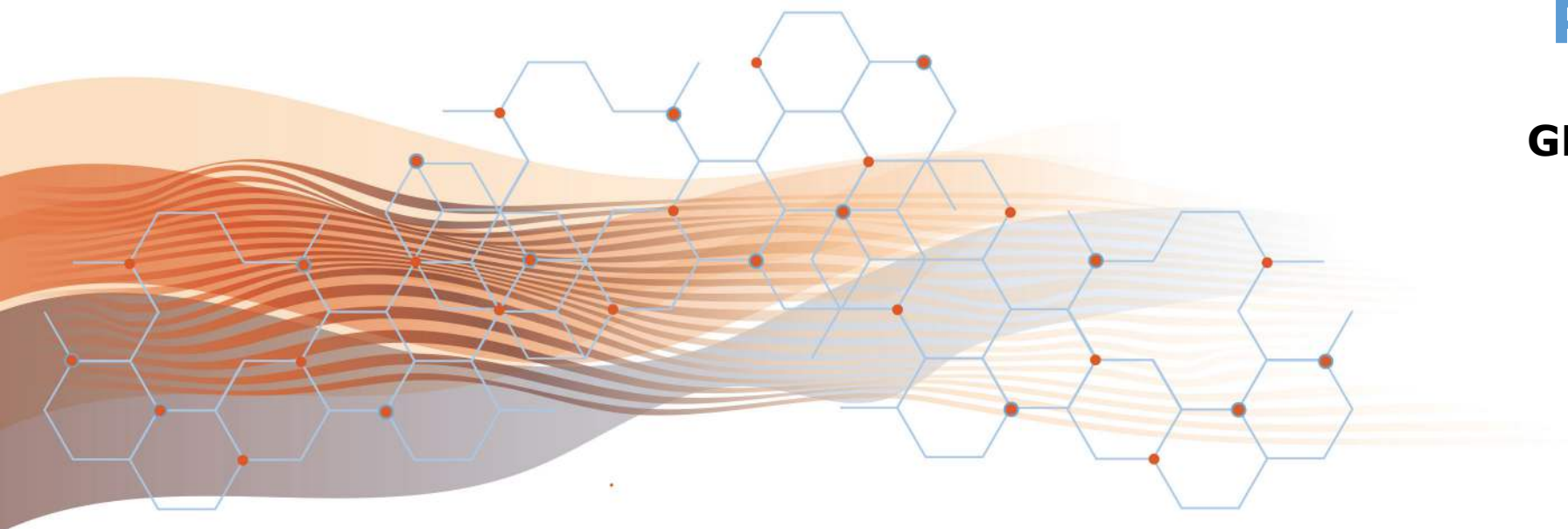

South
Australian
Chamber
Of
Mines &
Energy

Regional Industrialisation

Panel Discussion

GMUSG | 17 August 2023



South
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Mines &
Energy



Rebecca Knol
Chief Executive Officer
South Australian Chamber of Mines & Energy

South
Australian
Chamber
Of
Mines &
Energy



Adrian Tembel
Chair, South Australian
Productivity Commission



Regional Industrialisation – Fiscal Context

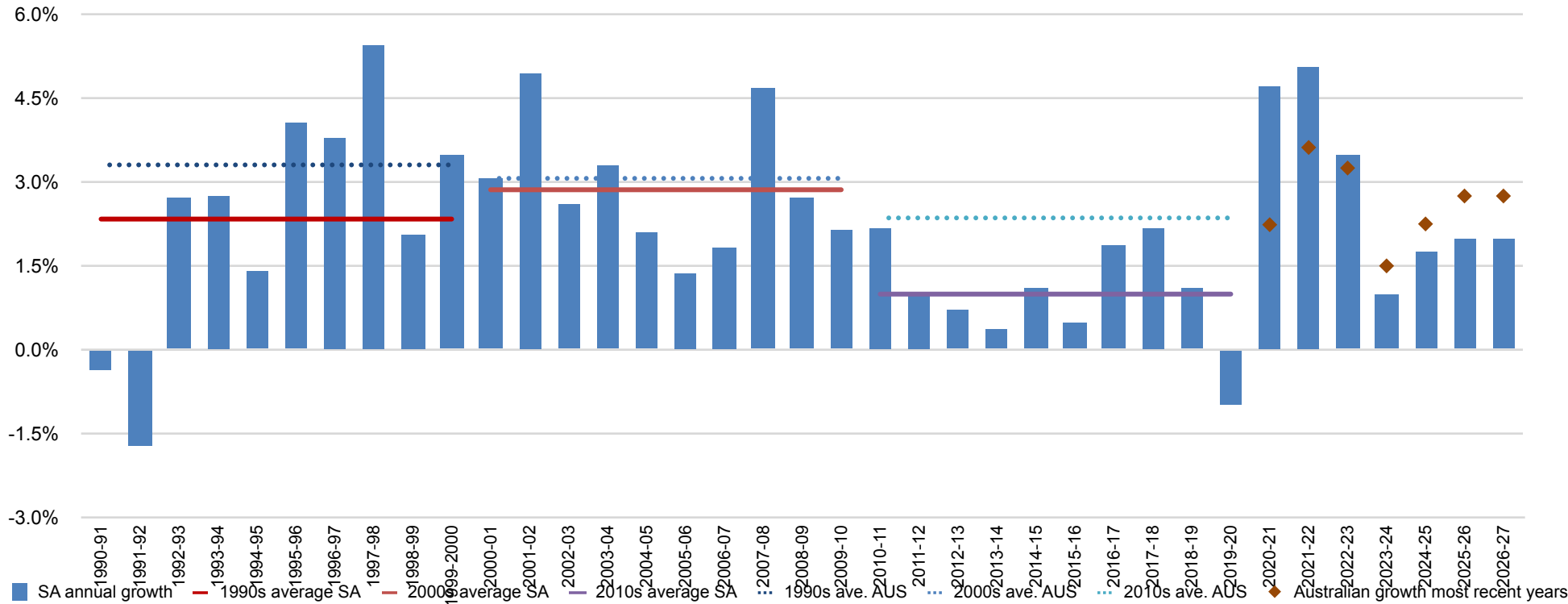
Adrian Tembel, Chairman

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Government of
South Australia

SA GSP Growth has been Underperforming for the last 30 years, with the 2010s particularly weak



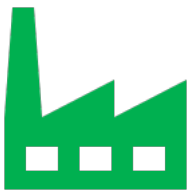
