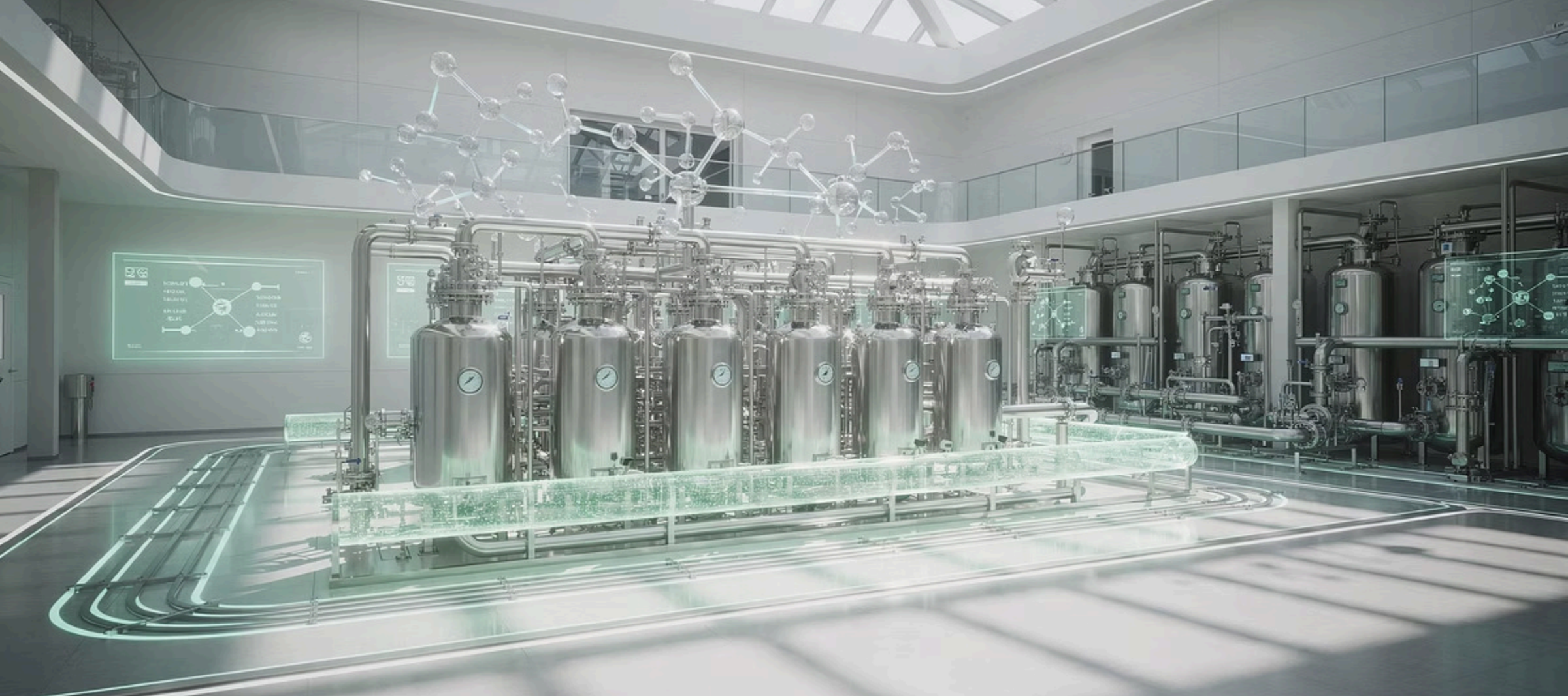


Germany's National Hydrogen Strategy

Key Goals, Opportunities, and Fields of Action

Federal Ministry for Economic Affairs and Energy — June 2020

OFFICIAL STRATEGY DOCUMENT

GREEN HYDROGEN

CLIMATE NEUTRALITY

WHY HYDROGEN MATTERS

The Case for Hydrogen

Hydrogen is central to Germany's path toward climate neutrality and fulfilling its commitments under the Paris Agreement. It enables deep decarbonisation in sectors where direct electrification remains technically or economically unfeasible.

