







Source: Guidehouse 2022 based on BMWK 2022 & BMWK 2020

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

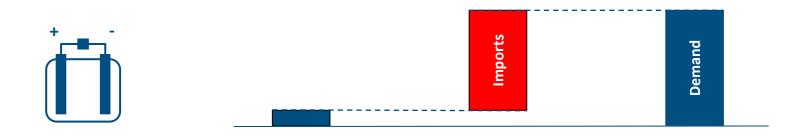




Source: Guidehouse 2020 based on BMWK 2020

Around 90% of green hydrogen required in Germany to be imported

Germany will remain an importer of energy also in a climate neutral world



10 GW

Green H₂
production
capacities planned
for Germany 2030

28 TWh

Green H₂
domestic
production in
Germany 2030

62 - 82 TWh

H₂ demand to be covered by **imports** in 2030 90 - 110 TWh

Total H₂ demand expected in Germany 2030 mainly for green steel and petrochemicals



Green Hydrogen Trading starting in Germany

Deadline Green Ammonia: 28 Feb. 2023 Deadline Green Methanol + SAF: 11 April 2023 **H2**Global Stiftung Hintco Federal Ministry for Economic Affairs and Climate Action

Long term purchase agreements at subsidized price Tender for green ammonia + methanol and SAF +4.3 bio EUR grant earmarked for countries outside EU https://www.bmwk.de/Redaktion/EN/Dossier/marketconsultation-H2Global.html



European trading of green hydrogen in the making by European Energy Exchange (EEX) https://www.eex.com/en/services/hydrogen



H2Cloud by beyondgas AG & Co. KG in the making https://www.beyondgas.de/h2cloud



Carbon Finance Revenue for Green Hydrogen Projects











- 2,2 6,7 Mio. EUR annual revenue from green H2 certificate sales estimated for a 100 MW green H2 project with certificate prices projected to range between 10 and 30 EUR per tonne CO2
- First contracts foreseen to be signed in 2023
- More info: www.hydrogenfornetzero.org
- Webinar took place on 15 February 2023.
 Recording can be found here.



Grant Funding for Indo-German Green Hydrogen Projects





- German Funding Guideline with focus on Research
- Up to 15 Mio. EUR grant per green H2 project
- German investor required
- More info: https://www.ptj.de/en/project-funding/internationalhydrogen-projects-bmwk-module-1



Since 2022 Indo-German Cooperation on Green Hydrogen

Political partner is the Ministry of New and Renewable Energy (MNRE)



- Focus on private sector and specific green hydrogen project development under PPP model
- Up to 2 million EUR grant for IND-GER green H2 projects
- At least 100,000 EUR (in-kind) contribution by German partner required
- CAPEX participation in exceptional cases
- More info: pooja.bose@giz.de



DEG Impulse Fund

Technical (Pre-)Feasibility Studies in India



and Development

- Co-financing of feasibility studies and other measures
- Typical project size of +60 Mio. EUR
- More info: info@degimpulse.de



PtX Development Fund (250 million EUR)





- Support to organize structured project financing
- Grants and conventional promotional loans containing market funds can be combined
- More info: PtX-Financing@kfw.de



PtX Growth Fund (300 million EUR)





- Financing of commercial large-scale GH2 plants and corresponding RE sources
- Accessible for European companies and consortia with Indian companies
- More info: PtX-Financing@kfw.de









धन्यवद

