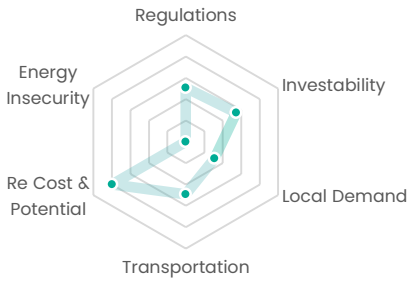
Oman

Index rank # 25

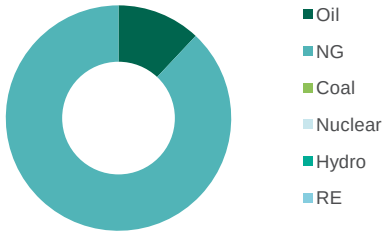
Aggregate score (out of 5) 2.7

GDP - USD (bn):	76
GDP per capita - USD:	15,343
Land area ('000 km2):	310
Population density (per km²):	16
Grid emissions factor (gCO²/kWh):	n/a

Hydrogen Drivers Matrix



Primary Energy Mix



2.5 Regulatory commitment
- No net zero commitments
- No carbon pricing
- A number of large Government-led pilot projects

2.5 Transportation
- Existing ammonia and LNG export infrastructure

2.7 "Investability"
- Rated BB- by S&P
- 68th in WB Ease of Doing Business

4.0 RE cost and potential
- World class solar resource
- Long track record of successfully procuring IPPs with well-developed local IPO market

1.6 Local demand potential
- Sizable ammonia production
- Some oil refining capacity, soon to increase with Duqm refinery
- Some shipping volumes

0.0 Energy insecurity
- Net energy exporter

Sizable government-led pilots attract strong international interest

Green hydrogen as an export commodity is an integral part of Oman's 2040 vision to diversify its economy away from oil and gas. A confluence of low oil prices, dwindling reserves and increasing production costs have strained Oman's fiscal buffers in recent years, resulting in successive credit rating downgrades. The infrastructure market nevertheless remains active and well-banked, with recent renewable tenders attracting strong international interest and very competitive pricing. The strong confidence comes from Oman's long track record of successful IPP and IWP/P procurement, the latter of which also ensures water supply for the planned hydrogen projects.

Oman has no carbon pricing mechanism in place to support local demand. Accordingly, the focus is likely to be on clean hydrogen export, or supply to exporting industries. In addition to world class solar resource and abundant land, Oman has the further advantage of having some ammonia export infrastructure, as well as the Qalhat LNG Terminal, the second largest in the Middle East after Qatar (albeit far smaller). The Port of Duqm has been identified to be the centre of the domestic green hydrogen value chain, and key initiatives have been launched, driven, among others, by OQ, Oman's national oil company.

HYPORT Duqm Green Hydrogen

Belgian contractor DEME Concessions and OQ have announced plans to build a 250-500MW green hydrogen/ammonia plant at the Duqm Special Economic Zone, where 150 sq km of land has been dedicated for green energy projects. In July 2021, Uniper joined the consortium to provide engineering services and as potential exclusive offtaker for delivery to Europe.

25GW OQ-InterContinental-Enertech project

OQ, InterContinental Energy and Enertech have formed a consortium to develop a mega green hydrogen & ammonia complex powered by 25GW of wind and solar, mainly for export to Europe and Asia. Resource assessment has been ongoing since 2019; however, construction is not planned to start until 2028 with full capacity production by 2038. Details on contracting arrangements have not been announced.

Acme 3.5GW green ammonia facility

Acme has signed an MOU and land agreement with the Omani government to establish a green hydrogen and ammonia facility near the Port of Duqm, powered by 3GW of solar and 500MW of wind, which when completed will produce 900kt of green ammonia per year for export to Europe and Asia. The first phase—size undisclosed—could be commissioned by the end of 2022, but construction will start only upon completion of ACME's first 5MW green hydrogen/ammonia plant in India.

Hy-Fly PPP platform

The Ministry of Energy and Minerals ("MEM") has established a national hydrogen alliance, Hy-Fly, made up of 13 public and private entities to drive the development of a national clean hydrogen export value chain. The platform will be led by MEM, facilitated by PDO's Energy Renewal unit[3].

hydrogen investability index

Cranmore Partners energy estate.

[1] A Hong Kong-based renewable energy developer; [2] A Kuwait-government-backed energy investor; 3 Key members include the Authority for Public Services Regulation, Petroleum Development Oman, Energy Development Oman, OQ, Oman LNG, BP Oman, Oman Shell and Total Energies Oman, Sultan Qaboos University, GUTech and the ports of Sohar and Duqm.