

Three reasons a green iron industry will be good for Australia

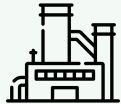
1. Nearly **\$400 billion** potential annual export value by 2060
2. Potential **4 per cent** contribution to global decarbonisation
3. Natural hedge against the loss of **\$120 billion** annual fossil fuel exports



Green hydrogen for industry, not energy

Hydrogen is of large importance for industry

Already economic in strong renewables regions with a carbon price and innovation support.



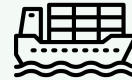
Hydrogen is important for reliability

Its production is variable and is more cheaply stored than electricity.

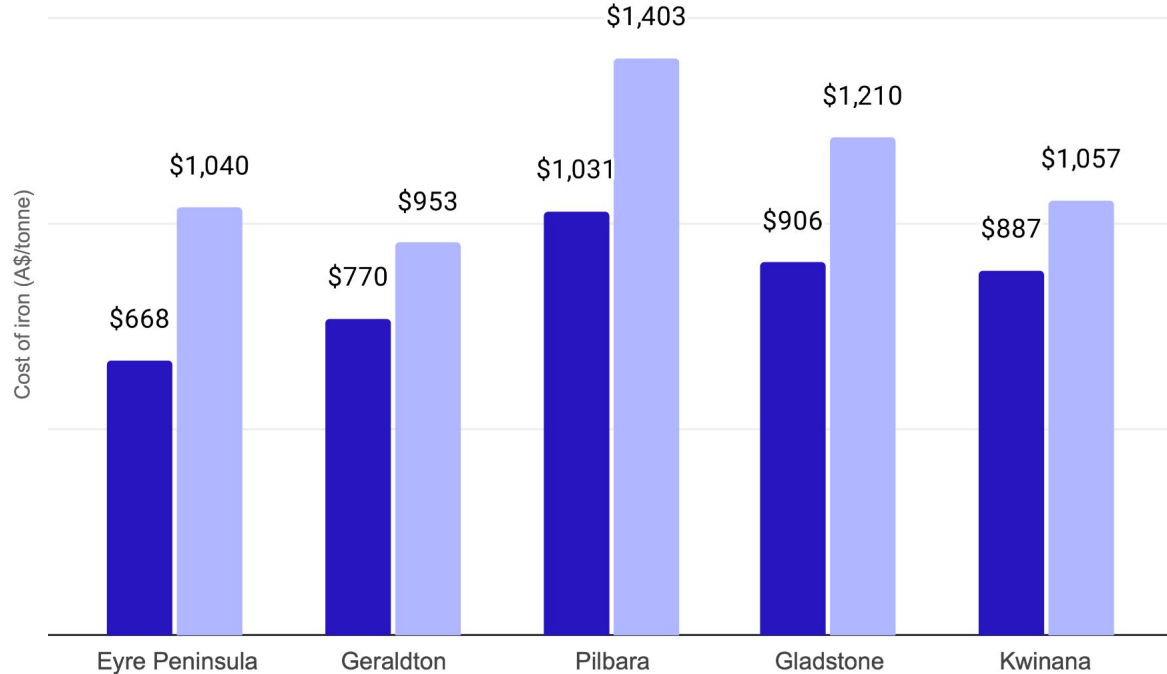


Exporting hydrogen is expensive

Exports as liquid H_2 or ammonia are only economic at scale to economies with extreme RE scarcity.



Variation in Costs of Green Iron Across Australia



Flexible Green HBI Inflexible Green HBI

Technology flexibility matters.

The ability to ramp production will likely reduce the costs of production.

Access to an electricity market can reduce the cost of green iron.

Location is critical.

Existing infrastructure, ore type, renewable energy resources, and lower capital costs give some regions a cost advantage.

The market failures holding back Australian green iron

1. **Unpriced emissions from fossil fuel-based production**

Green iron blocked from competing on a level playing field when carbon-intensive producers don't pay for their emissions.

