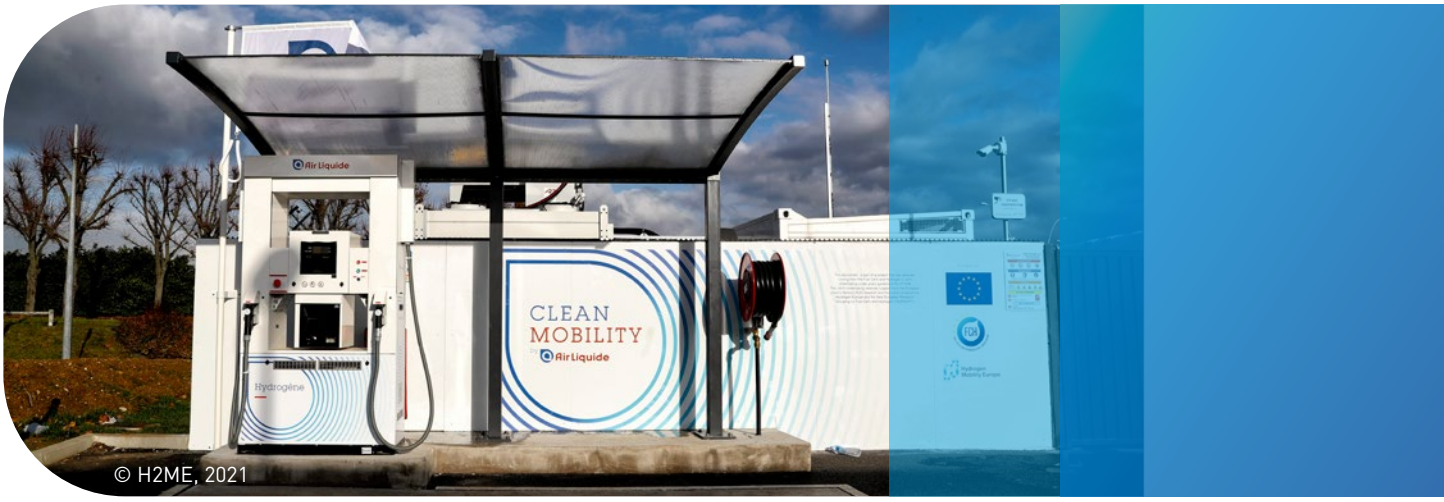
Making an impact on the clean energy transition

TRANSPORT

DRIVING FORWARD A HYDROGEN REFUELLING NETWORK



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Accessible H_2 mobility

If hydrogen vehicles are to prove a viable alternative to petrol and diesel cars and trucks, drivers must be able to refuel at convenient locations at a reasonable price when travelling. A growing network of hydrogen refuelling stations (HRS) and effective expansion strategies can drive down operational costs and support streamlined licensing by public authorities, making hydrogen more accessible for drivers.

The H2ME project (June 2015 to November 2020) and expansion project H2ME 2 (May 2016 to June 2022) have built new HRS to test different network-growth strategies in Germany, France, Denmark and the United Kingdom. Fleets of fuel cell cars, vans and trucks have also been deployed across Europe to assess real-world use. The projects have found that the skeleton network in Germany of over 90 HRS – from FCH JU and other funding – enables fuel cell vehicles to travel across the country, while in France, HRS roll-out coordinated with fleet availability has encouraged drivers to adopt hydrogen mobility.

Roll-out groundwork

H2ME 2 partners are also looking at the impact of connecting the refuelling stations to the live online European HRS Availability System (https://h2-map.eu/), which includes 149 stations to date. This encourages organisations to develop HRS location apps, such as H2.live and FillnDrive, helping consumers to find their nearest available station and, in turn, making fuel cell vehicles more attractive. HRS are already present in 14 countries in Europe. Project results strengthen the business case to expand the network and inform licensing and supportive public policies so that refuelling coverage can grow with demand.

With around 150 sites in operation, Europe has the largest network of public hydrogen refuelling stations in the world. Almost half of them have resulted from FCH JU projects, such as H2ME and H2ME 2. These two projects alone have financed and analysed 37 new refuelling stations to accelerate the uptake of hydrogen vehicles.

