

South Australia's green iron and steel opportunity

HILT CRC 2025 Conference

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Acknowledgement of Country

As guests here on Whadjuk country, we acknowledge everything this department does impacts on Aboriginal country, the sea, the sky, its people and their spiritual and cultural connection which have existed since the first sunrise.

Our responsibility is to share our collective knowledge, recognise a difficult history, respect the relationships made over time, and create a stronger future.

We are ready to walk, learn and work together.



Point Lowly Lighthouse,
Barnjala Country,
South Australia

Today's presentation

South Australia's energy transition

South Australia' green iron and steel opportunity

Whyalla Steelworks: Securing a national asset

Infrastructure and policy: supporting the transition

Collaboration critical to drive transformation



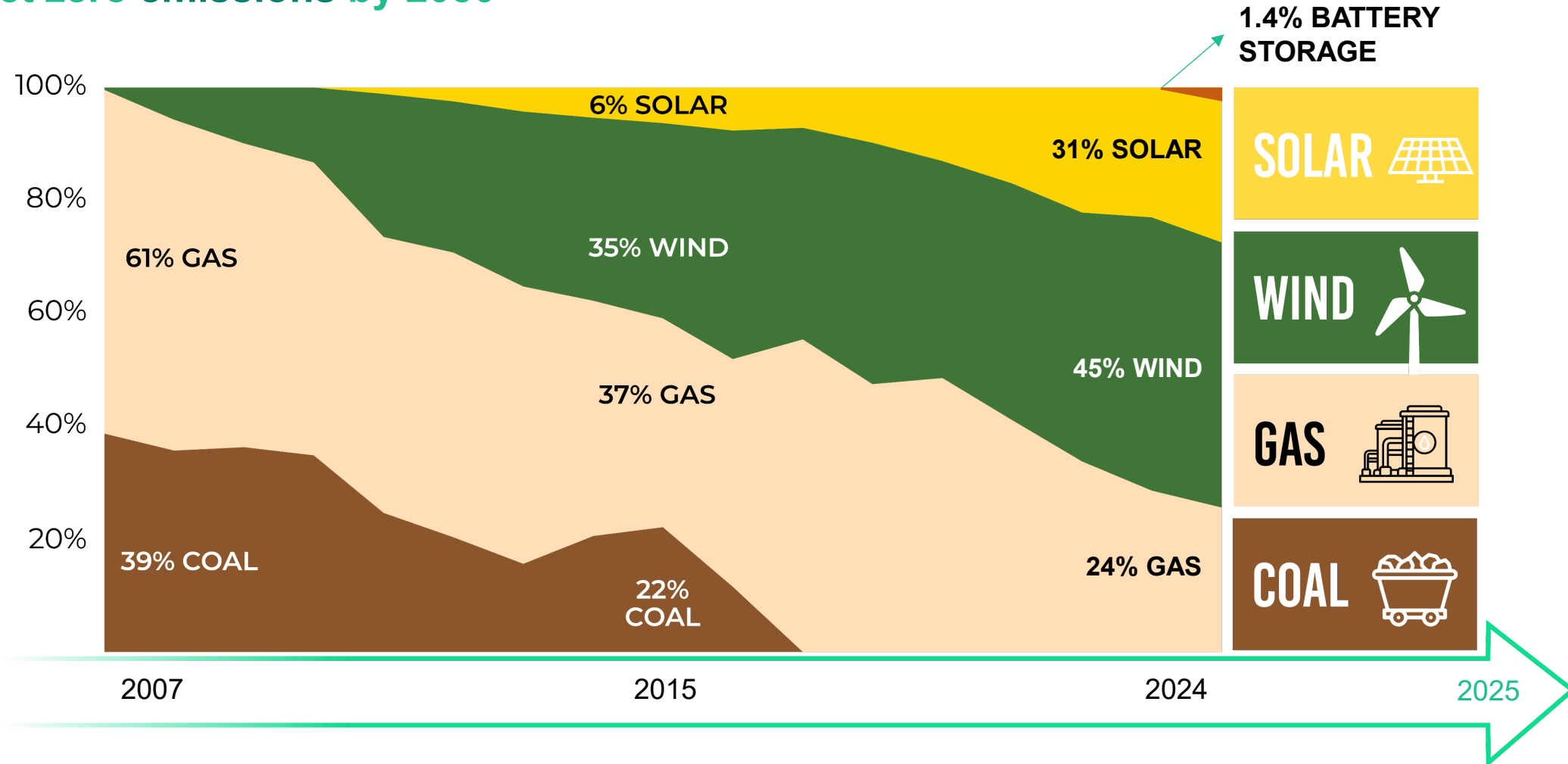
South Australia's energy transition



South Australia is world leading

Committed to 100% net renewable generation by 2027

Net zero emissions by 2050



Gas: Supporting South Australia's energy transition

A proud history of innovation and reliability

- **Pioneering infrastructure:** The 781 km long Moomba to Adelaide Pipeline (1969) connected the Cooper Basin to Adelaide, securing reliable energy for homes, businesses and industry.
- **South Australian success story:** Santos emerged as a national leader in natural gas production, driving regional investment and underpinning the state's industrial growth for decades.