Energy Storage

Balances fluctuating renewable energy supply across seasons and sectors

Sector Coupling

Bridges industry, transport, heat, and power systems

Green Option

Only green hydrogen — produced via renewables — is the long-term sustainable solution

STRATEGIC OBJECTIVES

Strategic Goals & Ambitions

Germany's hydrogen strategy sets clear national and international ambitions, anchoring hydrogen as both an industrial and geopolitical priority.

1

Global Climate Responsibility

Take global responsibility for climate mitigation through hydrogen-led transitions

2

Economic Competitiveness

Make hydrogen commercially viable and cost-competitive at scale

3

Domestic Market & Imports

Build a strong home market while preparing strategic import infrastructure

4

Industrial Feedstock

Position hydrogen as a sustainable input for hard-to-abate industrial processes

5

Industry Leadership

Strengthen German industry's global competitiveness in hydrogen technologies

FIELDS OF ACTION

Key Fields of Action

The strategy defines six critical domains where coordinated policy, investment, and regulation are required to build a functioning hydrogen economy.

Production

Domestic electrolysis expansion and strategic import partnerships

Transport & Distribution

Conversion of gas networks and dedicated H_2 pipeline development

Industrial Applications

Steel, chemicals, and refinery sector decarbonisation

Mobility

Heavy-duty road, aviation, and maritime transport applications

Research & Innovation

Programmes spanning the full hydrogen value chain

International Cooperation

Building global markets and sustainable supply chains

MARKET DEVELOPMENT

Hydrogen Market Development

Germany's current hydrogen consumption is approximately **55 TWh**, almost entirely grey hydrogen derived from fossil fuels. Demand is projected to rise substantially by 2030, particularly in industry and transport.

55 TWh

Current Demand

Predominantly grey hydrogen from fossil fuels

2030

Target Horizon

Significant demand increase expected across industry and transport

Import Dependency

Domestic renewable capacity is insufficient to meet future demand — strategic imports from EU and global partners are essential to bridge the gap.

Offshore Wind & PtX

Offshore wind generation and Power-to-X fuels will play a critical role in scaling green hydrogen supply both domestically and internationally.

INFRASTRUCTURE

Infrastructure & Safety Framework

A reliable, safe, and certified hydrogen infrastructure is a prerequisite for market development. The strategy calls for systematic expansion of distribution, storage, and quality assurance systems.

01

Network Adaptation

Expand and repurpose existing gas networks for hydrogen transport and delivery

02

Storage Systems

Develop robust large-scale hydrogen storage and distribution capacity

03

Safety Standards

Establish comprehensive technical safety and quality assurance norms

04

Certification & Metrology

Ensure rigorous certification, technical norms, and measurement frameworks for hydrogen use

R&D & WORKFORCE

Research, Innovation & Workforce

Germany's hydrogen strategy places research and human capital at its core, recognising that technological leadership and skilled labour are indispensable for long-term success.

Value Chain R&D

Long-term research across production, storage, distribution, and end-use

Regulatory Sandboxes

Accelerate market-ready technologies through controlled real-world testing environments

Pilot Funding

Financial support for hydrogen R&D, pilot projects, and industrial-scale demonstrations

Education & Training

Strengthen scientific excellence, vocational training, and workforce readiness

INTERNATIONAL COOPERATION

International Cooperation

Germany recognises that a functioning global hydrogen market is essential — not only for domestic supply security but as a vehicle for advancing international energy transitions.

Global Market Development

Establish international hydrogen trade routes and sustainable supply chains in partnership with key producer nations

Supporting Partner Countries

Help partner nations build renewable-based hydrogen production capacity without hindering their own energy development

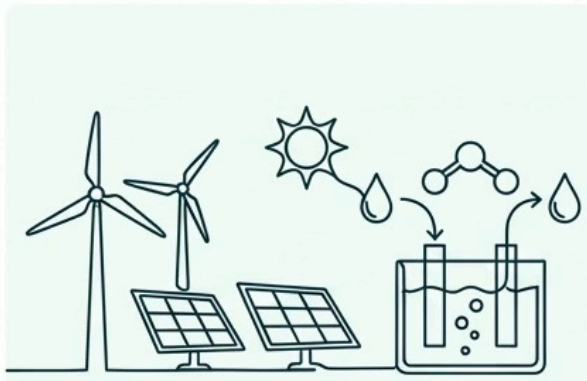
Hydrogen Diplomacy

Promote hydrogen cooperation through EU frameworks, bilateral agreements, and multilateral global platforms