Substantial Potential Upsides – many of which centre on the Upper Spencer Gulf



Green energy opportunities

- Excellent mix of wind and solar (+ uranium for export);
- Potential for green hydrogen production (export and domestic use);

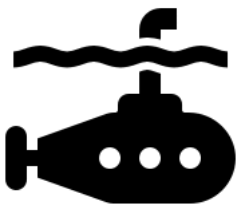
Green mineral opportunities



- Demand for critical minerals and copper increasing due to electrification.

Substantial Potential Upsides – many of which centre on the Upper Spencer Gulf

- Demand for magnetite increasing due to need to decarbonise steel production
- Potential for green processing of minerals



Trusted partner in an insecure world

- AUKUS submarine build
- Broader opportunities in defence

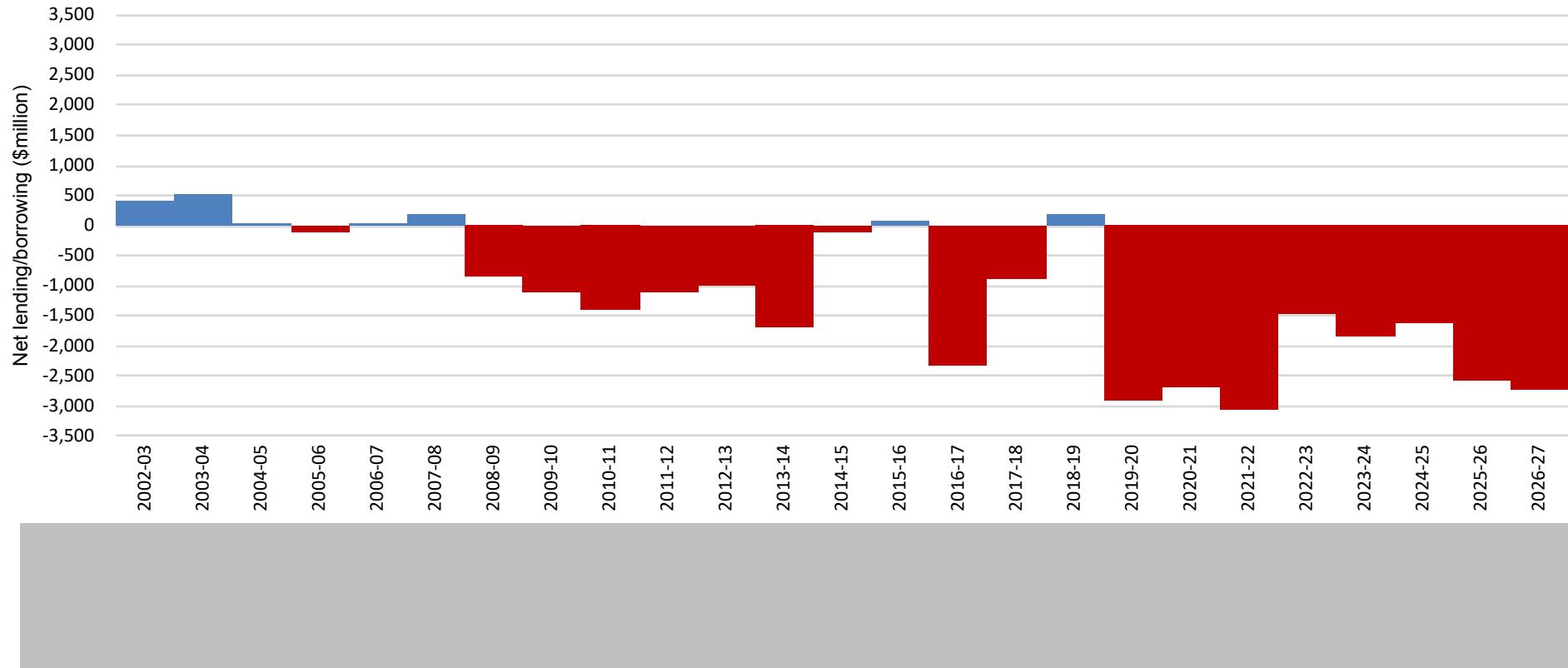
But Economic Success won't just fall in our lap

