

H2Direkt: 100% Hydrogen in Gas Networks – From Grid to Customer

Dr. Elke Wanke, Energie Südbayern Gruppe

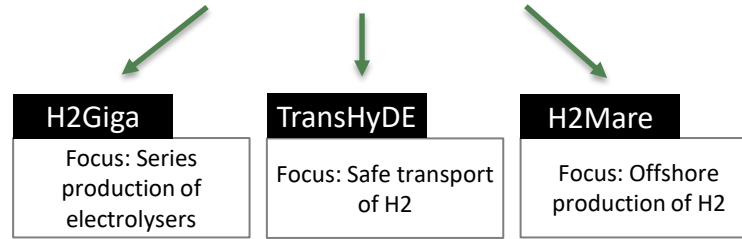


Funding Initiative

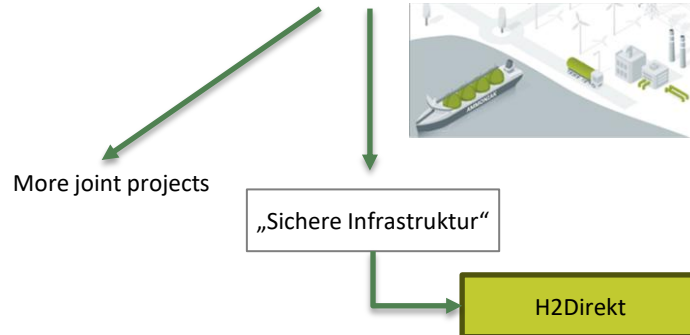
Funding Initiative „Wasserstoffrepublik Deutschland“

- Three flagship projects
- Goal: Reducing technological hurdles on the path to a future global hydrogen economy

Flagship Projects



Joint Projects



Our Project “H2Direkt”
is Part of the German
Hydrogen Flagship Project
TransHyDE

Project Content

100% Hydrogen in the Gas Grid to the Customer

- Repurposing of an existing grid section
- Separate supply by 100% H₂



Customers

- 10 households
- 1 commercial customer



Project-Duration:
01.04.21 - 31.12.25

Project-Operational Phase:
01.10.23 - 31.12.25



Project Goals

- Future use of the gas distribution grids as part of an efficient infrastructure
- and as a decarbonization option for connected customer groups (industry, household, commercial)
- Demonstration of a renewable heat supply with 100% H₂
- Proof of the safety and reliability of the technical concept
- Development of guidelines as a basis for scaling



Significant Key Points during the Conception:

Customer acquisition, collaboration and communication

Technical regulations and legal norms, reviews and approvals

Assessment of 100% H2-suitability (grid + TRGI)

Planning, tendering, ordering, construction of H2 feed-in and deployment

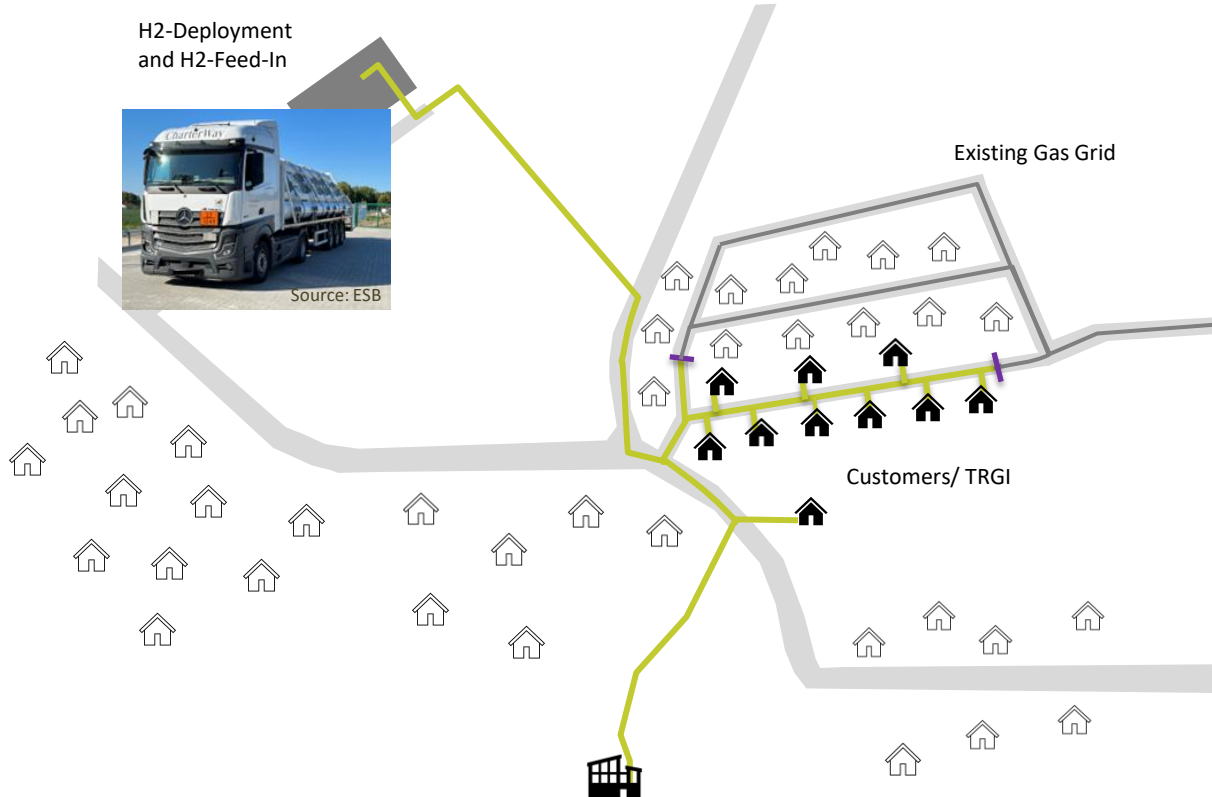
Calibration-compliant measurement concept

Safety concept, operational and conversion concept (including all service providers)



All components, with the exception of the boilers and the meters, could continued to be used for the field test. The 100% hydrogen operation is carried out by the existing operating team, that has been prepared through training and instruction.

H2-Deployment
and H2-Feed-In



Our Project- Setting



Foto: Vaillant GmbH



Foto: Ilona Stelzl

In Reality:

H2-Deployment +
H2-Feed-In



Foto: Ilona Stelzl

14.09.2023

Commissioning Ceremony for our Hydrogen Feed-In System



Our first heating period

PRESSEMITTEILUNG 16.05.2024

H2Direkt erfolgreich: Seit sieben Monaten 100 Prozent Wasserstoff im Gasnetz

Der Wintertest ist bestanden: Die erste Heizperiode mit einem auf 100 Prozent Wasserstoff umgestellten Bestandsgasnetz verlief reibungslos. Die Projektpartner und Kunden ziehen eine positive Zwischenbilanz.

Source: ESB

H2Direkt – Current Focus



Operation



Communication



Future Concept

Thank you for your attention!

