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Climate protectionism wastes Australia's energy comparative advantage

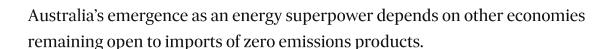
Protecting dirty fossil fuels by remaining outside the global climate consensus means Australia risks missing out on the massive clean industry opportunities in hydrogen and carbon capture.

Ross Garnaut

Contributor



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Paul Samuelson, the most influential American economist through the long postwar expansion, once nominated "comparative advantage" as the idea in economics that was both non-trivial and correct. Australians developed an elaborate theory of why Australia operated under different rules. The Australian way was different, and wrong.



The Morrison-Joyce Government's Roadmap suggests that hydrogen exports could be worth \$50 billion annually by 2050. **Michelle Mossop**

After the Hawke government removed nearly all protection, we rose to the top of the developed world's league table on productivity growth after nine decades near the bottom. We began the longest period of growth unbroken by recession that any developed country had ever had – ending only in the second quarter of 2020.

We heard a lot about the Australian way to zero emissions at the Glasgow conference. It is different, and wrong.

Australia has several sources of exceptional advantage in the zero-emissions world economy. Relative to economic size, Australia has by far the richest combinations of wind and solar resources. This is a source of comparative advantage in energy-intensive manufacturing. Australia has far more woodlands for capturing carbon in soils and plants and sustainably harvesting biomass for zero-emissions production of plastics and other chemical manufactures. It has unusually rich opportunities for carbon storage in known geological structures.

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And experience in the resources and agricultural industries contributes relevant knowledge, skills and human capacities. It is an advantage that Australia is by far the world's largest exporter of minerals requiring energy-intensive processing, led by iron and aluminium ores. Australia is unusually well-endowed with the critical minerals used in the new renewable energy and storage industries.

The new opportunities are much larger than the old.

Australia is also unusually well-endowed with fossil carbon and hydro-carbon resources. We have been the world's largest exporter of coal and first or second for LNG.

The new manufacturing opportunities are sustainable. Those based on coal and gas were non-existent or temporary. It costs less than 10 per cent of the value of steelmaking coal to move it to Kobe, Pusan or Shanghai – less than to Whyalla. As a result, there is no advantage in using Australian coal for industry in Australia.

Australian aluminium smelting from coal-based electricity in Gladstone and Newcastle was globally competitive when power generators had privileged access to Australian coal. It lost its advantage when Queensland and NSW coal was available only at export prices. Australian manufacturing was once able to use substantially cheaper gas than Asian. This advantage disappeared when exports of LNG from Gladstone raised east coast prices to export parity.



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To move renewable electricity by submarine cable or as hydrogen from Australia to major Asian markets more than doubles its cost. Renewable energy and hydrogen are available near the mineral deposits or export ports at not much more than cost. In the zero emissions world, it will always be much cheaper to process Australian ores into metals in Australia.

The new opportunities are much larger than the old.

The Morrison-Joyce government's road map suggests that hydrogen exports could be worth \$50 billion annually by 2050. If South Korea and Japan converted all of their fossil carbon and hydrocarbon imports into zero emissions hydrogen (liquefied, or embodied in ammonia and other carriers), they would be using around 200 million tonnes per annum. They currently draw about 40 per cent of their coal and gas imports from Australia. They would only have to import 12 per cent of their hydrogen requirements from Australia to reach \$50 billion at the low-price target of the road map. Our competitive advantage against main rivals is greater for hydrogen than gas and coal. So \$50 billion is no stretch for exports to Japan and Korea alone.

The opportunity is larger for processed metals embodying renewable energy than

renewable hydrogen would more than double the value of our largest export. Then there's aluminium, silicon and the critical minerals.

If Australian landowners had access to European carbon prices, carbon credits would emerge as our largest farm export industry. World prices will tend towards the European. Managed well, this export expansion from regional Australia would co-exist with increased production of established agricultural commodities.

Big developments in international trade are impossible until they happen. Australian iron ore, coal and LNG exports all make the point. Chapter 11 of my book, "RESET: Restoring Australia After the Pandemic Recession", tells how the recent scale of Australia's iron ore and coal exports to China was unlikely when it all began in the 1980s.

It is never easy to develop new export capacity amid uncertainty about access to future markets. West Australian premier Charles Court made the first LNG exports possible by guaranteeing Woodside large sales in the domestic market. The LNG industry on the east coast had its origin in a mandatory requirement for power generators to use a specified amount of gas.

Protectionist pressures are always with us. They make big use of small opportunity. Australia remaining outside the developed democracies' consensus on climate action over the next decade gives them big opportunity.

At times, protectionist pressures against the public interest seem overwhelmingly strong. During Hawke's trade liberalisation in the 1980s, BHP Steel fought ferociously for anti-dumping duties against a few million dollars of steel sales from Korea's POSCO. BHP management lost and its shareholders won. POSCO is now the biggest purchaser of goods from both BHP and Australia.



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The markets that matter most to Australian exports new and old are the densely populated countries of north-east Asia: China, Japan and Korea. For the new exports over the next decade, it's Japan, Korea, the European Union and the UK.

Political tensions are pushing China towards suppliers in the belt and road countries of central and west Asia – for the present, but hopefully not forever. South-east and South Asia will not move to reduce emissions decisively over the next decade. North America will be largely self-sufficient in new as in old energy and in carbon credits.

The US-Europe agreement on aluminium and steel signed during the Glasgow meeting will shape trade relations between these economies and influence trade with other developed economies and other products. Australia risks exclusion if it is not seen to contribute reasonably to global emissions reductions over the next decade.

Australian business and government leaders have been speaking since Glasgow about maintaining gas and coal expansion plans as they had been before. World prices for gas and coal are currently high, and are likely to remain so because of restrictions on investment in new supply capacity in other countries. Australia expanding supply to take advantage of high prices is seen as free-riding on the rest of the world's efforts to reduce emissions.

If established Australian coal and gas producers refrain from investment to maintain and expand production, they contribute to high prices for output from established mines. They conserve shareholders' cash. Present value of cash flows may be larger and would certainly be more certain.

The most Australian of our words for something being real and truthful may come

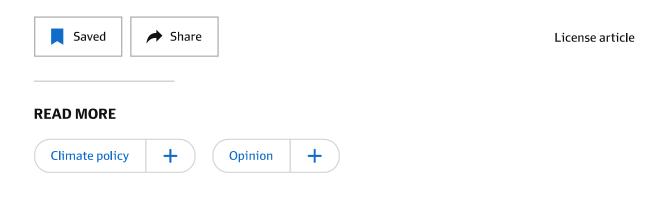
trom Cantonese and the mid-nineteenth century resources trade with China. Dinkum. Real gold.

The Morrison-Joyce government was not kidding in its Zero Emissions Technology Roadmap's statements about the hydrogen export trade being worth \$50 billion by 2050. That is not a fifth of new Australian exports in a world of zero emissions, free trade, and clever Australian utilisation of opportunity. Fair dinkum.

Ross Garnaut is Emeritus Professor of Economics, University of Melbourne, and a director of ZEN Energy and Chairman, Sunshot Zero Carbon Futures. This is the third in series of articles on Australia's energy superpower opportunities after Glasgow.

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