- **Reliable through transition:** Gas has been the backbone of South Australia's electricity system, providing dependable, dispatchable generation enabling renewables rapid expansion.
- **Supporting a clean future:**
 - Continues to firm the grid during periods of low wind and solar output.
 - Plays a key role in decarbonising hard-to-abate sectors such as steel, manufacturing and heavy transport.
 - Will evolve with renewable gas and hydrogen, ensuring energy security through the net zero transition.



South Australia's green iron and steel opportunity



Transforming Whyalla into a green hub

Decarbonising a high-emission industry

- Iron and steel is one of the **world's largest carbon emitters**, contributing approximately **7–9% of global CO₂ emissions**.
- Whyalla Steelworks is **South Australia's highest industrial emitter** contributing approximately **14% of state emissions** (~2.32 Mt CO₂/year).
- **Growing international demand for low-carbon steel**, especially from markets that lack Australia's natural advantages.

South Australia's unique position

- Abundant magnetite deposits, renewable energy, and existing operations, plus access to hydrogen pathways, create a competitive edge.
- Opportunity to transform Whyalla, into a world-leading green iron and steel hub, producing low-carbon steel for domestic and global markets and significantly reducing emissions.
- Decarbonising the sector supports jobs, industrial resilience, and Australia's sovereign steel capability.

South Australia's green iron advantage



South Australia has over **19 billion tonnes of magnetite iron ore** across three provinces. 7.9 billion tonnes is economically demonstrated.