- Realising the state's emerging opportunities will require substantial investments:
 - In skills (widespread skills shortages, and solving through migration harder due to housing shortage)
 - In energy (wind and solar; ways of firming green energy eg hydrogen, batteries and natural gas, and the wires and pipes to get the energy to market)
 - In access to water (particular constraint for hydrogen production or increased mining in outback).

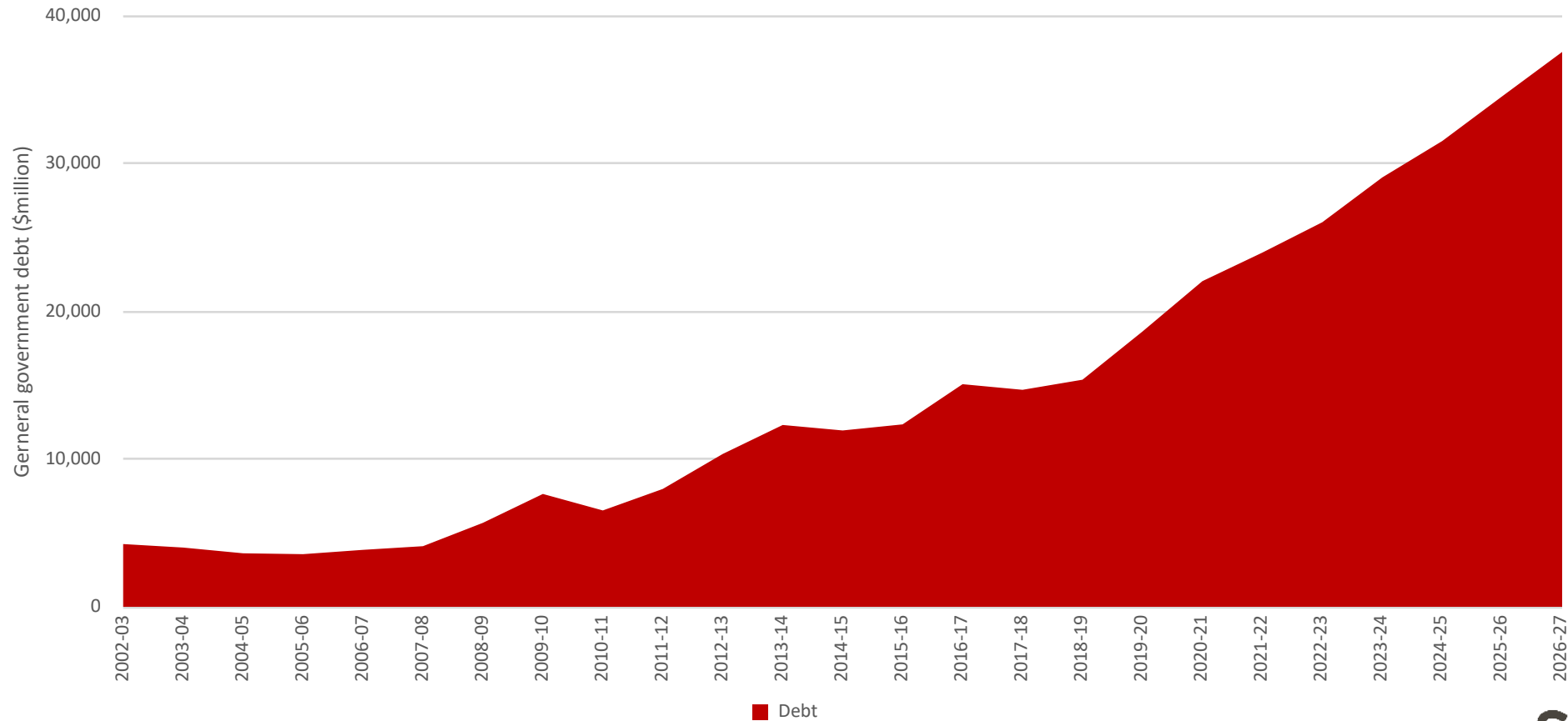
But Economic Success won't just fall in our lap

- In production facilities
 - In housing
 - In transport (ports, rail and roads)
- Does the South Australian Government have the fiscal flexibility to help?

