Federal Ministry
for Economic Affairs
and Climate Action

Hydrogen Market Ramp-Up in Germany

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Deputy Head

General issues of bilateral climate and energy cooperation

Germany adopts ambitious climate measures to achieve climate neutrality by 2045

Renewable Energy Act
80% renewable electricity consumption by 2030, almost 100% by 2035.

Wind power
2% of Germany's national land territory will be reserved for wind power. (2022: 0.5%).

Electricity prices
Renewable energy levy will be financed through general state budget.

Solar PV
Target increased to 215 GW by 2030 (2022: 67.4 GW).

Carbon Contracts for Difference (CCfDs)
Germany will launch CCfDs to support the industrial transformation.

Heating Strategy
By 2030, 50% of total heat is to be generated in a climate-neutral way.

Energy Efficiency
From 2025, all new buildings are to comply with Efficiency House 40 standard

Hydrogen
Germany will increase the target for electrolysers to 10 GW by 2030.

Source: Guidehouse 2022 based on UBA 2023; Icons from Flaticon.com

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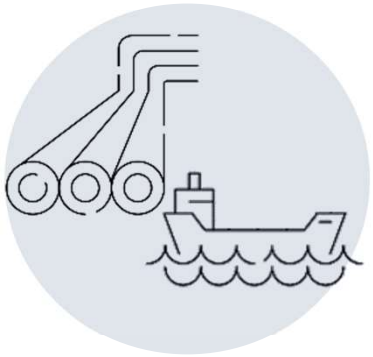
Adopted measures
Announced measures

The projected total hydrogen demand is 95-130 TWh by 2030

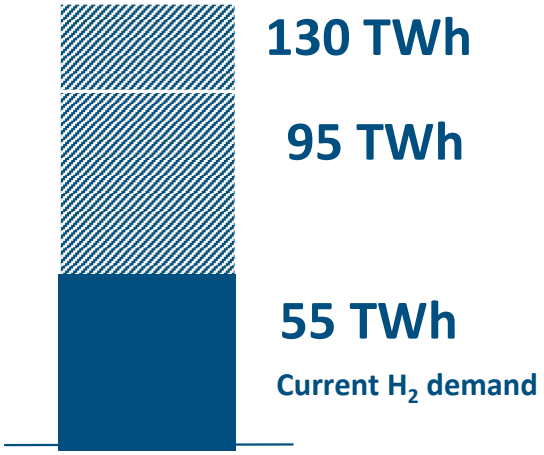
At least 10 GW

Domestic H2 generation up to 2030



45-90 TWh

Projected H2 and derivatives imports up to 2030



95-130 TWh

Projected total H2 and derivatives demand by 2030

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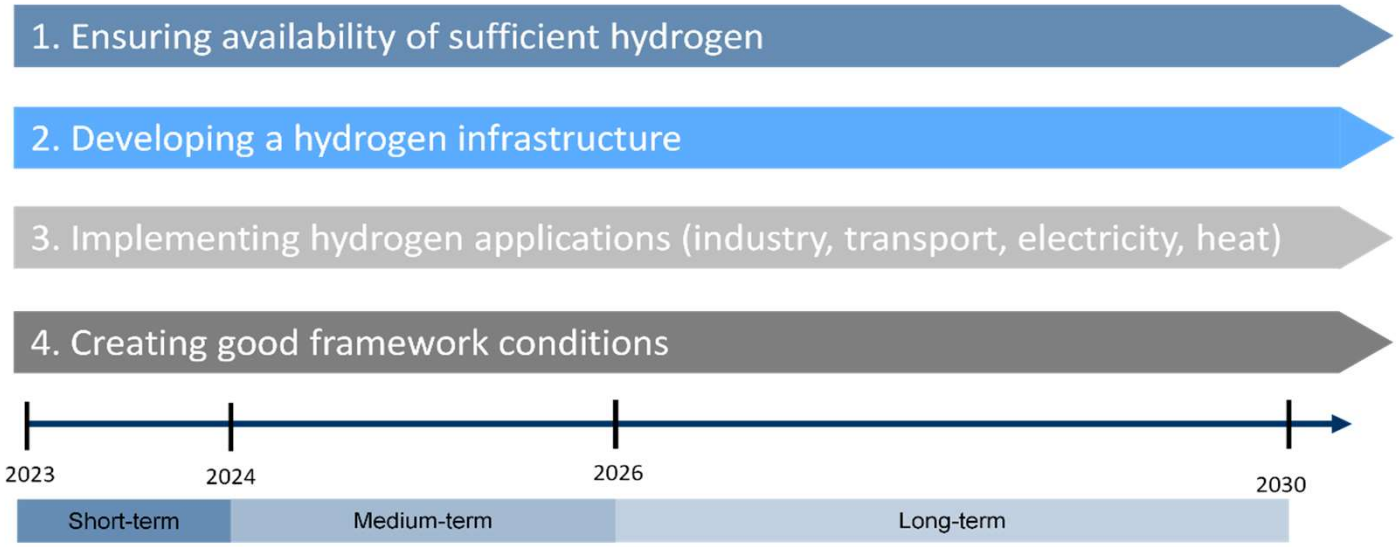
Fields of action and objectives of the 2023 NHS

