

The role of hydrogen under the German government

Working together for a successful global energy transition

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Climate and Energy Cooperation with Asia

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Objectives of Germany's National Hydrogen Strategy



Establish international markets and cooperation for hydrogen to **bring down the cost globally**

Develop a “home market” with focus on hard to abate sectors ready for **imports**

Germany's national hydrogen strategy has been elaborated based on a broad stakeholder dialogue



2019:
Stakeholder
dialogue on National
Hydrogen Strategy
across ministries



3 June 2020:
Coalition decision
on stimulus package,
incl. €9 billion
for hydrogen



2019:
Stakeholder Dialogue 'Gas
2030' with Industry,
Building Sector, Transport
Sector, Power Sector and
Ministries



10 June 2020:
Cabinet adopts
National
Hydrogen
Strategy

A concrete action plan lays out the necessary steps to make a success of Germany's hydrogen strategy

Hydrogen production

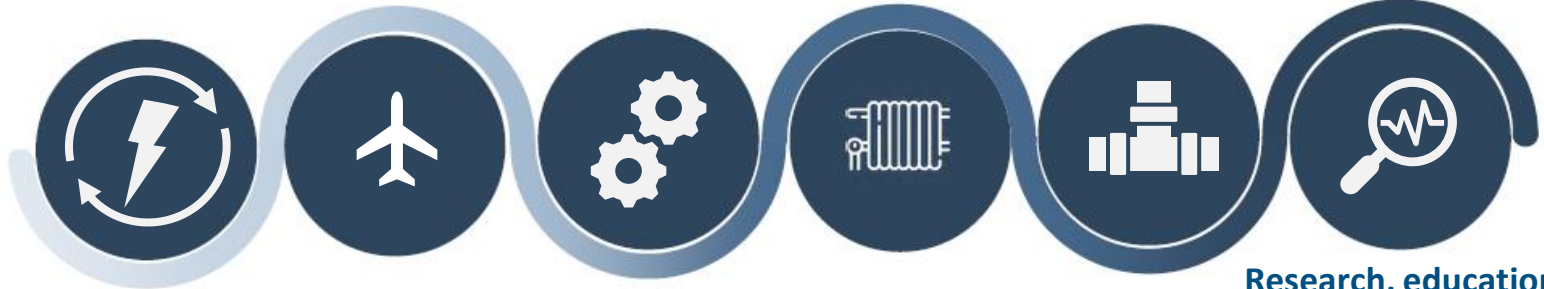
- Now 10 GW electrolyzer capacity by 2030 including renewable generation
- Additional 5 GW by 2040 considered

Industry

- Pilot program for Carbon Contracts for Difference (CfD)
- Sector-specific dialogue formats

Infrastructure and supply

- Stakeholder process to identify actions needed to establish hydrogen infrastructure
- Improve link between electricity, heat and gas sectors



Transport

- Implementation of the EU Renewable Energy Directive (RED II)
- 2% e-kerosene quota by 2030

Heat

- Incentivize 'hydrogen-readiness' for CHP plants
- Funding of funding fuel-cell heating systems

Research, education and innovation

- National and international demonstration projects on green hydrogen
- Research campaign entitled 'Hydrogen Technologies 2030'

Germany's National Hydrogen Strategy supports the development of hydrogen markets



H₂ production

- Expected H₂ demand of 90-110 TWh by 2030
- **2030 target of up to 10 GW green H₂ capacity**
- Additional 5 GW by 2040 being considered



Transport sector

- **Priority on aviation and shipping**
- Transport sector renewable energy target beyond EU Directive
- 2% e-kerosene quota by 2030



Industrial sector

- Carbon Contracts for Difference
- Markets for climate-neutral products
- **H₂-based long-term decarbonisation strategies**