SA Government has been a Net Borrower for most of the last 2 Decades



Debt is up Substantially



Substantial capex already committed beyond the forward estimates:

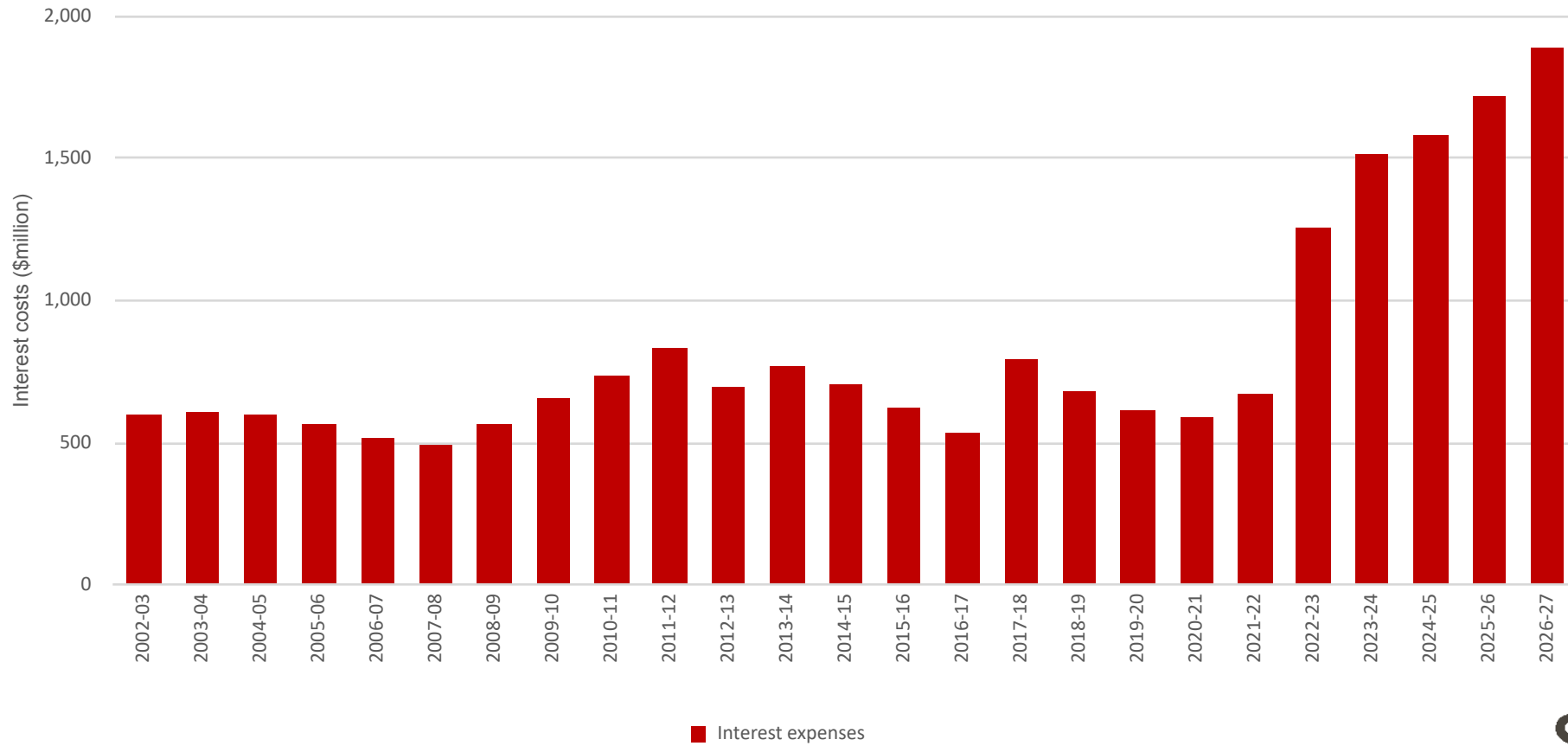
- \$6.5 billion in road spending (assuming a 50% Commonwealth contribution to the full cost of North-South connector)
- \$2.0 billion in hospital construction.

Budget Sustainability

SA Government targets:

1. Achieve a net operating surplus in the general government sector every year.
2. Limit general government operating expenditure growth to trend growth in household income.
3. Achieve a level of net debt that is sustainable over the forward estimates.

As are Interest Costs



- 6.6% of total spending by 2026-27
- \$1.9 billion out of \$28.6bn total spend
- Projected 2026-27 interest repayments = what we spend on Police + Courts system in 2023-24

SA Government role?

- Fiscal prudence through sticking to their budgetary targets is critical for the South Australian Government.
- Will need to look to the Commonwealth and to the private sector for the investment needed.
- SA Government needs to find ways to crowd in private sector.
- Proposed Hydrogen Bill simplifying access to Crown land and pastoral leases is a good start.
- Other reform options?