Phase 2: Accelerated market ramp-up

Fields of action of the NHS update



Cross-cutting field of action

Germany to become a **leading provider** of hydrogen technologies **by 2030**

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H2 generation in Germany

- Doubling the domestic electrolysis target from 5 GW to at least 10 GW by 2030
- Majority of electrolysers to be located and operated in a way that serves the electricity system by 2030
- 2023 NHS creates the conditions for developing a suitable mix of instruments to expand the production of hydrogen and direct promotion/support for generation of green hydrogen and derivatives in Germany

Source: GIZ 2023 based on BMWK 2022
Icons: Flaticon.com

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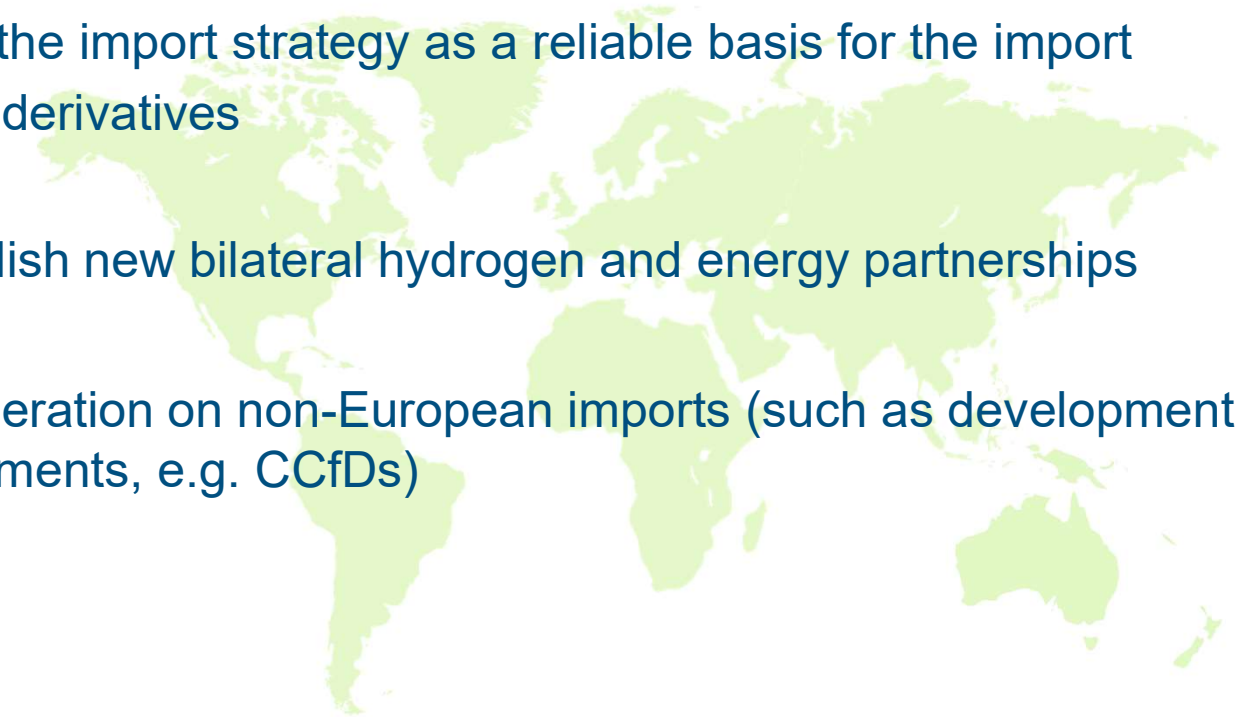
Import of H2 and derivatives

- The key instrument will be the import strategy as a reliable basis for the import of hydrogen and hydrogen derivatives
- Deepen existing and establish new bilateral hydrogen and energy partnerships
- Strengthen European cooperation on non-European imports (such as development of European support instruments, e.g. CCfDs)



Source: GIZ 2023 based on BMWK 2022
Icons: Flaticon.com

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European hydrogen corridors

To facilitate the import of up to 10 million tonnes of renewable hydrogen the European Commission will support the development of three major hydrogen import corridors:

- Via the Mediterranean
- The North Sea area
- With Ukraine

Figure 1: Potential H_2 supply corridors, European Commission, RePowerEU Communication Action Plan, May 2022.

