

CONNECTING POWERFUL HUBS

LEVERAGING VALUE CHAINS FOR POWERFUELS



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German Energy Agency

Session 1

***Powerfuel Hubs foster international
powerfuel value chains***



Global perspectives and reflections

5 Theses for Powerfuel hubs



1st – Global Perspective: Powerfuel hubs will be the cornerstones of a global (renewable) energy system

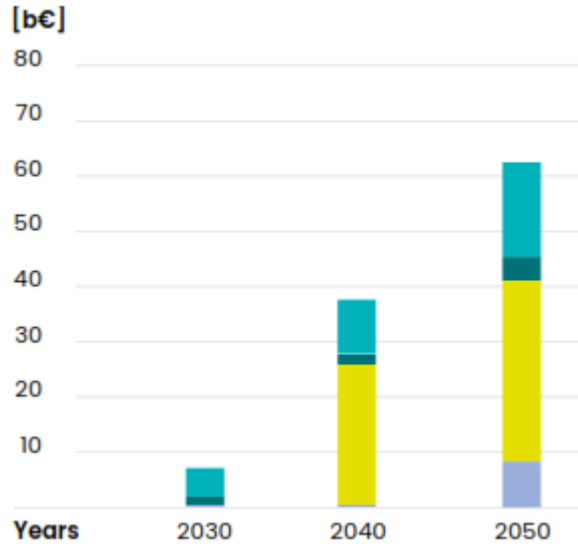
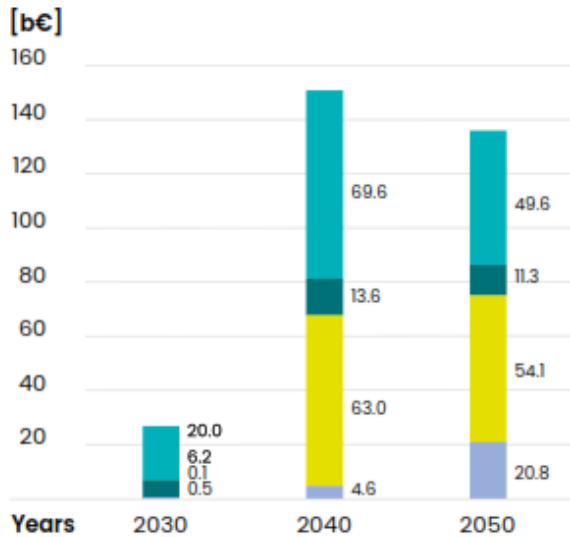


2nd – Trade flows: Global trade results in significant cost savings compared to a self-supply scenario

Global cost reductions

Cost reductions in Europe

Legend



- SNG
- FT-fuels
- Hydrogen
- RE-Ammonia
- RE-Methanol

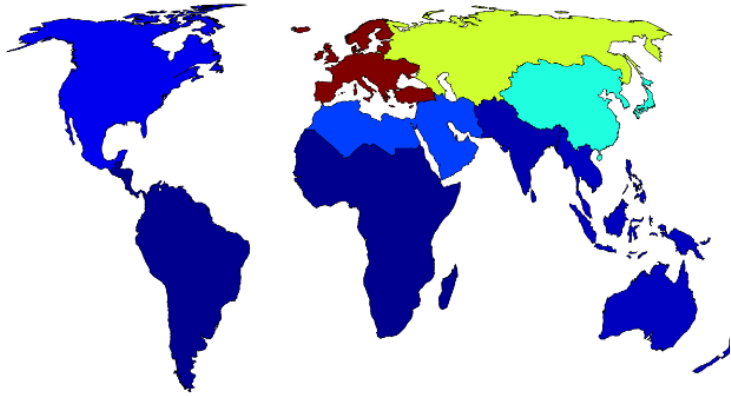
Max. cost reduction

15% – 30%
In European countries

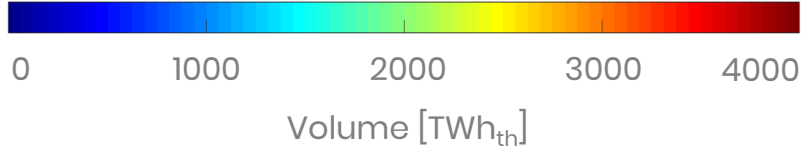
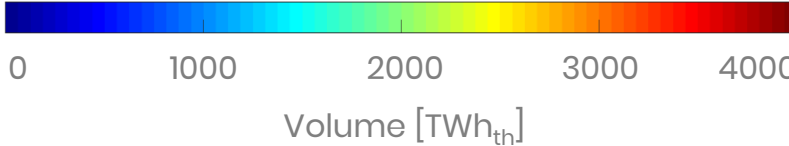
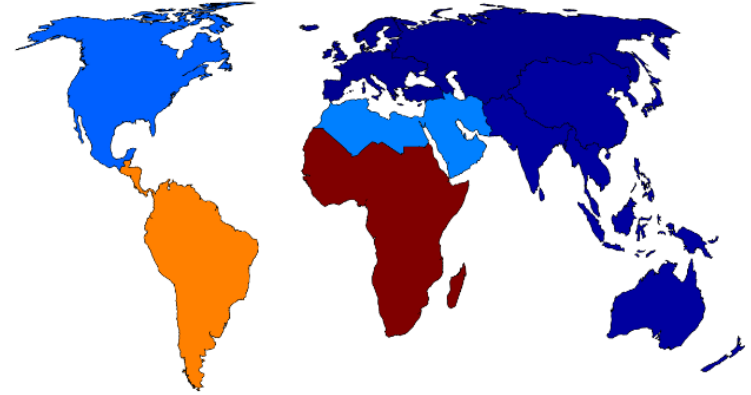