Wakefield House,
Level 15, 30 Wakefield Street
Adelaide SA 5000



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Paul Goiak

Director, Green Industrial Transition
Department for Industry, Innovation and Science

Green Industrial Transition Roadmap

GMUSG
August 2023



Government of South Australia

Department for Industry,
Innovation and Science

“It is my belief that the next 1,000 unicorns – companies that have a market valuation over a billion dollars – won’t be a search engine, won’t be a media company, they’ll be businesses developing green hydrogen, green agriculture, green steel, and green cement ¹.”

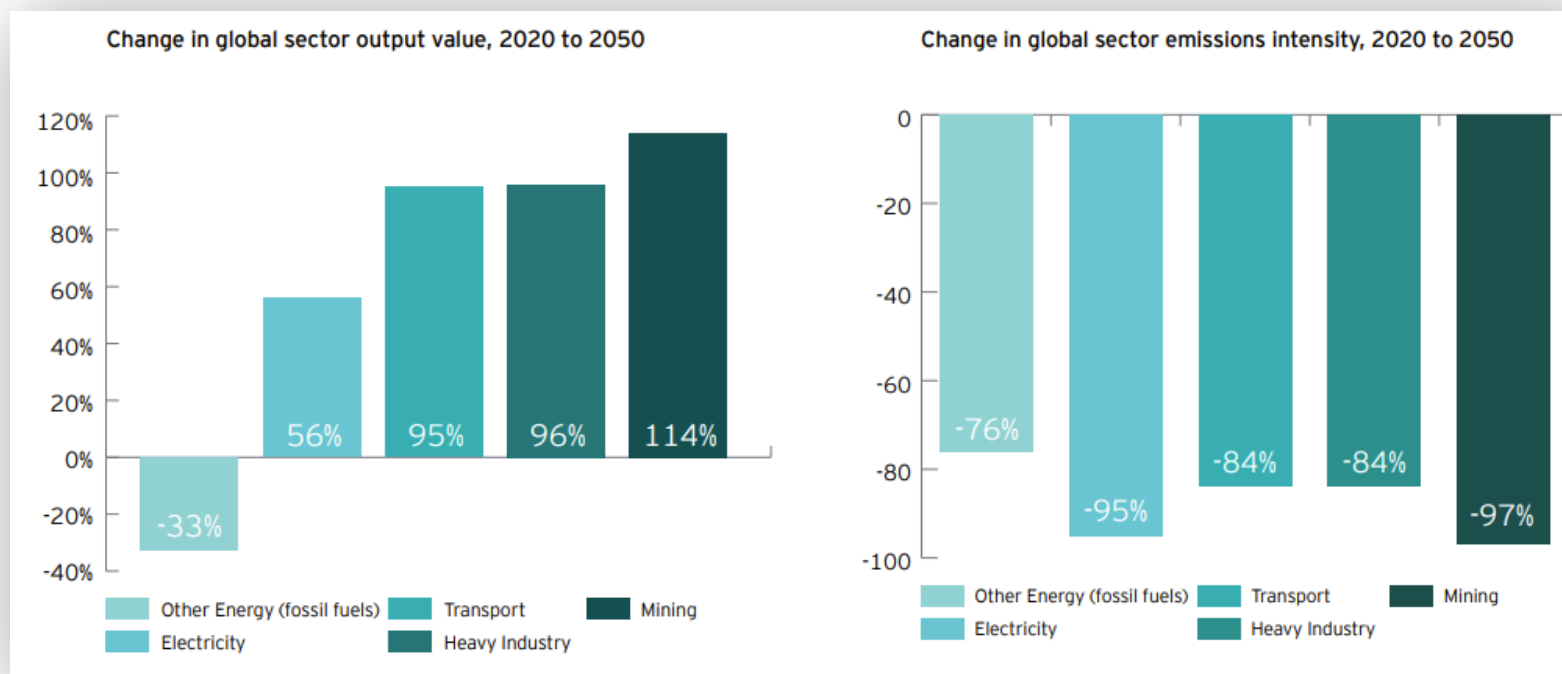
[Larry Fink](#), CEO and Chairman of Blackrock Inc.

Global Challenge

“ To limit climate change to below 2°C global emissions must fall by around 70% by 2050, even as the global population grows by 20% and the economy doubles.” 2

- “The scale of this challenge means that action to reduce emissions is required by all major sectors, including heavy industry....”
- “Heavy industry must find ways to reduce its emissions intensity by around 80%, while doubling its output value....”