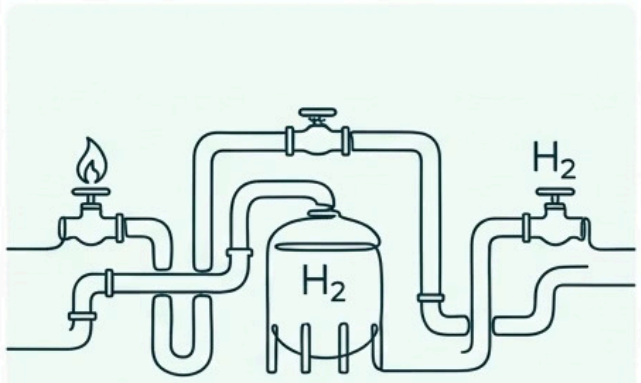
SUMMARY

The Hydrogen Strategy at a Glance

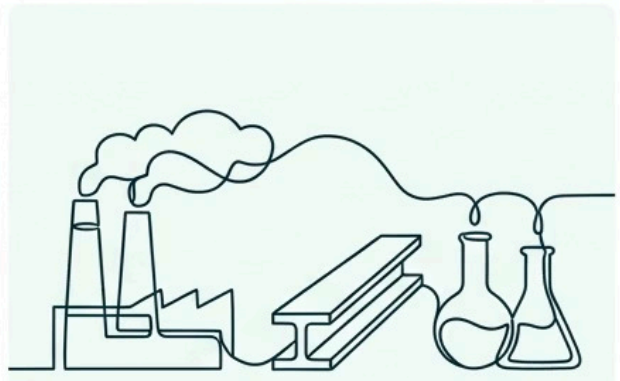
Six interconnected pillars define Germany's approach to building a hydrogen economy by 2030 and beyond.



Pillar 1: Green Production
- Domestic electrolysis & imports

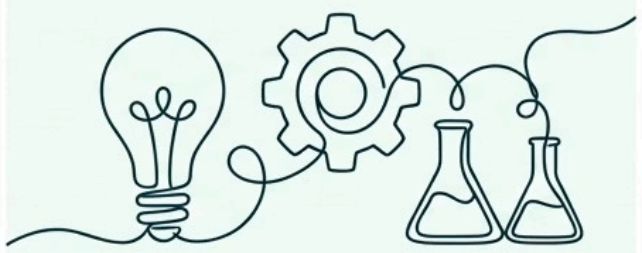


Pillar 2: Infrastructure -
Gas network adaption, H2 pipelines



Pillar 3: Industrial Use -
- Steel, chemicals, refineries

Pillar 4: Mobility -
Heavy-duty, aviation, maritime



Pillar 5: Research & Innovation - R&D funding, regulatory sandboxes

Pillar 6: International Cooperation - Global supply chains, H2 diplomacy

All six pillars are designed to act in concert — no single field of action is sufficient without the others. The strategy emphasises systemic, coordinated implementation.

Germany's Hydrogen Future Starts Now

The National Hydrogen Strategy charts a comprehensive course toward a climate-neutral, hydrogen-powered economy — grounded in scientific rigour, industrial ambition, and international solidarity.

> Green hydrogen is not just an energy carrier — it is a cornerstone of Germany's industrial transformation and global climate leadership.
> *— National Hydrogen Strategy, Federal Ministry for Economic Affairs and Energy, June 2020*

Found this useful? **Share this carousel** with colleagues in energy policy, industry, and sustainability — and tag a leader who should know about Germany's hydrogen roadmap. 🌿⚡

NATIONALHYDROGENSTRATEGY GREENHYDROGEN ENERGYTRANSITION