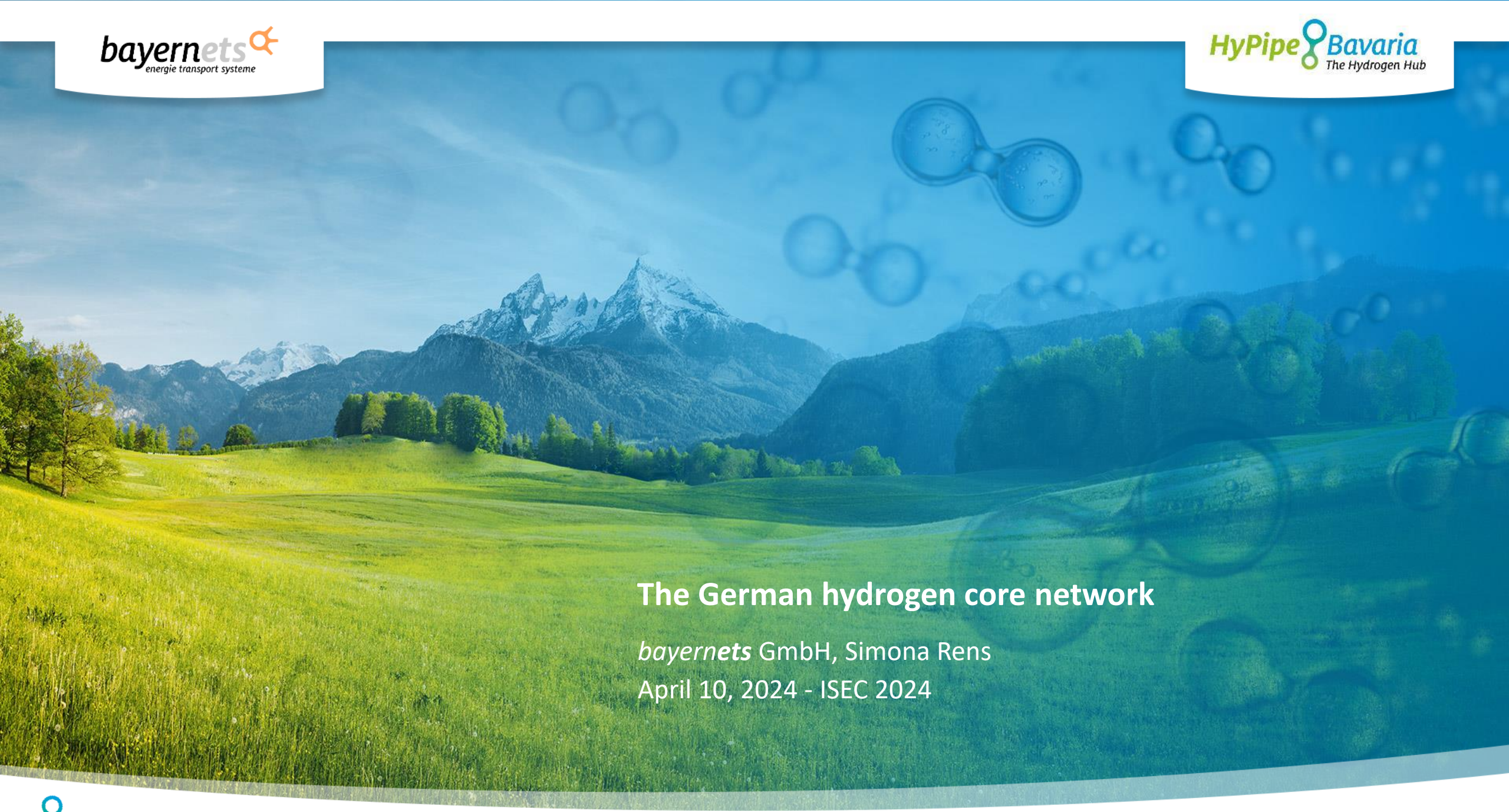


# The German hydrogen core network

*bayernets* GmbH, Simona Rens

April 10, 2024 - ISEC 2024