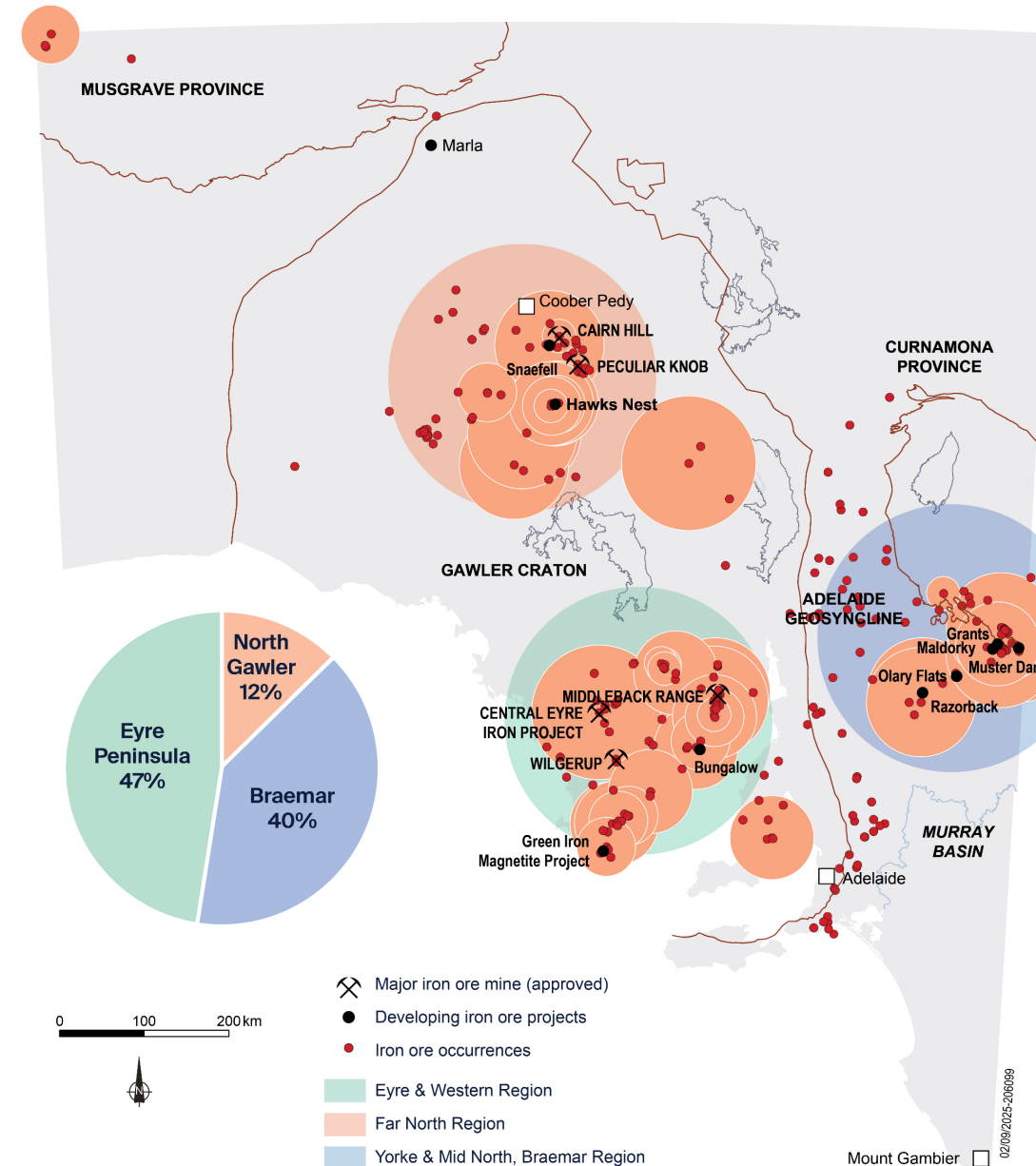


Miners **beneficiate** South Australia's superior quality magnetite to achieve **greater than 67% iron content**.



94% of South Australia's contained iron ore is **magnetite**, only 6% is haematite.

High-quality magnetite underpins the green iron and steel transition.



Whyalla Steelworks

Pit-to-Port integration

- iron ore mined in the Middleback Ranges
- processed and rolled at Whyalla site
- shipped via Whyalla Port
- Positioned for a transformation with ageing infrastructure and significant government investment

Domestic steel dominance

- Produces 75% of Australia's structural steel
- One of only two major steelworks remaining in Australia
- The only domestic producer of long-steel (rail, structural beam, etc.)

Employment and regional impact

- Employs approx. 1,100 workers directly, and supports over 2,000 indirect jobs
- Critical for sovereign steelmaking and national infrastructure resilience



Aerial image Whyalla Steelworks,
South Australia

Whyalla Port: Gateway to growth

Strategic asset under the Whyalla Steelworks Indenture

- Operates under a long-standing **Indenture** linking the **steelworks and port**, securing integrated operations and export pathways.
- Deepwater port supporting bulk exports and imports.
- Central to the **pit-to-port value chain**, enabling Whyalla's products to reach global markets.

Open access and regional opportunity

- Growing third-party interest as Whyalla's industrial base expands.
- Supports efficient logistics for mining, energy and export industries across northern SA.

Future-ready infrastructure

- Positioned for **modernisation and future expansion**.
- Key to support Whyalla's **transition to green iron, hydrogen products and clean energy exports**.
- Strengthening SA's **sovereign supply chains and export capability**.



Whyalla Port,
South Australia



Whyalla Steelworks: securing a national asset



Backing Whyalla Steelworks, local jobs, and a steel future

Prime Minister says \$2.4 billion package for Whyalla steelworks is an 'investment in the nation'

By Daniel Keane By Stacey Pestrin Steel

Thu 20 Feb



Prime Minister Anthony Albanese announces a \$2.4 billion package for the Whyalla steelworks.



