

The German hydrogen core network

bayernets GmbH, Simona Rens
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Our company

bayernets GmbH is the Bavarian transmission system operator.

headquarters
Munich

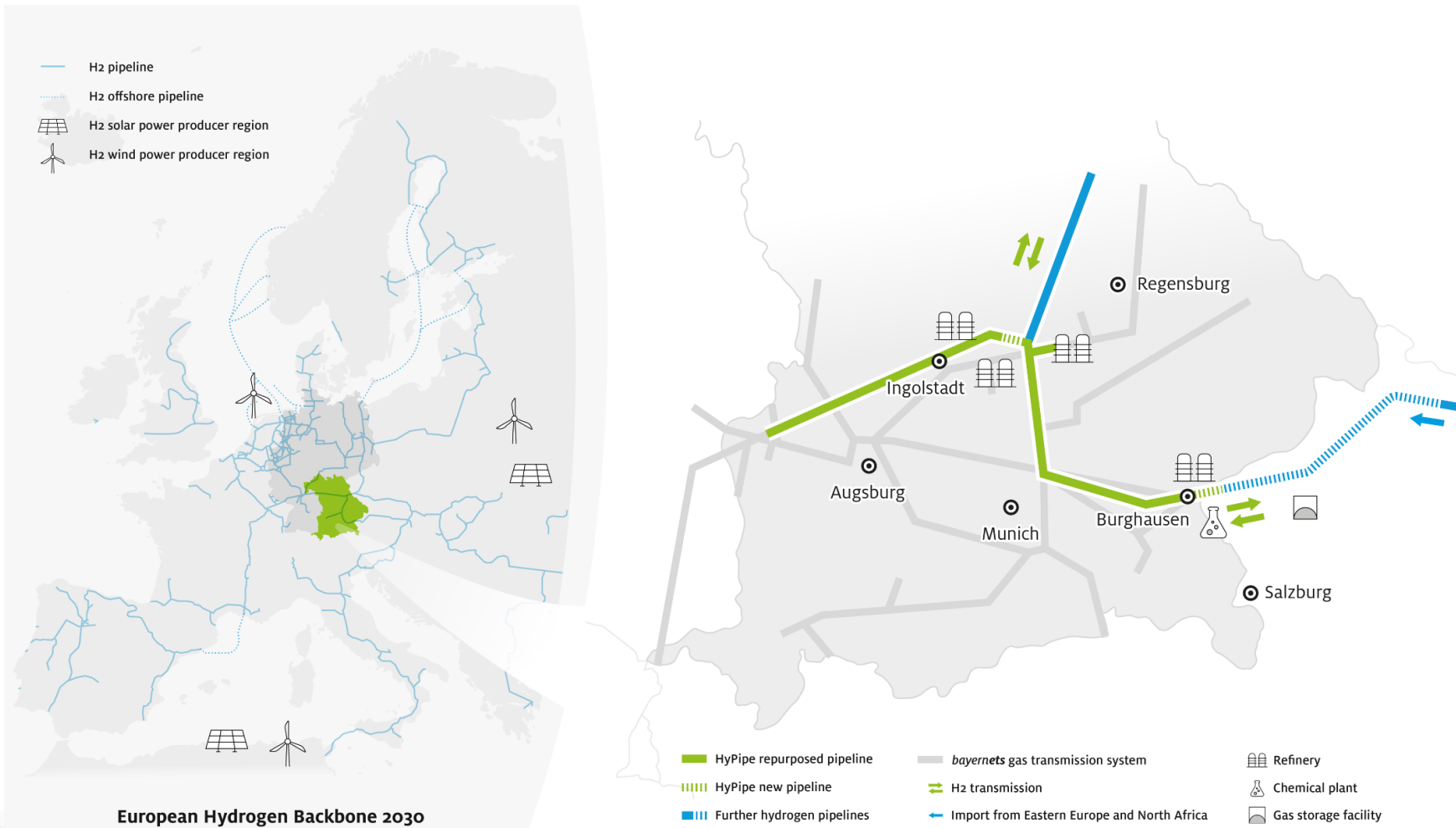
foundation
January 1st, 2007

number of employees
150
(status 31.12.2023)

shareholder
Bayerngas GmbH (59,1 %)
Stadtwerke München GmbH (32,4 %)
Stadtwerke Augsburg Holding GmbH (8,5 %)



