

AUSTRALIAN GOVERNMENT CLAIM:

CLEAN HYDROGEN

A low emissions fuel.

MISLEADING

ACTUAL SITUATION:

HYDROGEN MADE FROM COAL OR GAS IS NOT "CLEAN"

The only real "clean" hydrogen is "green" hydrogen made from renewable energy sources.

FACT



CLIMATE ANALYTICS

AUSTRALIAN GOVERNMENT CLAIM:

CLEAN HYDROGEN

A future low emissions fuel for homes, vehicles and industry.

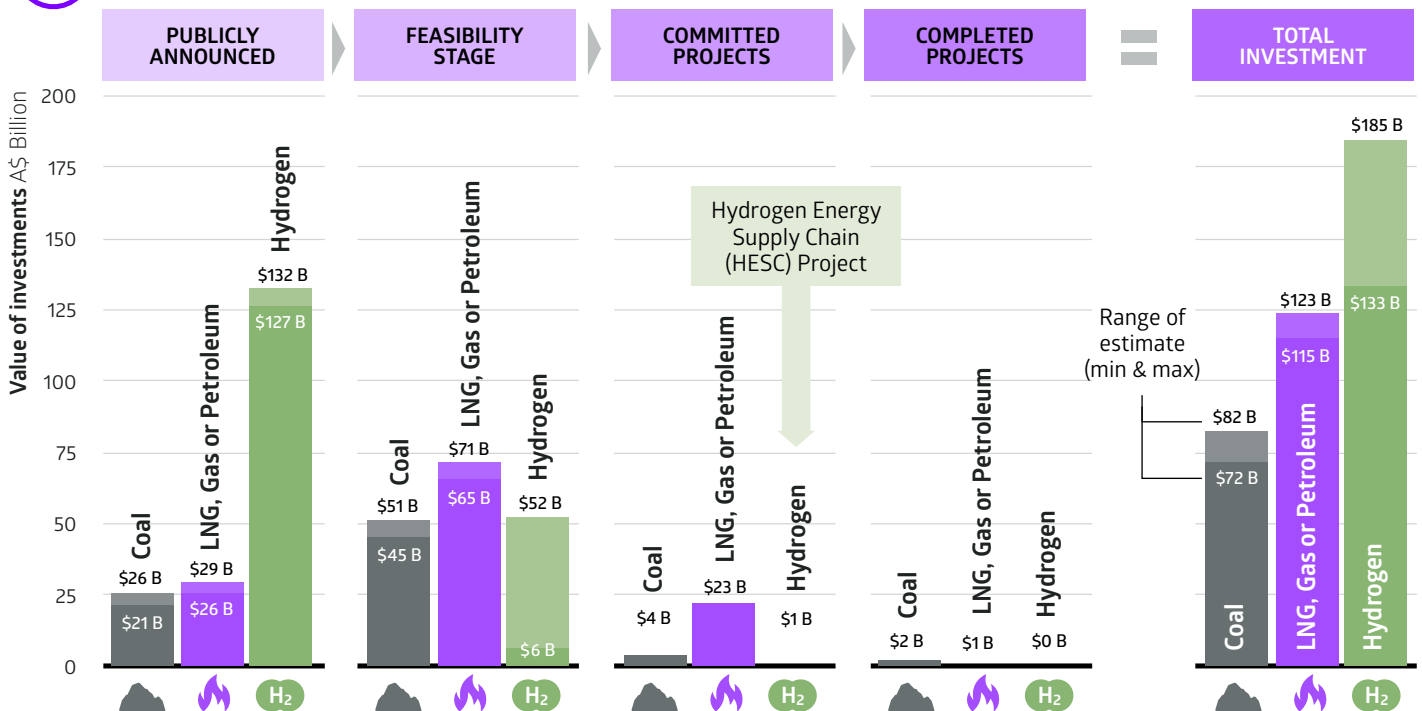
DECEPTIVE

- While hydrogen as a fuel has lots of potential, its environmental credentials rest on how it is made. Ideally, it should be "green" hydrogen made using renewables.
- The Australian Government instead refers to "clean" hydrogen that can be made from dirty coal or natural gas with "substantial" carbon capture & storage (CCS).
- The government is investing heavily in hydrogen, but its current focus is on developing hydrogen produced from coal and gas, not from renewable energy.
- An example is the Hydrogen Energy Supply Chain (HESC) Project that produces hydrogen from coal gasification.
- Of the 21 hydrogen projects listed in a recent major projects investment report, HESC is the only one at the committed stage.



Australia's future infrastructure

INVESTMENT PIPELINE FOR RESOURCES AND ENERGY MAJOR PROJECTS 2021



Caption: A total investment of AUD 133-185 billion in hydrogen compared to AUD 115-123 billion in LNG, gas, and petroleum projects, and AUD 72-82 billion in coal. **Source:** CSIRO (2022) DISER (2021)

**AUSTRALIAN GOVERNMENT CLAIM:
HYDROGEN FROM FOSSIL FUELS WITH
CARBON CAPTURE AND STORAGE
IS "CLEAN"**

Clean hydrogen defined as either hydrogen produced using renewable energy or from using fossil fuels with carbon capture and storage (CCS)

FALSE

- Carbon Capture and Storage (CCS) is an expensive, unproven technology with a shaky track record and very long list of project failures.
- Chevron's Gorgon facility in WA demonstrates this. It was supposed to capture 80% of CO₂ from the LNG. After multiple failures, it has captured only 30%.
- Today, 96% of hydrogen is produced by heating fossil fuels via either steam methane reforming (SMR) or coal gasification under the label of "grey" hydrogen. It is relabelled as "blue" hydrogen when CCS is added at the end of the process.
- "Blue" hydrogen is promoted as having either zero or low carbon greenhouse gas emissions despite clear evidence of incomplete CO₂ capture, methane leaks and high energy consumption all indicating the opposite. Even the best case scenario suggests that there really is no role for "blue" hydrogen in a carbon-free future.
- Despite all of this, both CCS and blue hydrogen feature prominently in the Government's emissions reduction policies.
- This includes a \$50 million Development Fund, with \$15 million granted to a Santos project at its Moomba gas plant. The gas with CCS is planned to supply a new "clean hydrogen" industry. The project aims to store 1.7 million tonnes of CO₂ per year — about 0.3% of Australia's annual carbon emissions and pales in comparison to the emissions from burning Santos' main product: fossil gas.

Sources: [Australian Government \(2021\) Carbon Capture Use and Storage Development Fund grant recipients](#)
[Santos \(2021\)](#)

[Climate Analytics \(2021\) Why gas is the new coal](#)
[Howarth, Jacobson \(2021\) How green is blue hydrogen?](#)

**AUSTRALIAN GOVERNMENT CLAIM:
>\$40 BILLION INVESTED IN
CLEAN ENERGY**

Like solar panels, since 2017 (Government and private investment)

MISLEADING

- Investment in 'clean' energy is not necessarily renewable energy, as implied.
- The government has invested in what it calls 'clean' energy but this includes fossil fuels with unproven carbon capture and storage (CCS). These funds are being used to prop up the fossil fuel industry, will create carbon lock-in and risk expensive stranded assets.
- Huge funding is directed towards fossil fuels, evidenced in the 2022-2023 budget with \$50 million designated for gas infrastructure.

Source: [Budget 2022-23](#)