Renewable and low-carbon hydrogen, a key vector for the decarbonisation and industrial competitiveness

Renewable and low-carbon hydrogen is a clean energy vector that can be used in hard-to-abate sectors, such as intensive industry and heavy transport.

The European Commission has emphasized hydrogen as a key pillar in achieving the 2040 greenhouse gas (GHG) reduction targets, enhancing energy resilience and strenghtening the European Union's industrial competitiveness. The expansion of hydrogen in the EU will rely on the development of a large-scale infrastructure network, linking supply from producer countries to demand centers.

Collaboration between companies and institutions on projects such as H2med, supported by the development of essential national networks, will be key to achieve the European hydrogen targets while enhancing the security of supply and price competitiveness.

Potential and benefits for Europe

Socio-economic

- Industrial development
- Innovational development
- Investment attraction
- Price competitiveness
- Market integration

Energy and environmental

- Emissions reductions
- Air quality improvement
- Renewables promotion
- Contribution to national objectives

Social indicators

- Just transition
- Employment
- Contribution to local economies
- Sustainable development goals

H2med

an example of European energy cooperation

Co-funded by the European Union

enagas natran OGE REN TERĒGA

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H2med is an essential element for the configuration of a hydrogen corridor from the Iberian Peninsula to Central Europe, connecting supply from producing sites to demand centers.

Driven by the governments of Spain, Portugal, France and Germany, with the support of the European Commission, it is promoted by the Transmission System Operators (TSOs) of the countries: REN, Enagás, NaTran, Teréga and OGE.

On the 8th of April 2024, the project was included on the list of Projects of Common Interest (PCI).

In December 2025, the European Commission proposed the renewal of the PCI status for the 2nd PCI list, to be published in 2026.

The project

H2med is made up of two interconnections, CelZa between Portugal and Spain, and BarMar, an offshore pipeline between Spain and France. The joint investment of these two projects is estimated at €2.5 billion.

	1 CelZa	2 BarMar
Maximum capacity	0.75 Mt/year	2 Mt/year
Length	≈ 270 km	≈ 400 km
Diameter	28”	42”
Max. depth	-	120 m
Design pressure	100 barg	100 barg
Compressor station	Zamora ≈ 30 MW	Barcelona ≈ 60 MW
Investment	≈ €350 M	≈ €2,135 M