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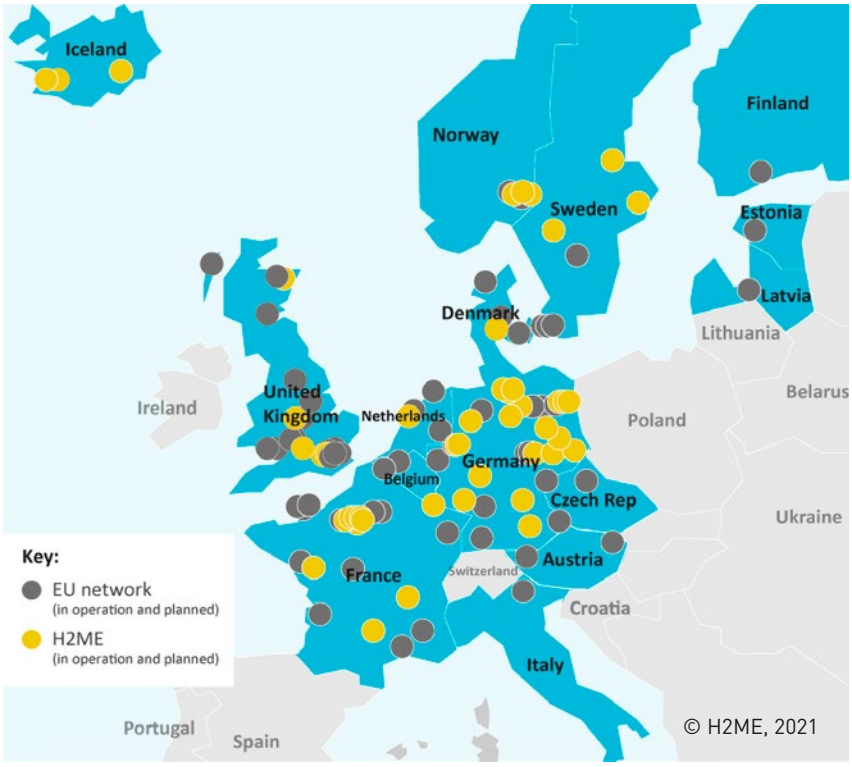
INFRASTRUCTURE THAT SUPPORTS DEMAND

To adopt hydrogen vehicles, drivers must be confident that refuelling stations will be available on their journey.

TRIED-AND-TESTED EXPANSION

FCH JU projects have rolled out fuel cell vehicles and hydrogen refuelling stations across Europe, analysing consumer, commercial and policy lessons for a shift to hydrogen mobility. **The goal?** Almost 50 SMEs, research organisations, manufacturers and public authorities have contributed to expanding the viability of private and business hydrogen transport. **Key results?** A significant increase in hydrogen refuelling stations, fuel cell vehicles on the roads and better understanding of strategies supporting full commercial roll-out of hydrogen vehicles.



KEY ACHIEVEMENTS

H2ME

27 HRS
deployed across Europe

99.99 % HYDROGEN PURITY
in participating stations

300 FUEL CELL ELECTRIC VEHICLES
in operation

14.5 MILLION km
driven by project vehicles

H2ME 2

9 HRS DEPLOYED
out of a possible 20

95 % AVAILABILITY
of the deployed HRS

1 000 FUEL CELL ELECTRIC VEHICLES
planned – 313 deployed

IMPACT

Contributes to the 149 HRS
connected to the European HRS Availability System

Increases potential network coverage
in and beyond existing countries

SUPPLIES GROWING DEMAND
106 tonnes of hydrogen were delivered from H2ME 2 stations in 2019-2020

BOOSTS FUEL CELL VEHICLE USE
shown by the almost 56 000 refuelling operations within the projects in 2019-2020

STRENGTHENS THE BUSINESS CASE
for hydrogen refuelling infrastructure

SUPPORTS A SWITCH TO HYDROGEN MOBILITY
to consumers, businesses and public services

CREATES A LEVEL PLAYING FIELD
with other low-carbon vehicle industries

REDUCES TRANSPORT EMISSIONS
even more so when using green hydrogen

FIND OUT MORE

www.fch.europa.eu/page/fch-ju-projects
https://h2me.eu
https://h2-map.eu
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FUEL CELLS AND HYDROGEN JOINT UNDERTAKING

A partnership dedicated to clean energy and transport in Europe

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