The future South Bavarian hydrogen transmission network



The German hydrogen core network

- first stage of hydrogen ramp-up

Goal: fast and cost-efficient establishment of a nationwide and expandable hydrogen core network

- Top-down-approach to hydrogen requirements
- Planned commissioning by December 31, 2032 with the option of timely flexibilisation until 2037*
- Obligation of the pipeline operators to cooperate
- Consultation of the hydrogen core network with the market



Draft presentation of the German Core Hydrogen Network, Source: BMWK 2023

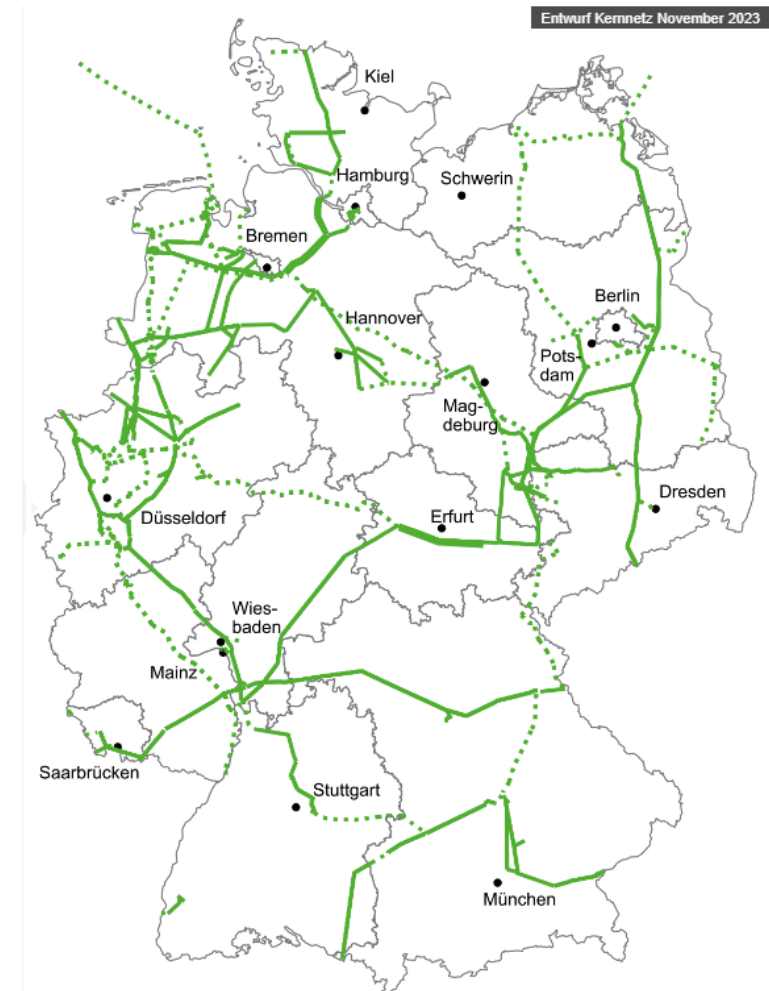
*Status: 9.04.2024; Compromise of the German coalition (SPD, Grüne, subject to the approval of the Free Democrats) on the 5th April 2024

The German hydrogen core network

- first stage of hydrogen ramp-up

Requirements for the inclusion in the hydrogen core network (Energy Industry Act)

- Necessary to establish a European hydrogen network
- Necessary grid for connecting areas of high industrial demand, hydrogen power plants, hydrogen ready power plants, hydrogen storage and hydrogen generation plants or
- Improving the integration of hydrogen import points or electrolysers