What an Industrial Revolution looks like in 2023



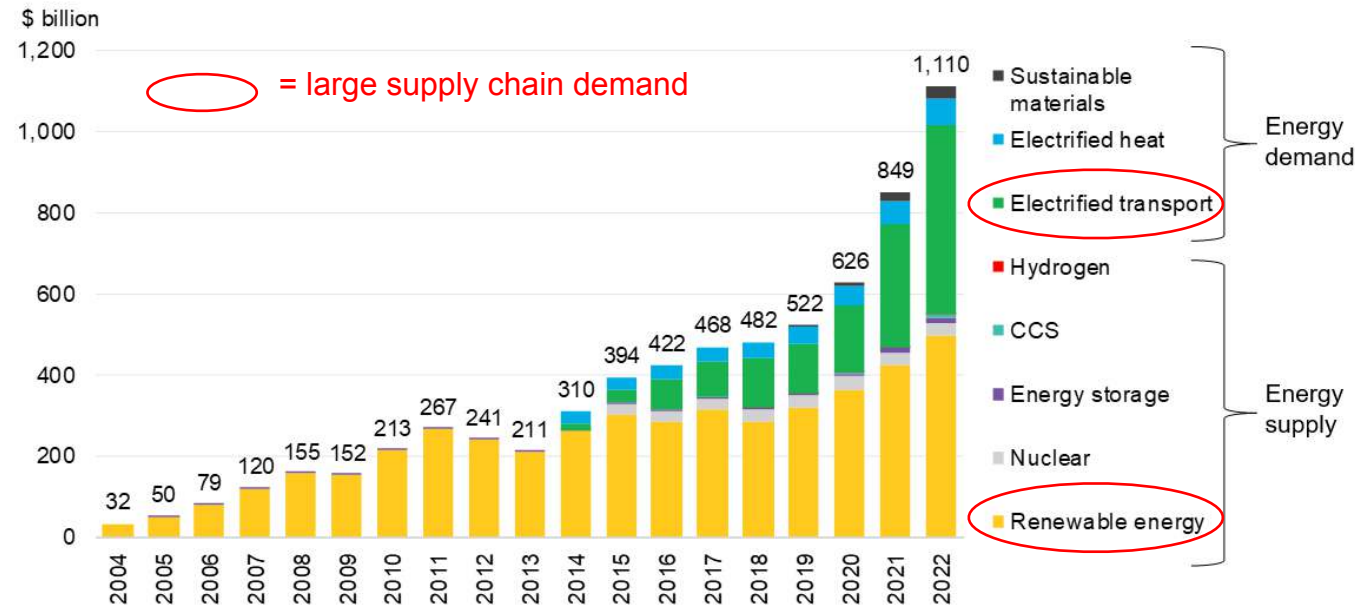
The Green Industrial Transition Roadmap

How fast are things moving ?

Key global investment trends (US\$):

- Global energy transition investment in FY21-22 = 1.1 trillion. A 31% increase on FY20-21.
- Renewable energy remained the largest sector at \$495 billion (up 17% year-on-year).
- Electrified transport is growing much faster and hit \$466 billion (up 54%).
- China accounts for just under half of global energy transition investment (\$546 b).
- Hydrogen was the smallest sector (\$1.1 billion), but tripled in one year.

Global energy transition investment by sector³



- Energy transition investment is about to overtake fossil fuel investment for the first time.