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Import infrastructure

Connection to the European Hydrogen Backbone by 2027/28, which in a first stage provides for a total of 4,500 km of upgraded or new pipelines throughout Europe

Further expansion efforts alongside priority corridors: the North and Baltic Sea regions as well as the connection to North Africa via FRA, ESP and PRT (H2Med) or via AUT and ITA (Southern Corridor)

For the import of derivatives from third countries, the government plans to promote the construction of H2 or derivative-ready import terminals on the German coasts and establish safe, sustainable shipping routes

Source: GIZ 2023 based on BMWK 2022
Icons: Flaticon.com

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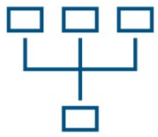
Procedures and clear sustainability standards



Digitalisation & Simplification of planning and approval procedures for electrolysers and for the construction of transport, storage, refuelling and import infrastructure

Increasing capacities and resources in administration (e.g. Federal Network Agency)

Clear requirements for accrediting green H2 (e.g. within the framework of CCfDs and quotas for transport and industry) and implementation of EU requirements (RED III, delegated acts, register of guarantees of origin)

Develop internationally recognised and robust methodology for calculation of the GHG footprint

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Source: GIZ 2023 based on BMWK 2022
Icons: Flaticon.com

Germany provides targeted funding instruments to support green hydrogen projects worldwide

Germany's H2 funding schemes

- H2Global: Auction-based promotion of international green hydrogen projects
- **H2Uppp**: Provision of supporting services to small private-sector projects
- **PtX Development Fund**
- National **Funding Guideline** for bilateral hydrogen projects in non-EU countries
- **Individual project funding** (e.g., grants for projects in Saudi-Arabia and Chile in Dec. 2020)

Source: GIZ 2023 based on BMWK 2022
Icons: Flaticon.com

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Thank you
for your attention!

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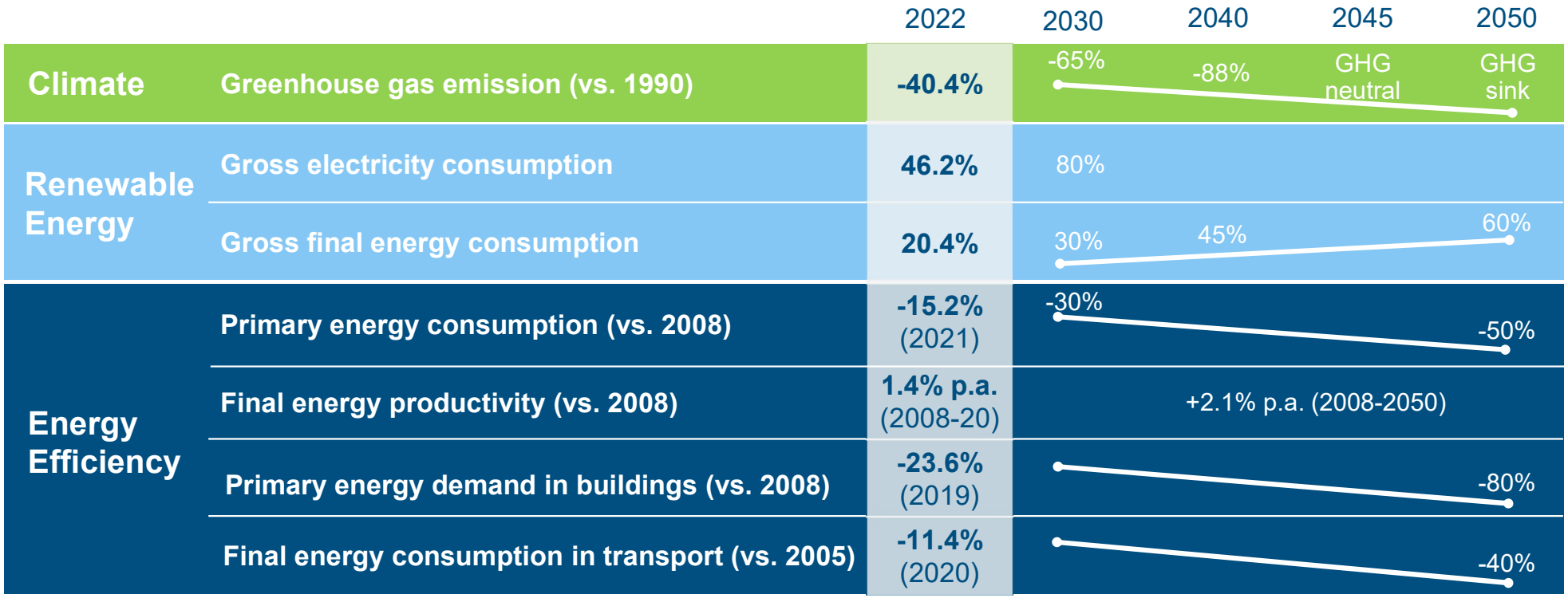
Additional Information

