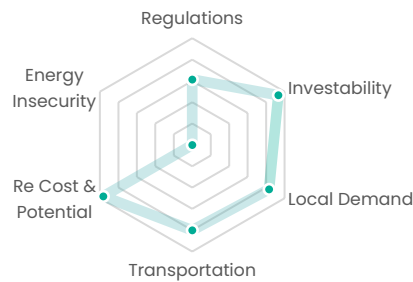
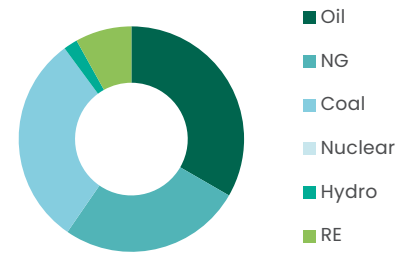


GDP - USD (trn):	1.3
GDP per capita - USD:	51,812
Land area ('000 km ²):	7,692
Population density (per km ²):	3
Grid emissions factor (gCO ₂ /kWh):	800

Hydrogen Drivers Matrix



Primary Energy Mix



3.1 Regulatory commitment

- No carbon pricing
- Strong international collaboration
- USD470m of targeted funding to be deployed over four years

4.0 Transportation

- Existing ammonia export infrastructure
- Collaboration on liquefied H₂
- Coastal clusters

4.7 "Investability"

- Rated AAA rated by S&P
- 14th in WB Ease of Doing Business

4.8 RE cost and potential

- Excellent solar and wind resources for hybrid green hydrogen production

4.2 Local demand potential

- Some local ammonia and steel production and oil refining
- Reasonably large mobility sector, particularly trucking

0.0 Energy insecurity

- Net energy exporter

Leading the hydrogen export race

The Australian national hydrogen strategy emphasizes a "light touch" approach without explicitly spelling out targets or timelines, with more detail arising at state level. While the strategy mentions domestic use and local hydrogen clusters, one of the few concrete measures of success is for Australia to rank among the top three exporters of hydrogen to Asian markets by 2030. There is an urgent economic imperative: Japan, Australia's biggest market for LNG and thermal coal, in recent months revised its 2030 energy plan reducing significantly the share of LNG and coal in the electricity mix; Democrat lawmakers in the U.S. have also tabled carbon border legislations that, if passed, will indirectly impact Australia through impacting its largest trading partner, China.

Australia's hydrogen demand today is c.650ktpa. This is produced almost entirely from SMR, with 65% consumed domestically by ammonia production, 35% by oil refining. Australia does not have a carbon pricing mechanism to support the value of clean hydrogen locally and until such a mechanism is implemented, hydrogen volumes in Australia will be driven by demand and price sensitivity in export markets. In the long term, Australia competes against other export-oriented countries on production and transportation costs, but it is geographically best positioned to serve the East Asian markets. Today it is well ahead for international project and export technology collaborations with e.g., Japanese interests. The Government has also put in place AUD643m (USD470m) of hydrogen R&D and implementation to be deployed over 4 years.

Massive project pipeline

Australia has an announced pipeline of more than 30GW of hydrogen projects, easily the largest in the world. While the mega-projects are in early stages, three modestly sized pilots have secured AUD103m (USD80m) funding from ARENA for ammonia production and gas blending. The 75MW Eyre Peninsula Gateway Hydrogen Project is in FEED stage and is exploring export to Germany with RWE.

International partnerships

Australia has signed a flurry of international collaboration agreements with potential export markets on developing hydrogen supply chains and export, including Japan, South Korea, Germany, Singapore, and the UK. The collaboration with Japan is particularly advanced, including partnership on developing the first liquefied hydrogen carriers, and mega projects in development such as the Iwatani-Stanwell 3GW Queensland green hydrogen project (FID 2022).

Guarantee of Origin (GO) certification

Australia launched a public consultation in June 2021 on the development of a GO certification scheme that would verify and track production technology, location, and Scope 1 and 2 emissions. The intent is for the scheme to harmonise with international standards, which are today led by the EU.