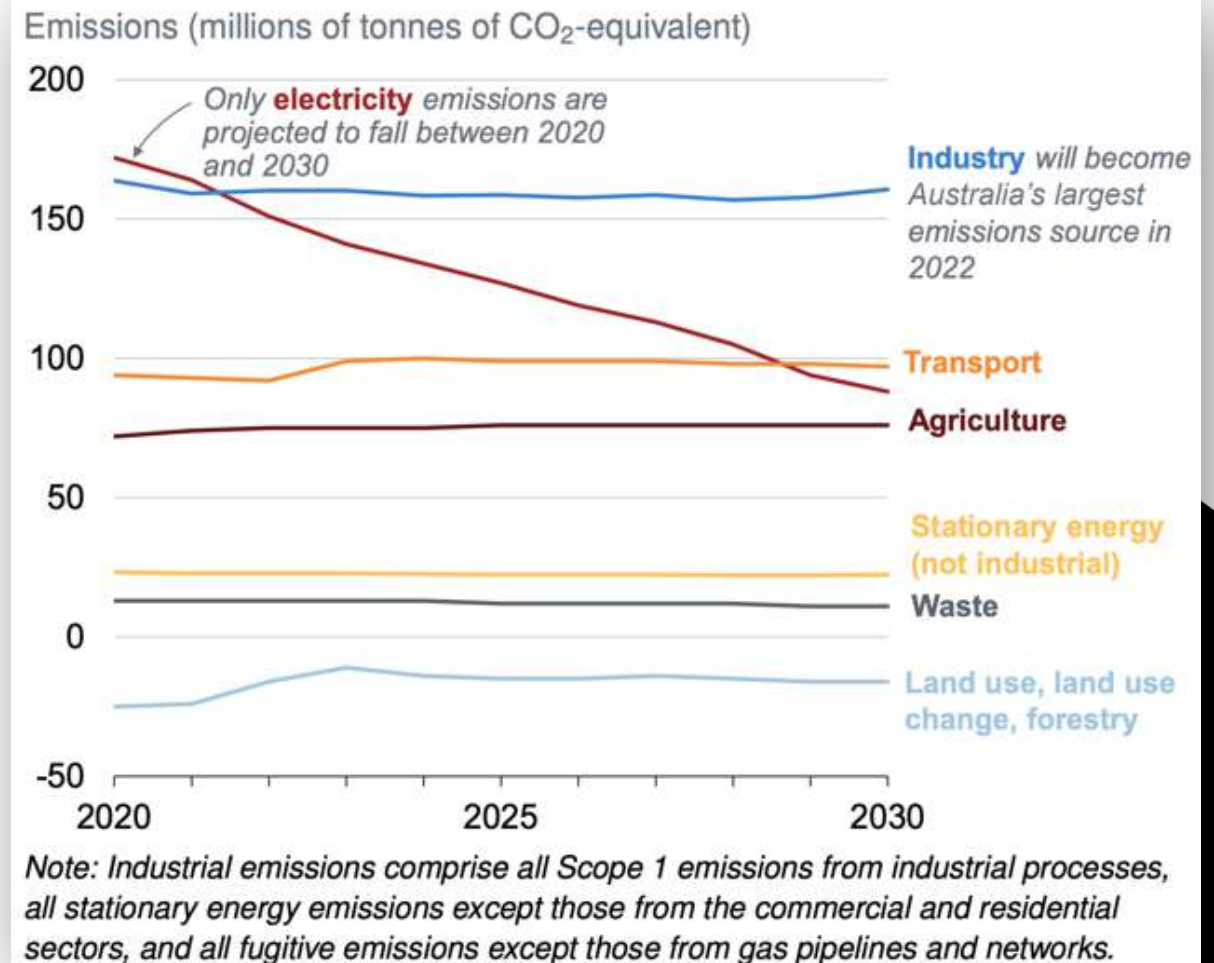
The Green Industrial Transition Roadmap

Australian Challenge

“ Industrial emissions in Australia are not projected to fall this decade.

4 ”

- Industry is now the largest contributor to emissions.
- and also the greatest area of opportunity
- Unless we choose carefully, we could make the emissions worse, not better.

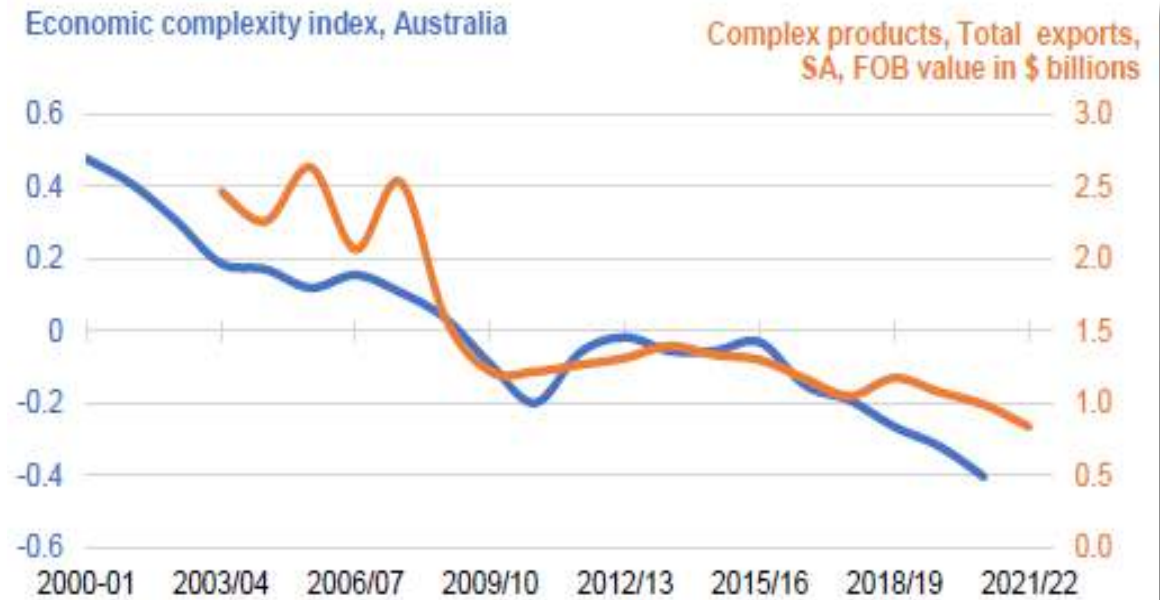


The Green Industrial Transition Roadmap

The Current State – Key Indicators

Key global and local trends:

- South Australia's economic complexity has declined since 2006. Our exports are reliant on relatively low value-add commodities⁶.
- Our economy is likely to return to relatively subdued growth (pre COVID levels) due to the impact of inflation and interest rates⁷.
- As a result of our demand profile, South Australian wholesale power prices are likely to remain higher than interstate⁸.
- Climate risk is expected to impact cost of capital⁹.
- Global competition for establishing green industry is intense to say the least.