It will be able to transport

10%

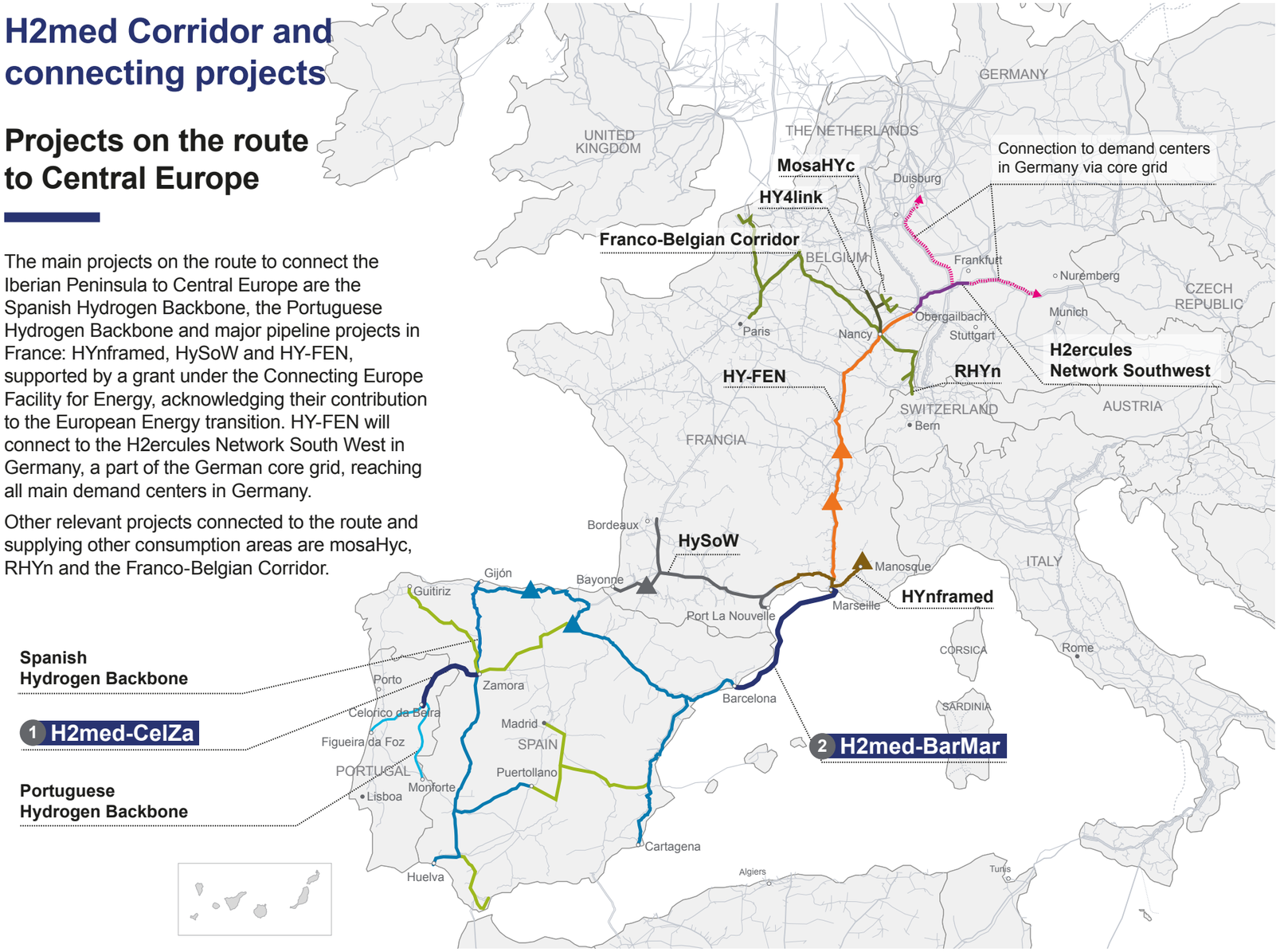
of expected European demand by 2032

H2med Corridor and connecting projects

Projects on the route to Central Europe

The main projects on the route to connect the Iberian Peninsula to Central Europe are the Spanish Hydrogen Backbone, the Portuguese Hydrogen Backbone and major pipeline projects in France: HYnframed, HySoW and HY-FEN, supported by a grant under the Connecting Europe Facility for Energy, acknowledging their contribution to the European Energy transition. HY-FEN will connect to the H2ercules Network South West in Germany, a part of the German core grid, reaching all main demand centers in Germany.

Other relevant projects connected to the route and supplying other consumption areas are mosaHyc, RHYn and the Franco-Belgian Corridor.



Schedule

STUDIES

- CBA (Cost Benefit Analysis)
- Feasibility studies
- Environmental impact study
- Technical proposal
- Public consultations
- Capacity allocation process
- Definition of tariffs and access rules
- Permits management

IMPLEMENTATION

- Engineering
- Procurement
- Construction
- Commissioning

COMMERCIAL OPERATION DATE

Oct-Dec 2022

- 9/12/2022 — Mandate by governments to TSOs to develop H2med project
- 15/12/2022 — PCI presentation

2023

- 10/2023 — OGE joins the project
- 08/04/2024 — Publication 1st PCI list

2024

- 06/2024 — Signature of the JDA for BarMar project
- 10/2024 — CEF-E Studies application
- 11/2024 — Launch of Call for Interest

2025

- 12/2024 — JDOI Signature of H2med Alliance
- 01/2025 — CEF-E Studies funds allocation
- 02/2025 — Publication of H2med CFI Results

2026

- 06/2025 — Constitution of BarMar SPV
- 09/2025 — Launch of the H2med Alliance
- 06/2025 — Signing of CEF-E Grant Agreements

2027

- 01/12/2025 — Publication of proposed 2nd PCI list Delegated Act by EC
- Mid 2026 — Launch of FEED

2028

- Mid 2027 — Capacity allocation process and Investment request

2029

2032