



Germany's Updated National Hydrogen Strategy

NWS 2023

Key Fields of Action, 2030 Vision, and Measures

Why an Update?

2020 → 2023

First National Hydrogen Strategy published in 2020; major geopolitical and energy-market shifts demanded a comprehensive update.

Climate Neutrality by 2045

Hydrogen is essential to Germany's decarbonisation pathway and industrial transformation.

EU Alignment

Strategy reinforces supply security, diversification, and competitiveness within EU regulatory frameworks.

2030 VISION

Zielbild 2030

10 GW

Domestic Electrolysis

Increased from the original 5 GW target

1,800 km

H2-Startnetz

National hydrogen network by 2027/28

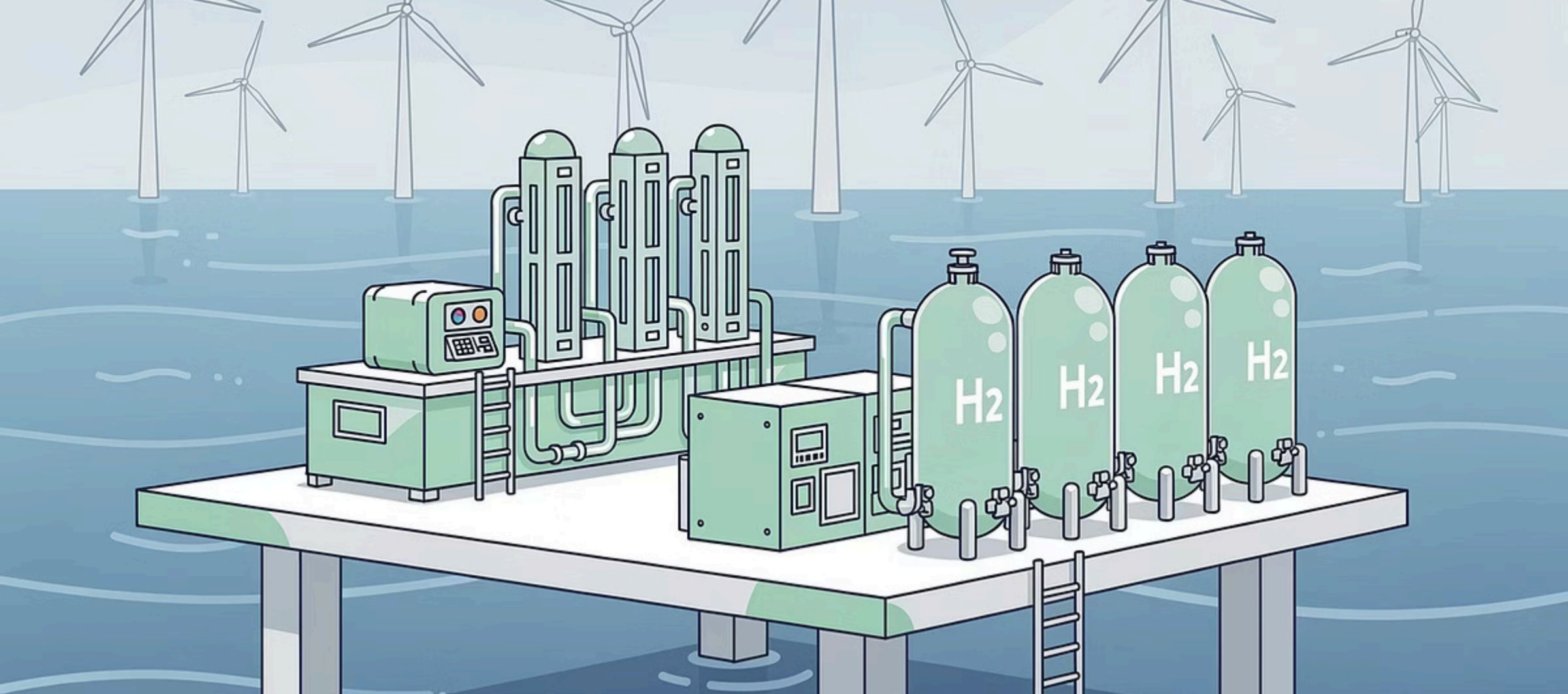
4,500 km

EU-Wide Network

Pan-European hydrogen backbone integration



Germany aims to become a **leading global provider of hydrogen technologies** by 2030, with hydrogen established across industry, transport, power, and heating sectors.



FIELD OF ACTION 1

Ensuring Hydrogen Availability

95–130 TWh

Estimated total hydrogen demand by 2030

50–70% Imports

Ammonia, methanol, LOHC, liquid H₂, and future pipeline imports

Domestic production via renewable-powered electrolysis (10 GW target). Import strategy upholds sustainability, human rights, and OECD/UN standards.

FIELD OF ACTION 2

Building Hydrogen Infrastructure

National H2-Startnetz

1,800 km network by 2027/28

Import Terminals

Ports and receiving facilities for imports



European Backbone

Seamless integration with EU network

Storage & Transport

LOHC, IPCEI, TransHyDE technologies

A fully integrated infrastructure connects domestic production with European and global supply chains, underpinning Germany's long-term hydrogen security.

Establishing Hydrogen Applications



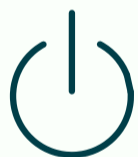
Industry

Replacing grey hydrogen; transforming steel, chemicals, and refineries.



Transport

Heavy-duty (N3), aviation, shipping — supported by NIP and renewable fuels.



Power Sector

H2-ready gas plants and system-serving electrolyzers for grid stability.



Heating

Evolving framework under GEG and EU gas package legislation.



FIELD OF ACTION 4

Effective Framework Conditions

→ **Faster Permitting**

Streamlined planning and administrative procedures for hydrogen projects.

→ **Sustainability Standards**

LCA-based CO₂ thresholds and certification frameworks.

→ **Innovation & Skills**

Strengthened R&D, decentralised production support, and workforce training.

NWS 2023 Roadmap

1

2023 — Short-Term

IPCEI funding, RED II implementation, 500 MW annual offshore electrolysis tenders, NIP projects launched.

2

2024–2025 — Mid-Term

Programme revisions, H2Giga scale-up, innovation pipeline development and market ramp-up.

3

2030 — Long-Term Goals

10 GW electrolysis capacity, established applications across all sectors, full infrastructure integration.



Germany's hydrogen transition is a structured, decade-long commitment — combining domestic production, European cooperation, and global import diversification.