The Energiewende is Germany's long-term energy and climate strategy



Source: Guidehouse 2023 based on UBA 2023 & BMWK 2021

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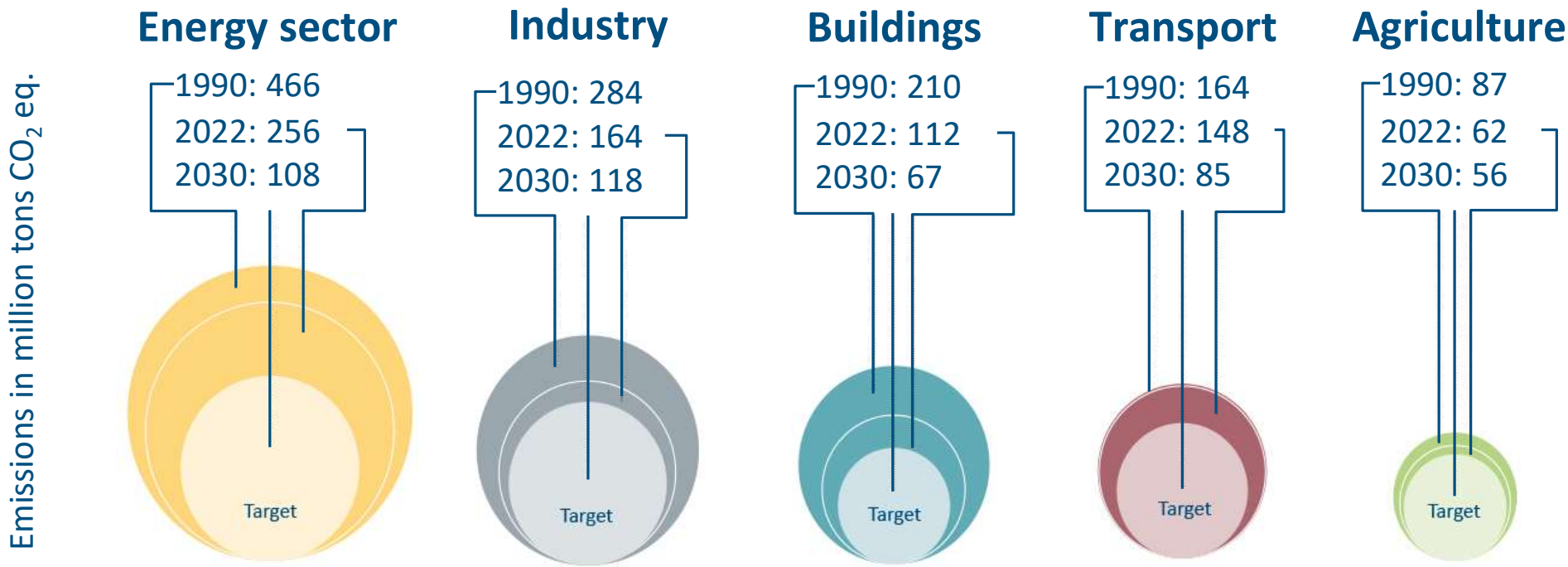
Germany's Climate Change Act defines sectoral emission targets for 2030

The German government is currently revising the Climate Change Act



Source: Guidehouse 2023 based on UBA 2023

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Total emission target 2030: < 438 million tons of CO_2 equivalent