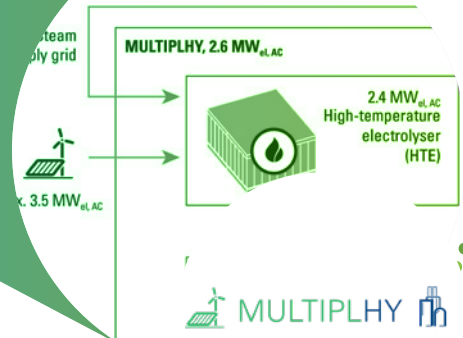


MultiPLHY

MULTIMEGAWATT HIGH-TEMPERATURE ELECTROLYSERTO GENERATE GREEN HYDROGEN FOR PRODUCTION OF HIGH-QUALITY CHEMICAL PRODUCTS



Project ID:	875123
PRD 2023:	Panel 1 – H2 production
Call topic:	FCH-02-2-2019: Multi megawatt high-temperature electrolyser for valorisation as energy vector in energy intensive industry
Project total costs:	EUR 10 907 722.50
Clean H₂ JU max. contribution:	EUR 6 993 725.39
Project period:	1.1.2020–31.12.2024
Coordinator:	Commissariat à l'énergie atomique et aux énergies alternatives, France
Beneficiaries:	Engie, Engie Energie Services, Neste Engineering Solutions BV, Neste Engineering Solutions Oy, Neste Netherlands BV, Neste Oyj, Paul Wurth SA, Sunfire GmbH

<https://multiplhy-project.eu>

QUANTITATIVE TARGETS AND STATUS

Target source	Parameter	Unit	Target	Target achieved?	SoA result achieved to date (by others)	Year of SoA target
AWP 2019	Electrical consumption	kWh/kg	85	✓	39.7	2017
	H ₂ production loss	%/1 000 h	< 1.2		1.9	
	Downtime	%	5	⚙️	N/A	N/A

PROJECT AND OBJECTIVES

MultiPLHY aims to install and integrate the world's first high-temperature electrolyser (HTE) system on a multi-MW scale at a biorefinery located in Rotterdam, the Netherlands, demonstrating both technological and industrial leadership of the EU in the application of solid oxide electrolyser cell (SOEC) technology. The central element of the project is the manufacture and demonstration of a multi-MW high-temperature electrolyser and its operation in a biorefinery. As a result, MultiPLHY promotes the SOEC-based HTE from technology readiness level 7 to 8.

PROGRESS AND MAIN ACHIEVEMENTS

- The project demonstrated stack durability for more than 7 000 hours without H₂ production loss.
- A new-generation HTE module was developed to decrease capital expenditure.
- FAT of all 12 modules has been completed, and the installation in Rotterdam is in progress.

FUTURE STEPS AND PLANS

Project tasks will be executed in accordance with a revised plan owing to a delay in completing some tasks. Tasks are continuously monitored regarding achievements and the timeline.