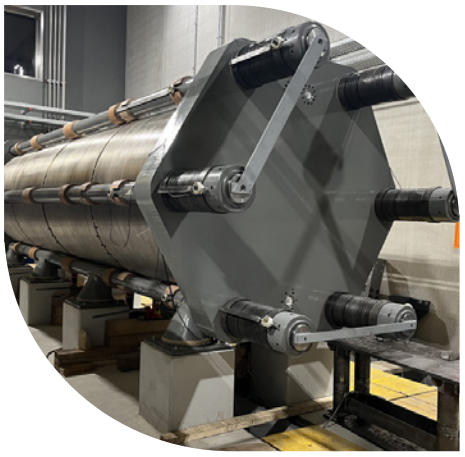
DEMONSTRATION OF 4 MW PRESSURIZED ALKALINEELECTROLYSERFORGRIDBALANCING SERVICES

Project ID:	736351
PRD 2023:	Panel 1 – H2 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 7 736 682.5
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, MPREIS Warenvertriebs GmbH, Instrumentación y Componentes SA, Fundación para el Desarrollo de las Nuevas Tecnologías del Hidrógeno en Aragón, IHT Industrie Haute Technologie SA

http://www.demo4grid.eu/

PROJECT AND OBJECTIVES

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



PROGRESS AND MAIN ACHIEVEMENTS

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

QUANTITATIVE TARGETS AND STATUS

Target source	Parameter	Unit	Target	Achieved to date by the project	Target achieved?	SoA result achieved to date (by others)	Year of SoA target
Project's own objectives	H_2 production electrolysis, hot start from min. to max. power	seconds	2			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	
	Minimum part-load operation targets for alkaline electrolysers	% (full load)	20			30	
	Ramp up	% (full load)/s	7	3		7	N/A
	Ramp down	% (full load)/s	10	2		10	

Clean Hydrogen Partnership
Co-funded by the European Union