Yesterday, we acted to stabilise the future of Whyalla, here's how we did it 🙌

State and Federal Governments **investing** to secure the future of the **Whyalla Steelworks**



Aerial image Whyalla Steelworks, South Australia



\$100 million
for immediate support



\$658 million
to stabilise and support the continued operation of the steelworks



\$1.9 billion
to invest in the future of the steelworks

Supporting the Whyalla Steelworks transition

- The Government of South Australia working with the Commonwealth Government, Administrator, and potential buyers to ensure South Australia's interests are protected, including:
 - funding packages
 - transition to modern steelmaking
 - mining expansion
 - local jobs and participation, and
 - community outcomes.
- Credible bidders progressing through the sales process - targeting sale mid to late 2026.
- Funding packages providing governments an opportunity to meet and negotiate with potential bidders.



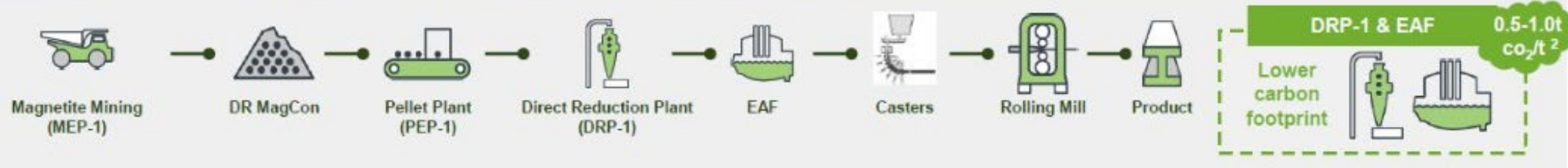
Pathway to transform and optimise operations

During its transition, the Whyalla Steelworks will replace the existing blast furnace with a world-leading, optimised iron and steelmaking system, delivering substantial carbon emission reductions.

Foundation | Continued operation of the blast furnace in a safe and responsible manner, whilst transitioning infrastructure and resources



Transformation | Investment to transform the existing facility to low carbon emissions iron and steel with a more flexible operating model to be able to effectively manage changes in market demands including upgrades to both mining and steelworks



Optimisation | Investment to increase scale of mining operations to significantly reduce mining costs and input feed costs to steelworks, thereby supporting sustainable steelmaking in Whyalla, while growing the DR MagCon or DR Iron (HBI) export market



Infrastructure and policy: supporting the transition



Enabling infrastructure

Whyalla Industrial Link

- To support industrial growth in the region ElectraNet, in partnership with the South Australian Government, is building a **275 kV high-voltage power supply**.
- Includes **two new substations and transmission**.
- This project will **unlock the Steelworks future modernisation** and growth with power to support an electric arc furnace, direct iron reduction process, and future needs.
- **Unlocks future developments** in the region.
- Completion on track for early 2026.