3rd – Location: Trade flows between import & export regions will determine large scale powerfuel hubs

Powerfuels import volumes 2050



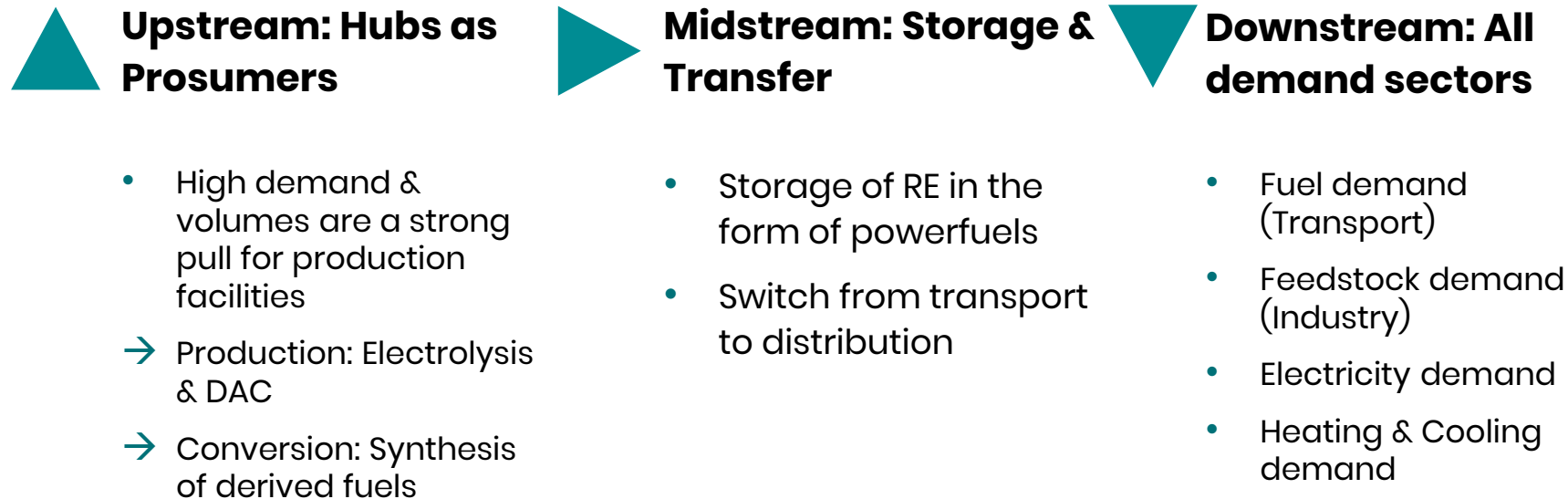
Powerfuels export volumes 2050



Global traded volume =
9577 TWh_{th}



4th – Diverse Functionalities: Powerfuel hubs embody small scale powerfuel value chains

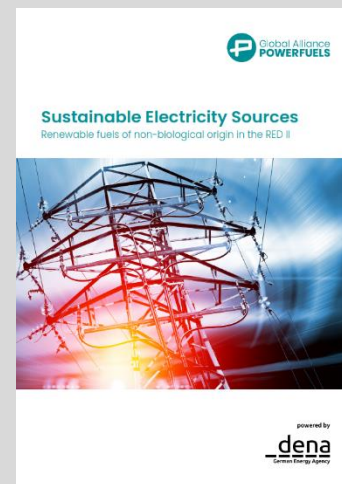
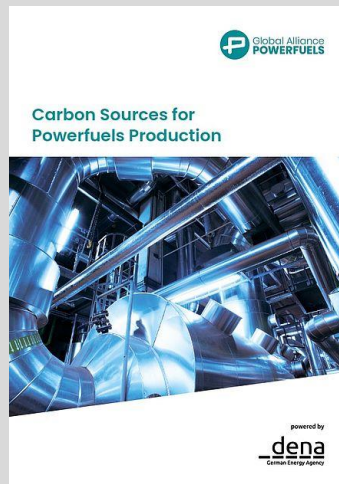


5th – Tradability: Successful powerfuel hubs will set new standards

Prerequisites for tradability:

- Globally applicable sustainability criteria for:
 - Electricity – Renewability, Additionality, etc.
 - CO2 – DAC vs. Point sources
 - Water (work in progress)
- Powerfuel infrastructure

Dena publications on Sustainability Criteria



Thank you for your attention!



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