# Our company

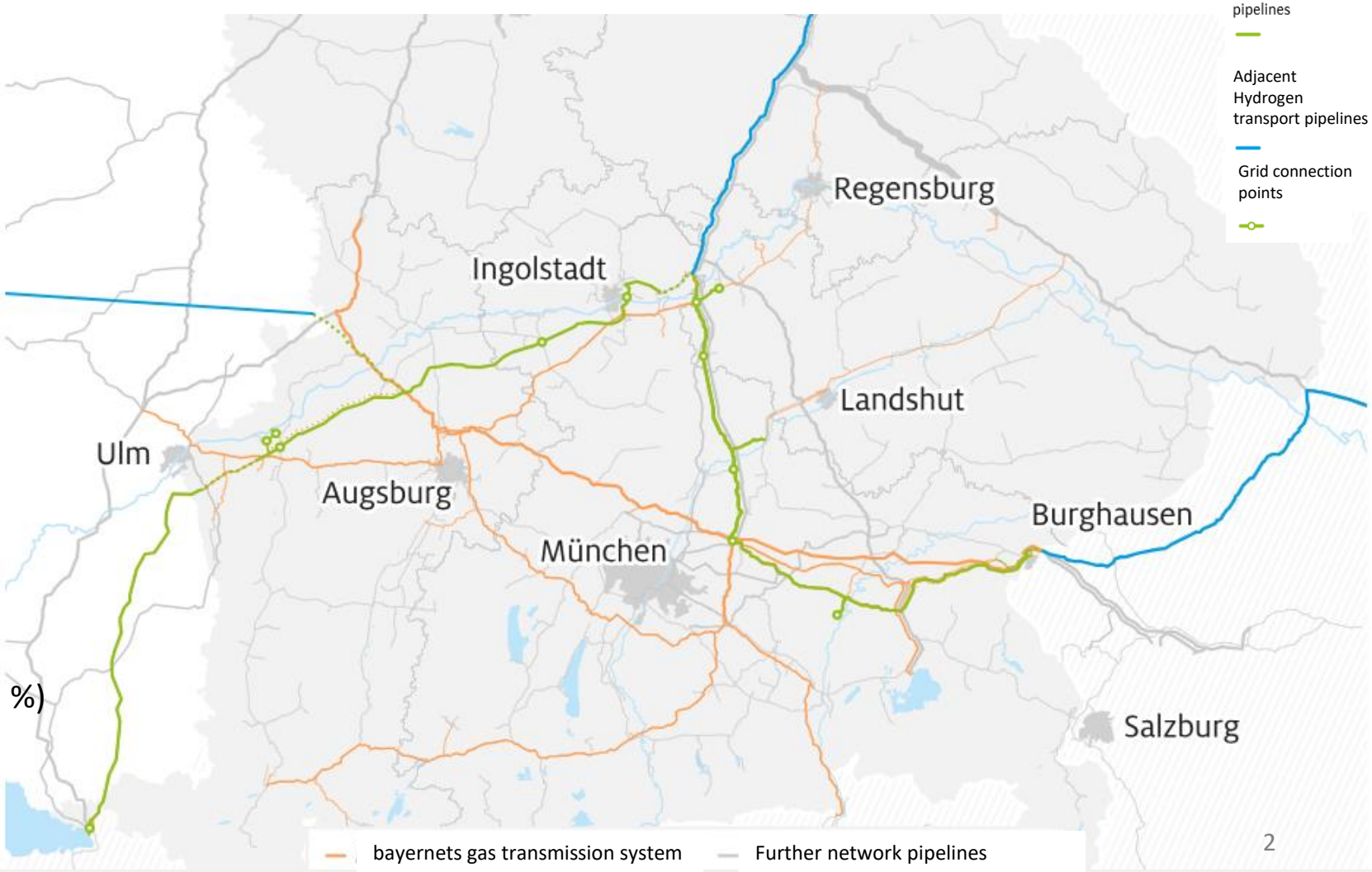
***bayernets* GmbH is the Bavarian transmission system operator.**

