



Bringing hydrogen into the mix: opportunities for growth

Our hydrogen and fuel cell technology related expertise for strategy, investments, market entry and sourcing



Roland Berger covers the entire hydrogen value chain and has supported projects around the globe

Selected Roland Berger fuel cell and hydrogen experience around the world

We work along the entire hydrogen value chain

- > Production: grey, blue, green, pink, turquoise
- > Conversion, transport, storage, distribution, refueling
- > End users in transport, energy, industry ... including the underlying industrial supply chains

...for private businesses and public authorities

- > Private industry: energy and technology companies, equipment suppliers, infrastructure developers
- > Public sector and associations at regional, national and supranational levels
- > Financial investors
- > Start-ups

...on a broad range of strategic assignments

- > Market entry strategies, business model design, technology roadmaps
- > Project development support, feasibility studies and public funding support
- > M&A support and commercial due diligences
- > Policy and sectoral studies

By now hydrogen has become an integral part of energy policy making in most countries around the world

Overview of the state of play of selected national hydrogen strategies

- > Half of the countries with a hydrogen strategy still do not have a clear position on hydrogen imports and exports
- > Only the more industrially developed nations (e.g. Japan, South Korea) clearly consider hydrogen imports due to their limited production capacity
- > Other countries (e.g. AU, ES, NO, RU, MO and UK) envision hydrogen exports in the long run depending on the development of international trade opportunities

Hydrogen export (Countries with cheap energy sources) Hydrogen import (Highly industrialized nations with significant demand)

Source: IBS International Hydrogen Strategies, Roland Berger

Upstream capabilities to ensure lowest possible cost as well as strong customer relations for offtake required

Required capabilities

Access to cost-competitive renewable energy

- Requires access to efficient & high-load-factor renewable energy sources such as (offshore) wind & solar to produce cost-competitive green hydrogen

Green hydrogen production

- Needs large green hydrogen production plants to be a relevant hub on a regional scale and harvest economies of scale
- Structured supplier management based on solid know-how about H₂ technologies for production, conditioning and distribution

Easy accessible

- Requires strategic location selection with a pool of potential customers in its vicinity

Proximity to an industrialized region with offtake potential

- Delivers green hydrogen (feedstock) to nearby industrial clusters to ensure regional offtake and improve security of cost-competitive renewable H₂ supply
- Great customer relations and track record of successful delivery in specific partner settings (e.g. key account management, integrated projects)

Strong ties to political decision makers and influence on H₂ regulation to actively shape the market environment (best-case: market maker)

Great customer relations and track record of successful delivery in specific partner settings (e.g. key account management, integrated projects)

Source: Roland Berger



Info about H₂