...our **Industrial Policy** needs to find a way to make more impact

The Green Industrial Transition Roadmap

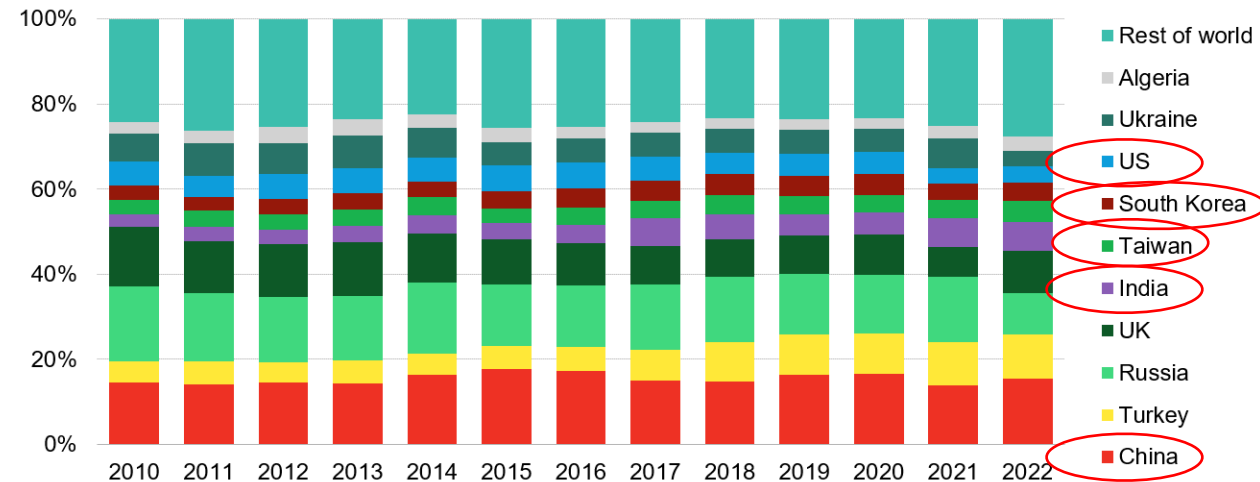
6. (2023) Santos E et al, EIP 2023-02 Economic Complexity of South Australia, DPC. 8. (2022) SA Productivity Commission, Inquiry into SA renewable energy competitiveness.
7. (2023) McKay, et al: Department for Industry Innovation and Science, Strategic Policy 9. (2023) Bloomberg, Financial Materiality Report, The next Big ESG Investing Battle.

The Carbon Border Adjustment Mechanism - CBAM

World's First Carbon Tariff

- Starting October 2023, exporters to the EU must count and disclose CO₂-e emissions of certain goods ¹⁰.
- \$US 132 b - the value of EU imports from CBAM-covered sectors.
- Phase 1 - to December 2025: transition phase, where reporting begins. Phase 2 - from January 2026, annual declarations begin, as do surrendering of CBAM certificates/tonne of reported direct emissions.
- Selected countries SA exports to and % of total export value: China (15.1%); USA (9.2%); India (5.5%); South Korea (3.2%); Taiwan (2.9%); EU (6.4%). ¹¹

EU Imports of CBAM products, by non-EU Country of Origin.



Source: BloombergNEF, ITC. Note: Includes product codes as detailed in the CBAM legislation. Does not include imports from Liechtenstein, Iceland, Norway and Switzerland.

CBAM may impact South Australian exports directly or indirectly.

The Green Industrial Transition Roadmap

10. (2023), Vagner-Jones A, Bloomberg NEF, World's First Carbon Tariff is now a thing.

11. (2023) McKay M, et al: Department for Industry Innovation and Science, Strategic Policy

The Huge Opportunity for South Australia

We asked the experts for advice:

- They told us South Australia is very well positioned to build low carbon industry.
- Five opportunities stand out, and three rely on Hydrogen as an input.
- the devil is in the detail

South Australia Leading the Superpower Transformation¹²:

- Hydrogen based green iron
- Hydrogen to green fuels, such as methanol
- Hydrogen to ammonia, for export and fertilisers
- Mining and processing of energy transition minerals
- Metallurgical recycling focussed on green waste

“It’s important to note that the development of a hydrogen industry should be domestic first, and export second, and most countries have that priority backwards.”¹³

The Green Industrial Transition Roadmap

12. (2023) Garnaut, R; Sims, R; Sandiford, M; et al. South Australia Leading the Superpower Transformation.

13. (2023) Kobad Bhavnagri, Global Head of Strategy – Bloomberg NEF, Sustainable Agriculture, Sao Paolo, 22 March.

Thankyou.



Government of South Australia

Department for Industry,
Innovation and Science

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Peter Treloar

Chair, Sustainable Development Forum

Q&A – Regional Industrialisation Panel

SACOME



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Paul Goiak

Director, Green Industrial
Transition, Department for
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Thank you!



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