

Why maritime decarbonisation matters for Australia



Australia's economy and way of life depend on shipping.

Around 99% of Australia's trade by volume and 87% by value is carried by sea, making maritime transport essential to the nation's economic prosperity and connection to global markets. At the same time, international shipping is beginning a major transition toward zero- and near-zero-emission fuels and technologies, driven by evolving regulation, customer expectations, and supply chain decarbonisation commitments.

Australia's shipping-related greenhouse gas (GHG) emissions from commodity exports are estimated at around 34 million tonnes annually, equivalent to approximately 8% of the country's total GHG emissions. Although these emissions are not directly captured within Australia's domestic emissions targets or policy framework, the Australian economy remains highly exposed to shipping's net-zero transition.

Maritime decarbonisation is therefore not simply a climate issue, but an economic, energy security, and strategic opportunity for Australia.

The economic opportunity

As key trading partners such as Japan, South Korea, and China move to reduce emissions across global supply chains, Australia's competitiveness will increasingly be influenced by the emissions performance of the products it exports and the systems used to transport them.

Australia's resources and energy exports are forecast to generate more than AUD \$400 billion in export earnings in 2026-27, with iron ore alone accounting for more than a quarter of those earnings. Supporting the uptake of clean maritime fuels can help ensure Australia remains integrated into the low-emission supply chains being developed by its major trading partners. It will also help maintain the international competitiveness of key export industries, including iron ore, critical minerals, agriculture, aluminium, and other energy-intensive sectors. At the same time, it will reinforce Australia's reputation as a reliable trading partner in a low-carbon global economy.

As these trading partners pursue green steel, low-emissions manufacturing, and broader industrial decarbonisation pathways, demand for lower-emission commodities and supply chains is expected to grow. Shipping could provide one of the earliest sources of demand for alternative fuels such as ammonia, helping unlock investment in fuel production, storage, transport, and bunkering infrastructure. Realising this opportunity will require coordinated policy, investment, and industry action to scale the fuel production and supporting infrastructure needed to provide confidence for private investment.

Concentrated export hubs and shipping routes—such as those supporting Australia's iron ore exports—offer practical opportunities to aggregate demand, demonstrate commercial viability, and support the growth of Australia's emerging clean fuel industry.

The energy security opportunity

There is also a compelling energy security rationale. Australia remains heavily dependent on imported fuels, with approximately 95% of its transport fuels sourced from overseas. This leaves the economy exposed to the impacts of international supply disruptions, price shocks, and geopolitical uncertainty on the cost and availability of conventional maritime fuel.

Australia also has limited domestic capability to produce fossil maritime fuels, as remaining crude oil resources are scarce and internationally uncompetitive. By contrast, Australia has abundant low-cost renewable energy potential and diverse sources of low-emissions biomass, creating an opportunity to develop domestic production of hydrogen, ammonia, and methanol. Building sovereign capability in these fuels could strengthen Australia's energy security and strategic resilience by supporting a more secure fuel supply for critical maritime operations, including defence and government fleets.

As maritime fuel demand transitions over time, Australia has the potential to domestically produce a substantial share of the fuels it needs. The infrastructure, expertise and supply chains developed through maritime decarbonisation could therefore make a meaningful contribution to national energy resilience whilst creating new economic opportunities.

The strategic opportunity

Like Australia, many other Asia-Pacific (APAC) countries are actively exploring pathways to diversify fuel supplies and establish new clean energy value chains. By supporting first-mover maritime decarbonisation initiatives like the Australia-East Asia iron ore green corridor, Australia can strengthen regional partnerships, contribute to shared APAC fuel security objectives, and position itself as a leading partner in the clean energy and green shipping corridors that will underpin future low-emission trade.

First-mover initiatives also provide practical test beds for new fuels, vessels, and infrastructure, helping to reduce transition risk, accelerate learning, and create blueprints that can be replicated and scaled across ports and trade corridors. Early participation in these initiatives will help ensure Australia remains competitive in evolving international supply chains, while capturing opportunities associated with new fuel industries, port infrastructure investment, and regional trade partnerships.