

Federal Ministry for Economic Affairs and Climate Action

Scenario-based hydrogen policy-making: Experiences from Germany

IRENA Fifth International Forum on Long-Term Energy Scenarios

Long-term scenarios with coupled models allow high-resolution analyses. Aim: explore potential solutions and identify robust transformation paths.





Further scenarios

Source: Federal Ministry for Economic Affairs and Climate Action (BMWK)

More information at www.langfristszenarien.de

Energy demand: Bottom-up modelling of industry, transport and building sectors Energy supply: Europe-wide optimization of electricity and H2 generation







H2 demand German industry

Electrolyser location in 2045

H2 trade in Europe in 2045



Robust key findings of the scenarios are the basis for (i) an integrated approach to system planning, and for (ii) specific policy strategies



Around 50-70% of Germany's H2 demand need to be covered by imports

Federal Ministry for Economic Affair and Climate Action

Published July 2024

Demand for molecular H2 will mostly be covered by pipelines, demand for H2 derivates by ship



and Climate Action



Molecular H2 by **pipeline**





H2 derivatives by ship

About 40 international partnerships contribute to a broad diversification of H2 supply



Source: German Federal Government 2024





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Thanks for your attention!