

H₂ ACCELERATE TRUCKS

LARGE SCALE DEPLOYMENT PROJECT TO ACCELERATE THE UPTAKE OF HYDROGEN TRUCKS IN EUROPE



Project ID	101101446
PRR 2025	Pillar 3 - H ₂ End Uses - Transport
Call Topic	HORIZON-JTI-CLEANH ₂ -2022-03-03
Project Total Costs	110 961 308.68
Clean H ₂ JU Max. Contribution	29 991 488.50
Project Period	01-02-2023 - 31-01-2029
Coordinator Beneficiary	SINTEF AS, NO
Beneficiaries	FIAP SERVICE SRL SOCIETA BENEFIT, FEDERAZIONE ITALIANA AUTOTRASPORTATORI PROFESSIONALI, ERM FRANCE, EVERFUEL A S, SHELL NEDERLAND VERKOOPMAATSCHAPPIJ BV, TOTAL ENERGIES GAS MOBILITY BV, DAIMLER TRUCK AG, LINDE GMBH, UNIUNEA NATIONALA A TRANSPORTATORILOR RUTIERI DIN ROMANIA, TEKNOLOGIAN TUTKIMUSKESKUS VTT OY, OMV DOWNSTREAM GMBH, ENVIRONMENTAL RESOURCES MANAGEMENT LIMITED, IVECO SPA, ELEMENT ENERGY LIMITED, UNION INTERNATIONALE DES TRANSPORTS ROUTIERS (IRU), VOLVO LASTVAGNAR AB, WIRTSCHAFTSKAMMER OSTERREICH, VOLVO TECHNOLOGY AB

<https://h2accelerate.eu/trucks/>

PROJECT AND GENERAL OBJECTIVES

The overall project goal is to support the transition of fuel cell trucks from technically proven but high-cost demonstrators to a viable commercial choice for operators across Europe. To achieve the above goal, the general objectives are to:

- Deploy 150 fuel cell trucks weighing between 41 t and 44 t in nine European countries by the end of 2029.
- Operate the trucks on an HRS network designed for zero-emission truck deployment, operated by Everfuel, Shell and TotalEnergies.
- Analyse technical, environmental, economic and attitudinal data to determine the viability of H₂ fuel cell trucks as a solution to decarbonise road freight.
- Raise awareness of the benefits of using green H₂ for trucking in Europe through a wide range of targeted communication activities.

PROGRESS AND ACHIEVEMENTS

- The adaptation of manufacturing facilities to accommodate fuel cell truck production.
- Preparations for homologation and type approval.
- The initial preparations by original equipment manufacturers for fleet launch.

MAIN RESULTS

- Dialogue with heavy-duty truck end users and HRS network operators.
- The development of, and agreement on, protocols for data monitoring and analysis.
- First batch of "artificial" truck operation data transferred to VTT for assessment.
- The assessment of health and safety issues and submission of an adequate safety plan.
- The launch of the project's website and LinkedIn, X accounts.
- The establishment of a dissemination and exploitation plan.
- The submission of OEMs annual progress reports.



PROJECT TARGETS

Target source	Parameter	Unit	Target	Target achieved?
Project's own objectives	Deployed HD Trucks' gross weight	t	41-44	
	Vehicle range under heavy load	km	> 600 km for compressed H ₂ and > 1 000 km for liquid hydrogen	
	Annual CO ₂ emission savings	t/year	Confirmation (by LCA) of a saving across the fleet of 21 000 t/year	
	End user groups to allow detailed discussion of hydrogen trucks with users not in the project.	Number	3	
	Dataset covering the performance of 150 trucks.	Number	Shareable separate reports (including regular updates) of the technical, economic performance of and end users' attitudes to hydrogen trucks in day-to-day operation.	
	Trucks cost	€	< 450 000	
	Central and eastern European potential truck operators in end user groups.	Number	> 20	
	Vehicle availability	%	> 95	
	Green hydrogen demand created	t/year	2 100	
	Data monitoring and analyses of trucks' performance.	% of deployed trucks	20 (corresponding to 30 trucks of the full fleet of 150 trucks)	
	Monitored operational period per truck.	Months	24	
	Demand for electrolyser capacity created.	MW	26 (assuming 50% load factor to match green supply)	
	Dedicated truck road tour visits in EU Member States.	Number of MS	5	
	Number of H ₂ /FC powered HD trucks deployed.	Number	150	
	Presentations at events and conferences.	Number/ year	5	
	Visible social media and web presence.	Number	2	✓