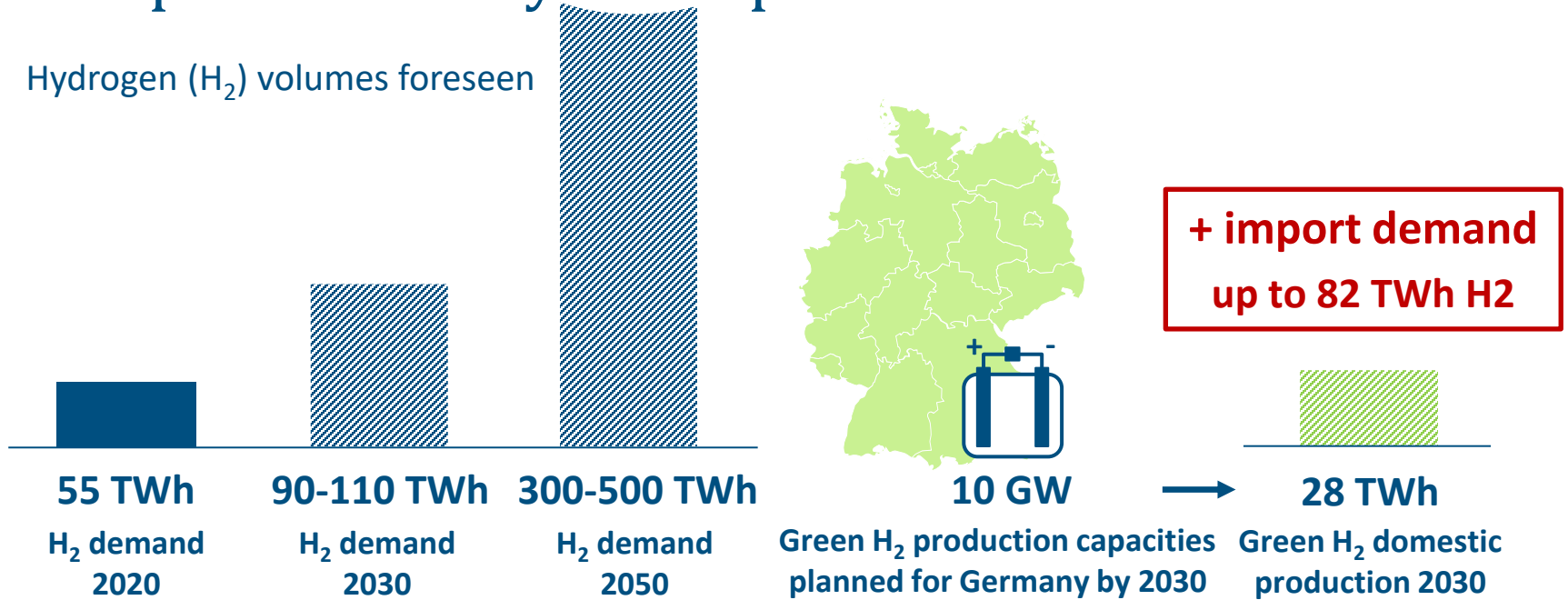


International cooperation

- **Importing green H₂ from beyond EU**
- **Bring down the cost globally**
- €2 bn in funding for pilot projects in partner countries

Germany develops a domestic market for hydrogen and paves the way for imports

Hydrogen (H₂) volumes foreseen



Germany provides targeted funding instruments to support green hydrogen projects worldwide



H2Global: Auction-based promotion of international green hydrogen projects



H2Uppp: H2Uppp accompanies and supports efforts to ramp up the market for green H2 and PtX applications in cooperation with the private sector



National **Funding Guideline** for bilateral hydrogen projects in non-EU countries



Individual project funding (e.g., grants for agreed with partners of Govt. of Germany)

Progress report on the implementation of the Strategy

- Time period: June 2020 until December 2021; Published on June 2nd, 2022
- Purpose: Constant and systematic monitoring of the progresses in the implementation
- Identification of 7 strategic goals of the Strategy and assignation of the 38 measures described in the Action Plan
 1. Creation of the regulatory framework conditions for the market ramp-up of hydrogen, including uniform sustainability standards.
 2. Generation capacities for green hydrogen and its derivatives in Germany.
 3. Ramp-up of the infrastructure for hydrogen value chains, including hydrogen refueling stations.
 4. Competitiveness of green hydrogen and its derivatives.
 5. Decarbonization of the transport and industrial sectors using hydrogen.
 6. Germany as a leading supplier in the field of green hydrogen production and application technologies.
 - 7. International cooperation (within and outside the EU) about hydrogen imports and technology exports.**





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Thank you for your attention!

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