headquarters
**Munich**

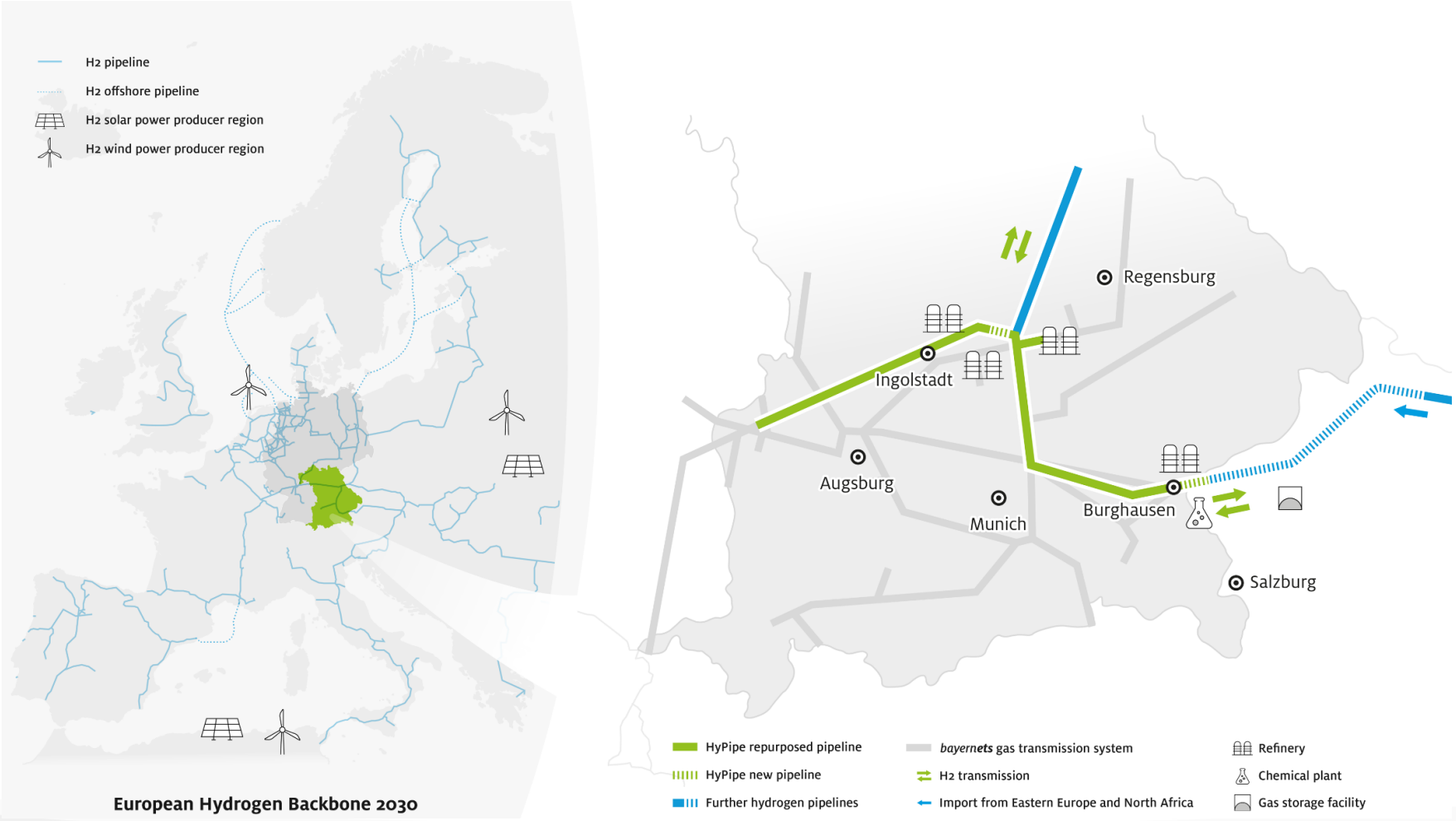
foundation
**January 1st, 2007**

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




European Hydrogen Backbone 2030

# 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

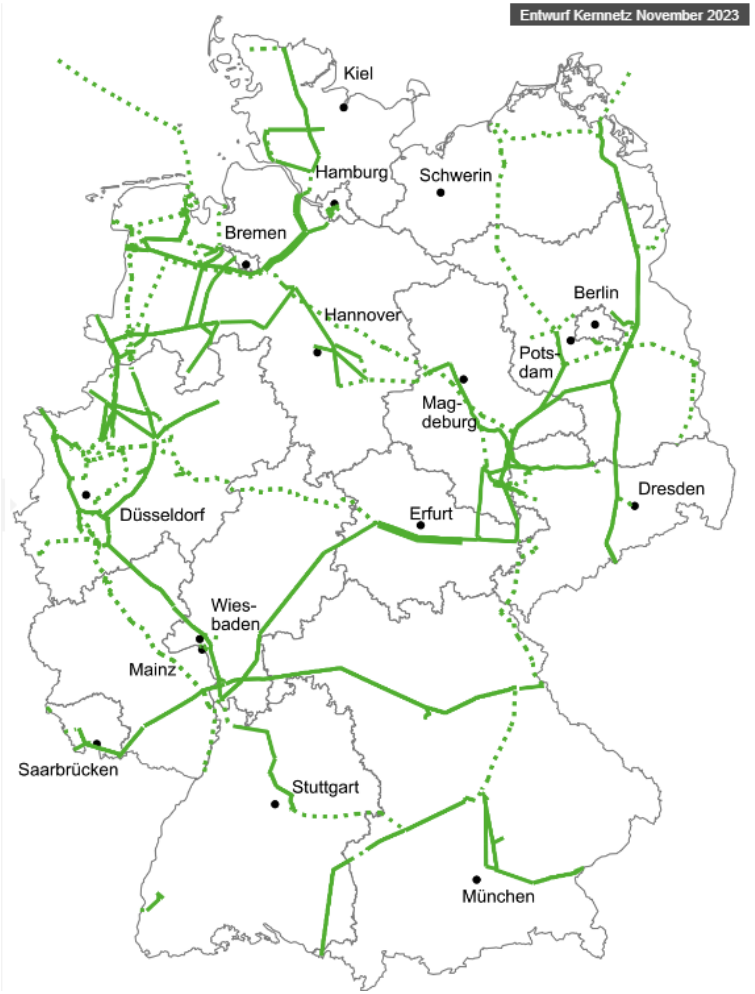
*Status: 9.04.2024; Compromise of the German coalition on the 5th April 2024

