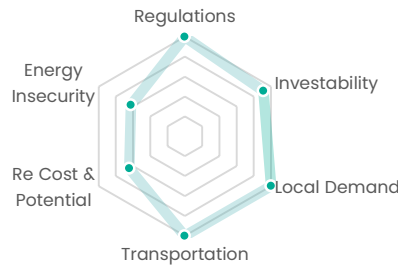
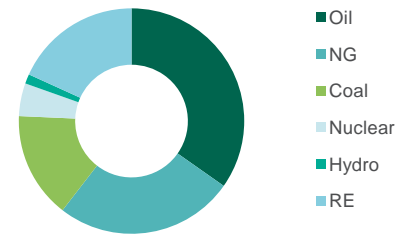


GDP - USD (trn):	3.8
GDP per capita - USD:	45,724
Land area ('000 km2):	349
Population density (per km ²):	237
Grid emissions factor (gCO ₂ /kWh):	469

Hydrogen Drivers Matrix



Primary Energy Mix



5.0 Regulatory commitment

- EUR8bn funding committed
- National ETS for transport & heating on top of EU ETS
- H2 Alliance global CfD scheme

5.0 Transportation

- First refurbished 100% dedicated pipeline banked in 2021
- Largest salt cavern storage potential in Europe

4.6 "Investability"

- AAA rated by S&P
- 22nd WB Ease of Doing Business

3.2 RE cost and potential

- Large RE market despite average onshore wind and modest solar resources
- c.200GW fixed bottom offshore wind potential

5.0 Local demand potential

- 7th largest steel manufacturing
- 10th largest oil refiner
- 13th largest ammonia producer
- 7th busiest container port traffic

3.1 Energy insecurity

- 61% net energy import (fr. 58% in 1990 despite 10x increase in RE)
- Nuclear phase out by 2022 and coal phase out by 2038

EUR 8bn funding and world-first hydrogen "CfD" scheme cements Germany as global hydrogen forerunner

Since the launch of Germany's National Hydrogen Strategy (NHS) in June 2020, Germany has remained at the forefront of centralised planning and funding of hydrogen projects across the value chain. Germany has one of the world's highest expected demand levels of hydrogen under its 2050 net zero scenario at more than 50 TWh p.a. by 2030, growing to 150-550TWh by 2050. Its Hydrogen Strategy acknowledges Germany's role as a long-term net importer and consequently places clear emphasis on building EU and global green hydrogen networks. Germany's geographical attributes support its aspirations to lead the EU's energy transition – Germany holds 42% of Europe's onshore and offshore salt cavern hydrogen storage potential, essential to seasonal energy balances.

EUR8bn government funding

Supporting 62 large scale hydrogen projects, including 2GW of electrolysis capacity and 1,700km of pipeline infrastructure, this state funding is expected to be matched with EUR33bn (USD39bn) of private investment. The country's major steel manufacturers will receive EUR2bn (USD2.4bn) for hydrogen-related decarbonisation projects.

H2Global initiative

The initiative is tasked with buying green hydrogen and derivatives and

re-selling these at annual auctions, with first deliveries as early as 2024. The entity would act as a federal-backed guarantor to offtakers under the HPAs upon the delivery of contracted volumes. In a significant nod of confidence, the Government is providing approximately EUR900m (USD1bn) to bridge any gap between the purchase and sales prices – timely de-risking to help kick-start the green hydrogen market.

National Emissions Trading Scheme

On 1 January 2021, a national emissions trading scheme for fuels was launched under which fuel suppliers will be obliged to acquire carbon certificates corresponding to fixed prices of EUR25 (USD30) per tonne of CO₂, stepping up to EUR55 (USD65) by 2025, and be decided by auction thereafter. This is in addition to Germany's participation in the EU's Emissions Trading Scheme (EU ETS), underscoring the nation's leading role in carbon pricing initiatives.

Global partnerships

Deals to actively collaborate on imports, knowledge or technology exploration have been agreed with Australia, Saudi Arabia, Canada, Russia and Chile this year alone. In parallel, discussions are underway on whether Germany should establish an import strategy alongside its NHS.