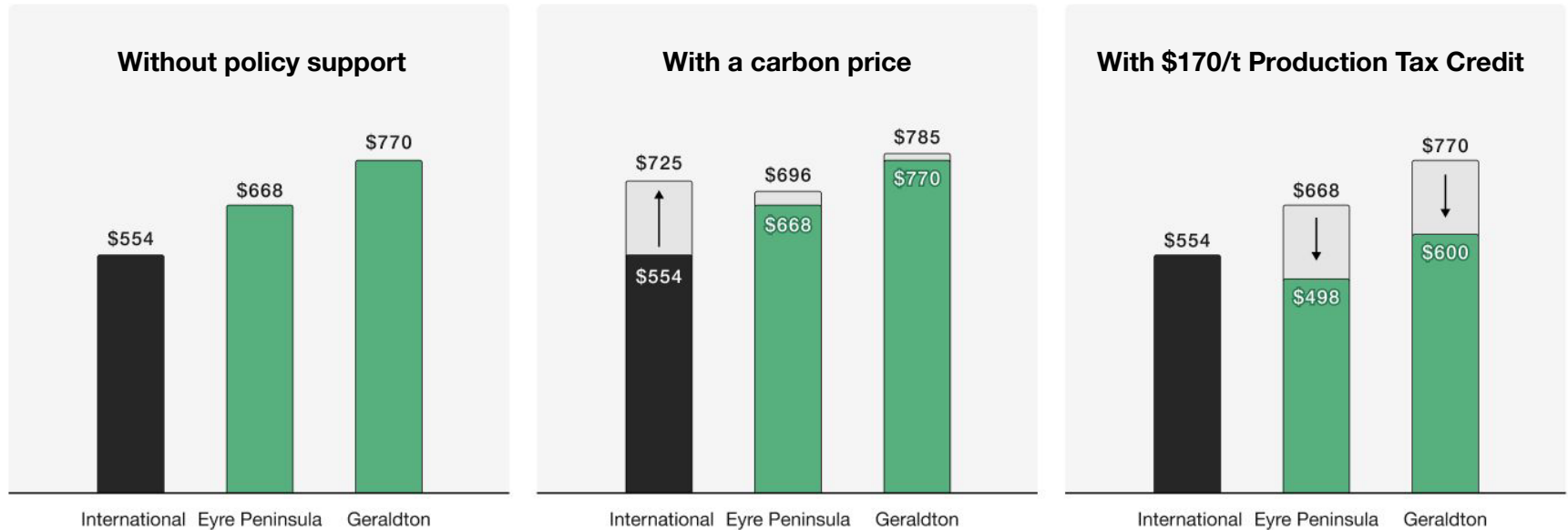
2. **Under-provision of common-user infrastructure**

Private investors won't build shared infrastructure to an efficient scale

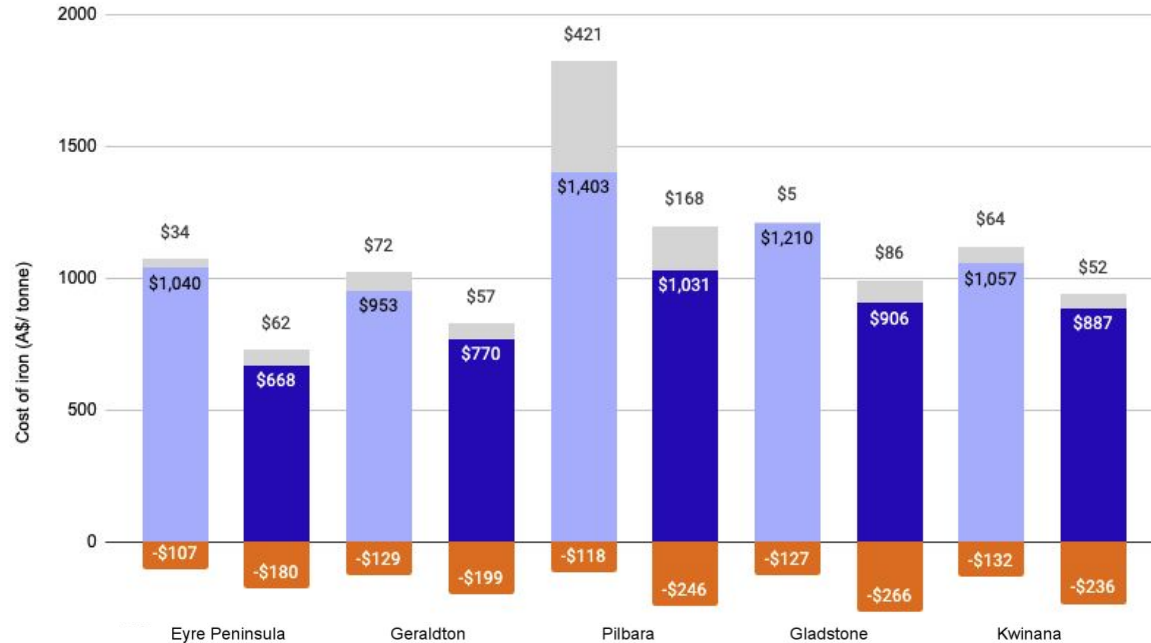
3. **Innovation spillovers and early-mover risk**

Early producers bear the costs of innovation and learning, which benefits later producers.