# 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**

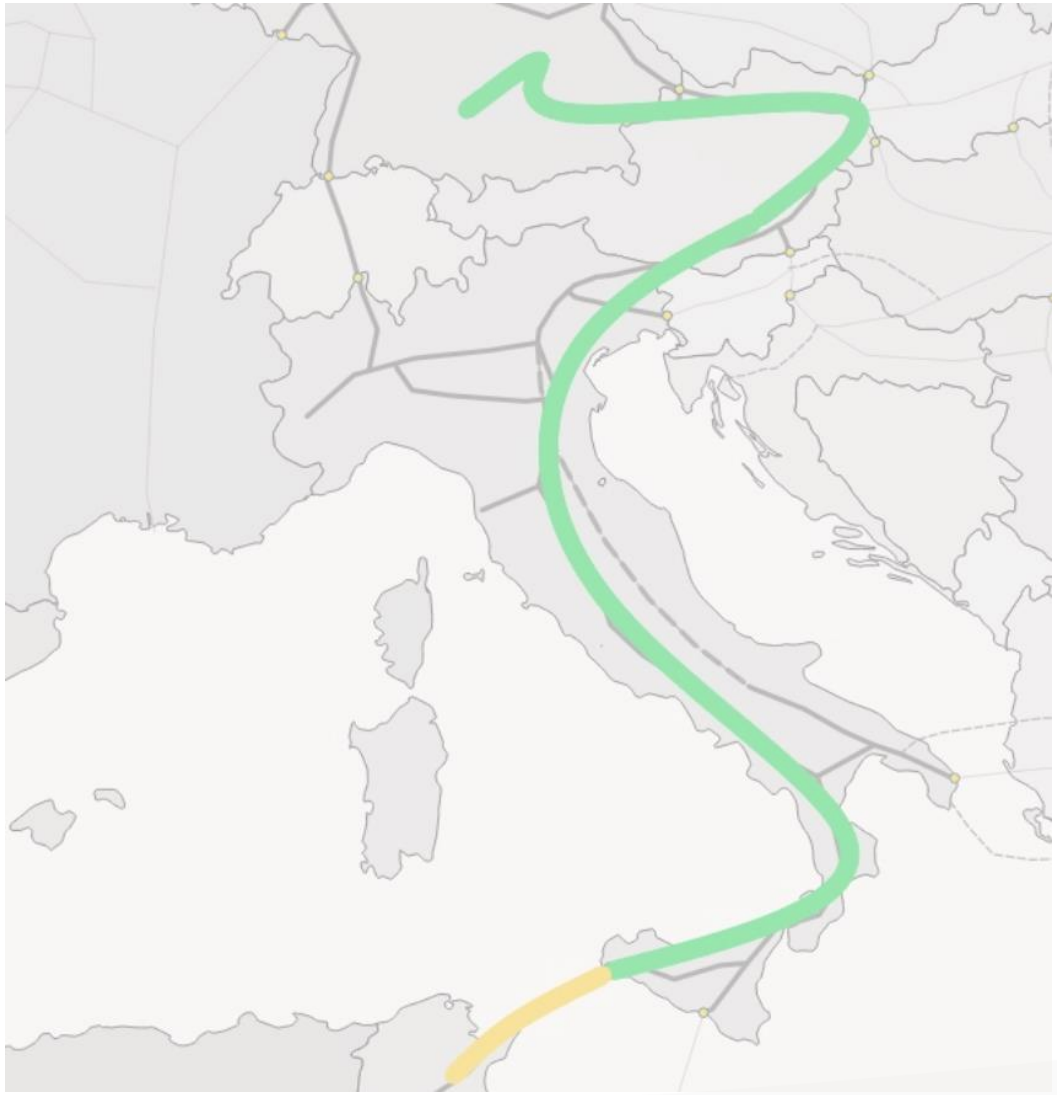
Source: FNB Gas 2023

# 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 period
- Approval of the core network (summer 2024)
- After the authorisation by the federal network agency (BNetzA) the network operators could start building the infrastructure