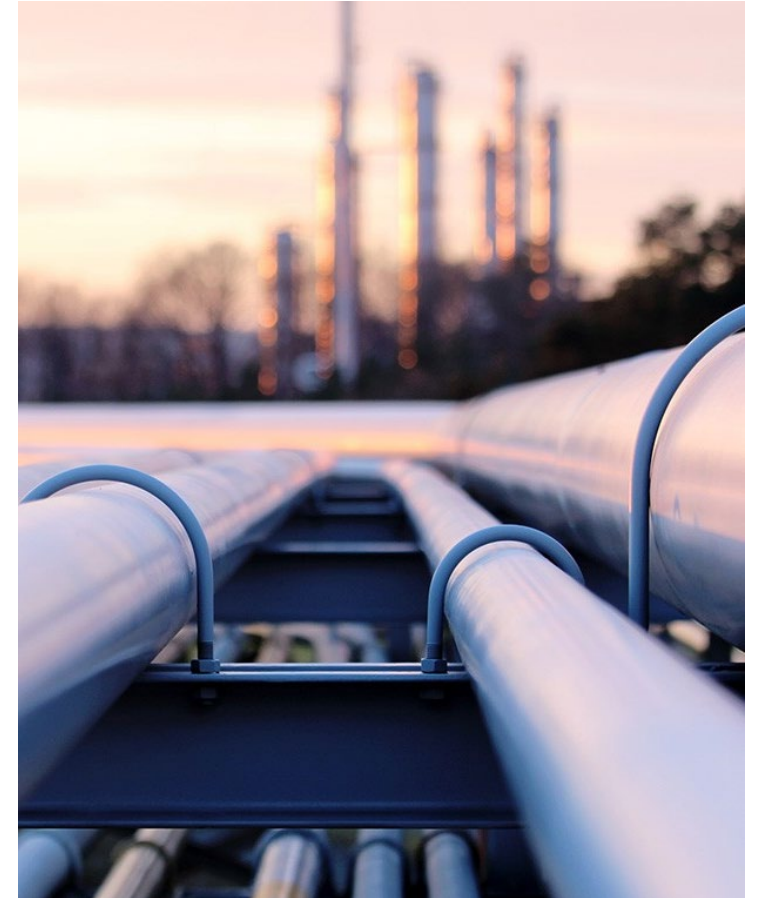


Aerial image Roopena Substation.
Whyalla Steelworks in background
(Sept 2025), South Australia

Enabling infrastructure

Whyalla natural gas supply and infrastructure

- The transition to modern steelmaking will require **increased gas supply**, and the corresponding infrastructure and delivery options are under active consideration.
- Recent **Request for Information** (RFI) process, developed in collaboration with Whyalla Steelworks, provided industry insight and competitive options to support future gas supply to the Steelworks, including how to manage infrastructure constraints, gas volumes, potential pricing, delivery models and timeframes.
- Building on this, work is proposed to assess CAPEX, OPEX, schedule, deliverability, and provides the basis for a **FEED** (Front End Engineering Design) **Scope of Work** on the recommended option(s) which would determine firm pricing.
- Further **analysis of responses is ongoing** ahead of decisions on next steps for both supply and infrastructure arrangements.



South Australia's Hydrogen and Renewable Energy Act

Unlocking future investment in renewable projects

- Efficient, flexible, transparent and consultative regulatory framework.
- Licenses and regulates the entire lifecycle of renewable energy and hydrogen projects.
- One-window to Government.
- Maximises benefits for all South Australians including recognising Aboriginal participation.
- Maintains government's commitment of multiple land use principles.
- Upcoming release areas.



Hydrogen in South Australia

- Government **committed to building a world-class hydrogen industry**, with Whyalla at the centre
- Hydrogen **project learnings** (including approvals) and Government insight ready to advance hydrogen developments in Whyalla region
- **Renewables-rich grid** and **clear policy support**
- Future focus – **unlocking SA's green industry**
- **Scale hydrogen** to decarbonise hard-to-abate industries.



Aerial image Port Bonython,
South Australia

Hydrogen hub opportunity

- Port Bonython Hydrogen Hub located ~30 km from Whyalla.
- Commonwealth grant funding agreement focussing on environmental and technical studies and investigating common user infrastructure and upgrades.
- Long-term development opportunity leveraging existing port and available land.
- Hydrogen-based products (e.g. low-carbon fuels, methanol, diesel) being explored for local use and export via the jetty.

Northern Water project

- **Significant** industrial **growth** and resource expansion **requires** a new, reliable, secure and climate independent **water** supply.
- Desalination plant and extensive water pipeline proposed.
- The pipeline would directly support:
 - expansion of copper mining operations in far north SA
 - growth of emerging green manufacturing and expanding clean energy industries.
- Currently undergoing a pre-feasibility study.



Collaboration critical to drive transformation



Partnering for a green iron and steel future



In South Australia, government action lays the foundation for the transition to green iron and steel, supported by renewable energy, gas, hydrogen, and enabling infrastructure.



The scale of this transformation requires the innovation and expertise of HILT CRC members, researchers, and industry partners.



Your work and research in low-carbon technologies, process innovation, and commercial solutions is critical to decarbonising Australia's iron and steel sector.



We share the responsibility for this shift, and together, we can turn ambition into reality.



Thank you

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Department for Energy and Mining