A production tax credit simulates the effect of an international carbon price



Early producers create knowledge that benefits everyone, and should be supported



Superpower Innovation Investment Scheme:

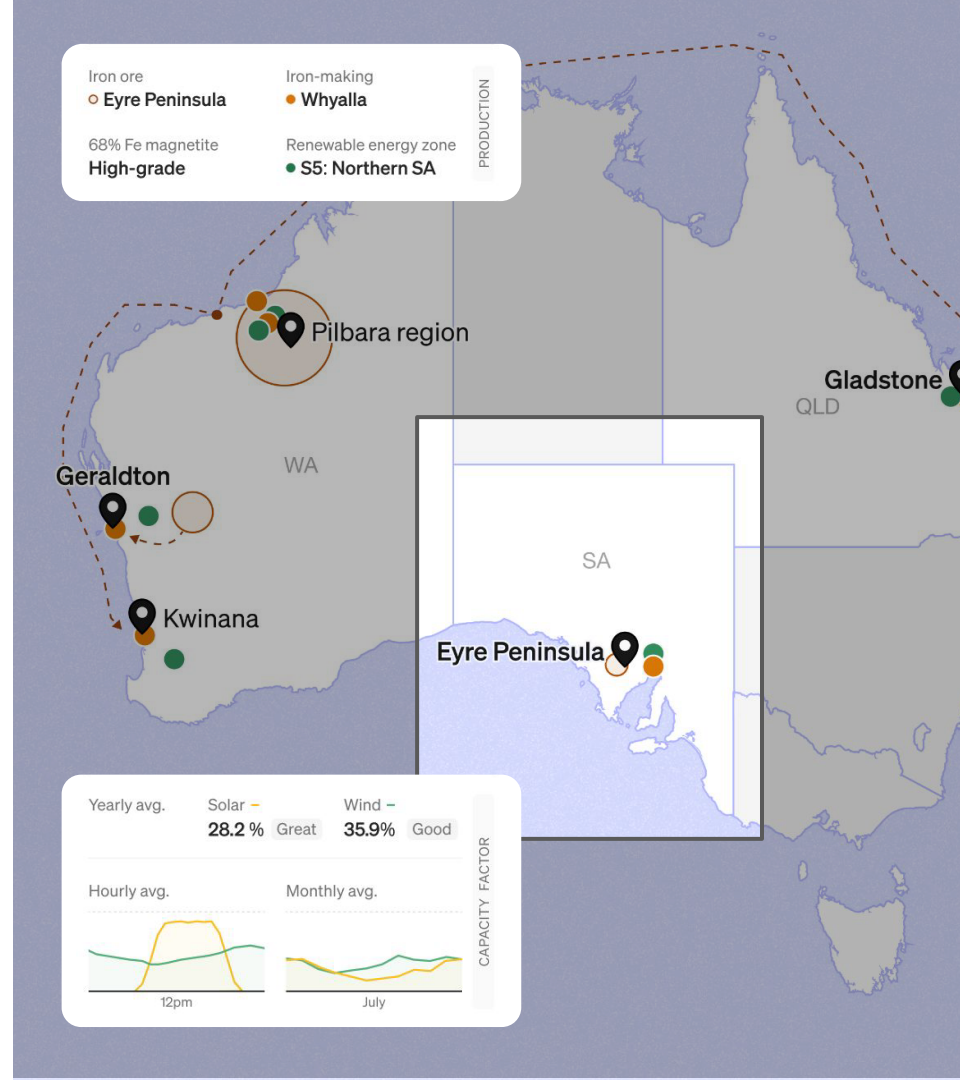
Up to 30% capex support, capped at \$500m per project

Eligible for the first commercial plants (>0.5Mtpa)

Could build on the Federal Government's Green Iron Investment Fund

Eyre Peninsula's Advantages

- **The lowest capital costs of the five locations**
- Existing grid connection with high penetration of renewables (~75% today → 100% in 2 years)
 - meaning more can be drawn from the grid
- **Substantial high grade magnetite resources** that do not require electric smelting furnace (cutting capex)
- Very good capacity factors for wind and solar
- Established workforce and port facilities



South Australia's Advantages

- One of Australia's **best established industrial regions**, with experience and infrastructure for power generation, mining and metallurgy
- Political support: quicker approvals and lower execution risk
- Broadly based **support in the community** for sustainable development, renewable energy and promotion of zero carbon industry



South Australia is green iron-ready with FMIA

The Upper Spencer Gulf is ready for one million tonnes now

- Each of Port Pirie, Port Augusta and Whyalla now
- Eventually, all three will house projects with existing infrastructure
- Green iron in region much larger later with more transmission infrastructure



South Australia is green iron-ready with FMIA

Could be part of a Whyalla Steelworks solution

- Green – quicker (no new gas infrastructure)
- Green – possibly lowers costs at current gas market price with FMIA National Interest policies
- Green – doesn't divert gas from other SA users when gas is scarce
- This is separate from the general case for green iron on the Eyre Peninsula