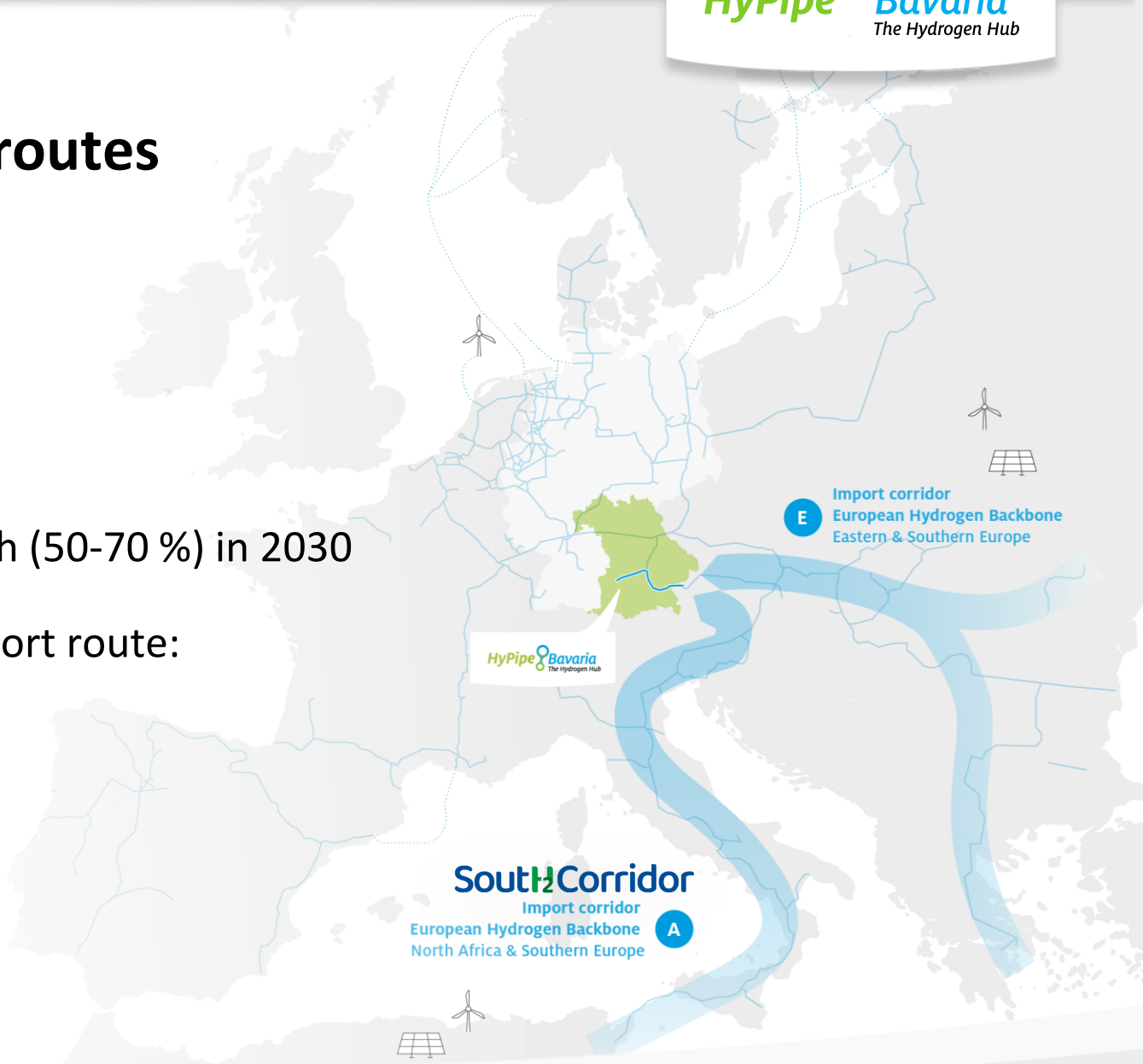
# SouthH2Corridor

- 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 SouthH$_2$Corridor enables the import of low-cost renewable hydrogen from Algeria and Tunisia



# 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
- SoutH$_2$Corridor 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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$H_2$ für Bayern