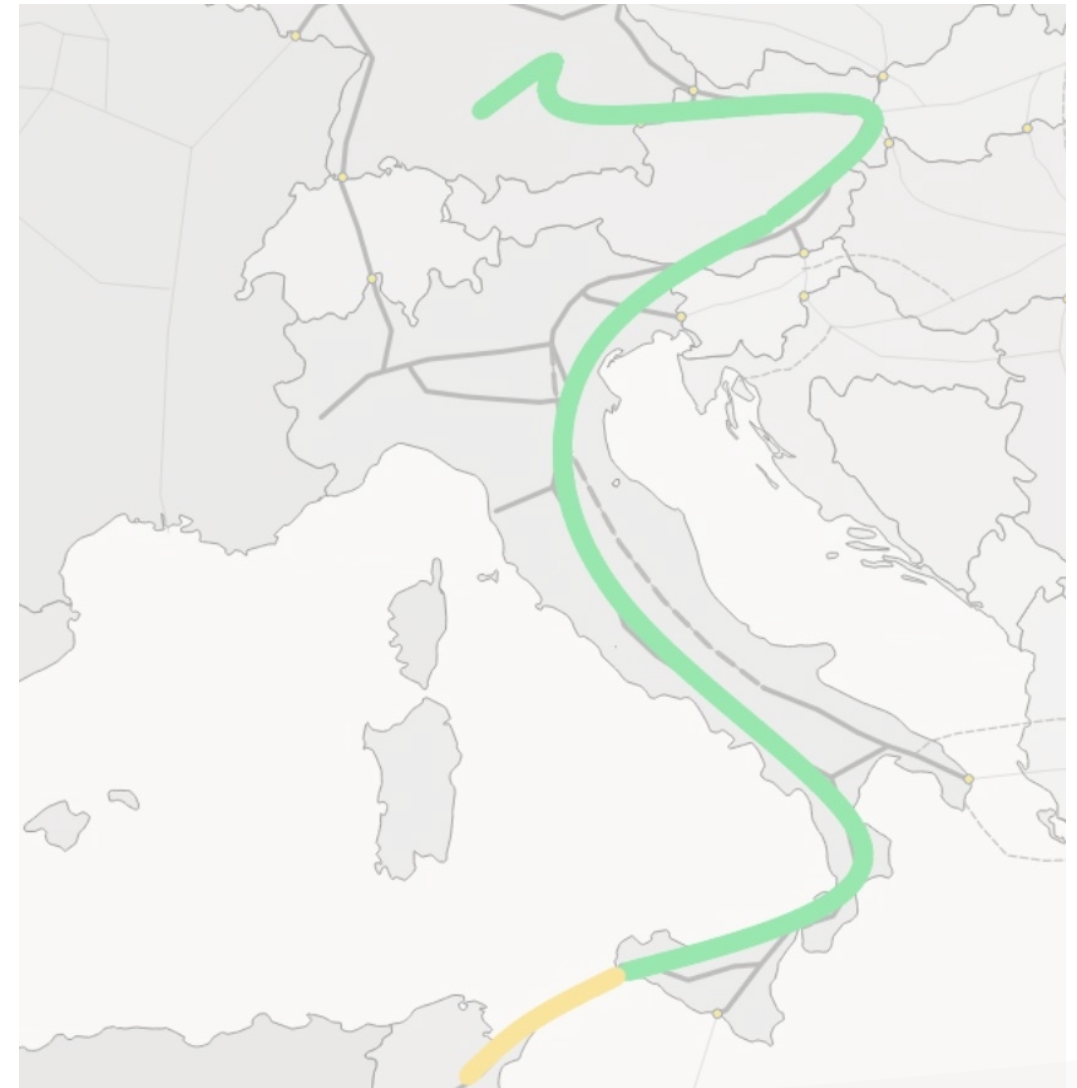
Key data for the design of a core network
Source: FNB Gas 2023

Important steps towards the realisation of the hydrogen core network

- Hydrogen needs were used to design the core network
- No prioritisation of reported hydrogen inquirements
- Core network grid projects with planned commissioning after 2027 will be examined in the integrated network planning (gas and hydrogen)
- Submission of the application for the H2 core grid by the TSOs (21. May 2024) followed by a short consultation perio
- Approval of the core network (summer 2024)
- After the authorisation by the federal network agency (BNetzA) the network operators could start building the infrastructure

South_{H₂}Corridor

- Led by the TSOs: Snam, TAG, GCA and bayernets
- Each individually submitted Project of Common Interest (PCI) applications
- The corridor connects North Africa, Italy, Austria and Germany
- The South_{H₂}Corridor enables the import of low-cost renewable hydrogen from Algeria (138-149 €/MWh) and Tunisia (148-156 €/MWh)



Diversification of national import routes

- Market demand of hydrogen in 2030:
 - National hydrogen demand of 95-130 TWh
 - Bavarian hydrogen demand of 30.6 TWh
- National import demand of around 45-90 TWh (50-70 %) in 2030
- SouthH₂Corridor establishes the necessary import route:
 - Length 3,300 km
 - More than 70 % repurposed pipelines
 - > 4 Mtpa green hydrogen potential 2030
 - In operation in 2030



Contact and further information



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H₂ für Bayern