

DECARBONIZING GERMAN INDUSTRY WITH H2: COLLABORATION AND PARTNERSHIP/ INNOVATION AND TECHNOLOGY

HYDROGEN EUROPE 2025

Raphaël Goldstein (Dipl.-Ing. Univ.) Co-Leader Hydrogen Project Group www.gtai.com

Collaboration and partnership

Energy

Chemical industry

18%

69%

Germany imported 69% of its primary energy consumption. 92% of it is based on fossil ressources (oil, gas and hard coal)

Approximately 18% of these fossil ressources are used as raw material (mostly crude oil and gas). The chemical industry is also the largest consumer of natural gas followed by the metal sector

Germany's National Hydrogen Strategy (NWS) Updated and supported by further strategies



H₂ production

- Expected H₂ demand of 95-130 TWh by 2030
- 2030 target of up to 10 GW of H₂ capacity



Transport sector

- Priority on air, maritime and heavy duty
- Implementation of RED II with ambitious national targets and RED III
- 2% e-kerosene quota by 2030



Industry/energy

- Carbon Contracts for Difference
- Markets for climateneutral products
- Carbon management strategy
- H₂ in the energy sector



- Hydrogen import strategy
- Funding for pilot projects in partner countries

A new team and a new name Federal Ministry for Economic Affairs and Energy



A new coalition: a new program Take aways for gas, CO2 and hydrogen

•20 GW gas power plants by 2030, prioritizing existing sites

•CCS/CCU recognized as crucial for climate policy

- Introduction of a green gas quota
- •H2 import strategy
- •Expansion of the hydrogen network

Key elements: Power plant, CCU/CCS (carbon capture utilization/storage), hydrogen, green gas



Our advisory services include:

- Market-entry strategy development support
- Tax and legal information and support
- Funding and financing options advice
- Location identification, location visit support

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Contact

Raphael Goldstein T +49 (0)30 200 099-140 raphael.goldstein@gtai.com

Berlin

Friedrichstraße 60 10117 Berlin www.gtai.com



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Innovation and technology

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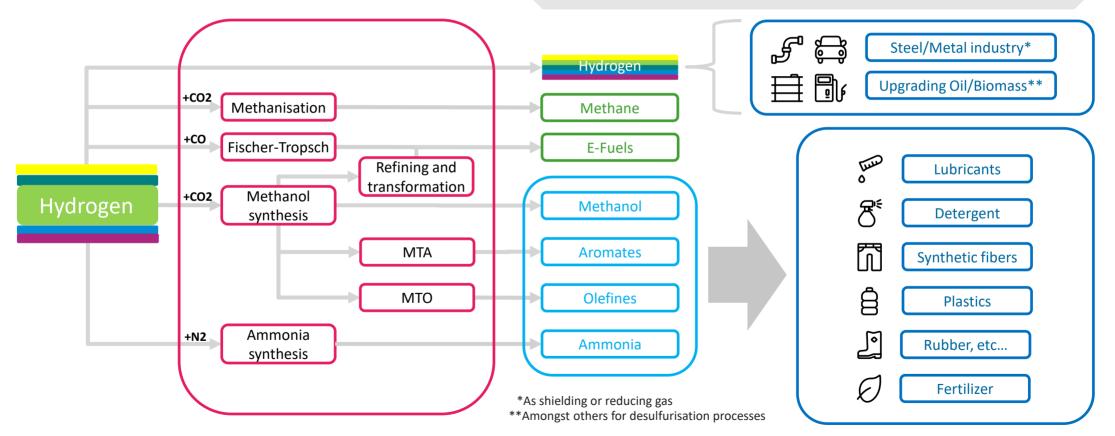
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From basic to final product

Greening the whole value chain with H2 and new processes

H2 final use as raw material



A new coalition: a new program Further take aways for the industry

•Promotion of biotechnology, chemical recycling, CCU/CCS technologies

•Competitiveness: Measures to protect against carbon leakage

•CO₂ pricing: Extended to more sectors, genuine offset measures, use of international carbon certificates

•Storage technologies: Development of H₂, batteries, CO₂, pumped storage

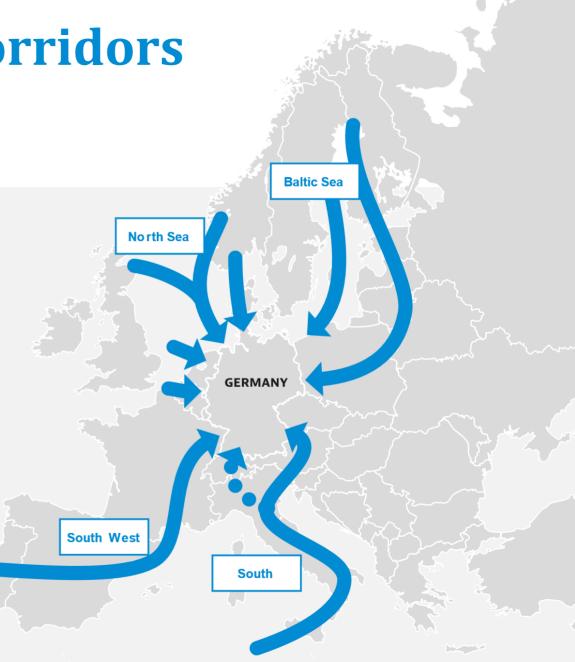
Innovation, CO2, storage as key enablers

Key hydrogen import corridors to central europe

Supply corridors of the European Hydrogen Backbone Initiative

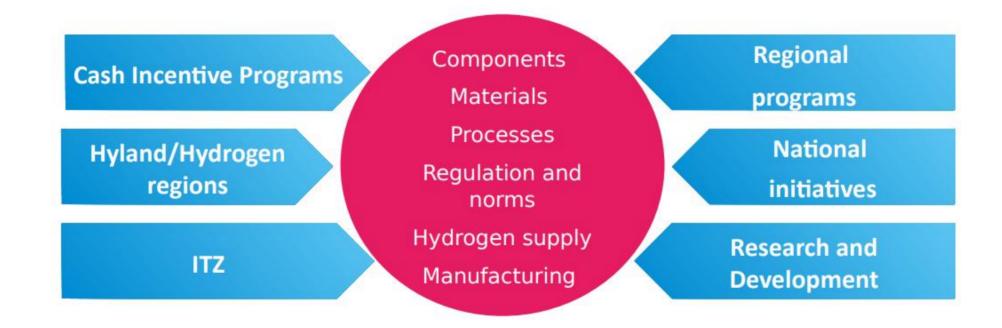
German hydrogen core network

- 9,040 kilometres of pipelines
- Around 60% of which are natural gas pipelines that will be converted to hydrogen
- The total investment costs are expected to be €18.9bn



Source: Federal Ministry for Economic Affairs and Energy

Get into the German hydrogen economy Many ways and means



Sources: BMU, NOW GmbH, European Commission, GTAI research, BMWK 2023



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10

(installed electrolyzer capacity)

The EU hydrogen strategy

- A global hydrogen market
- A progressive trajectory
- New investments

40 GW (installed electrolyzer capacity)

The German hydrogen strategy

- 9 billion €
- A policy framework
- 38 measures

A new coalition: a new program Main topics

•Renewable energy expansion aligned with grid development. Details with EEG reform

•Demand-oriented grid development. Single electricity bidding zone

•Coal phase-out by 2038 remains unchanged

•New transmission lines as overhead lines

•Commitment to climate neutrality by 2045

Focus on Renewable Energy, grid Modernization, Commitment to Climate Neutrality