What can Australia learn from APAC first movers on maritime decarbonisation?

Several Asia-Pacific (APAC) economies are beginning to implement policies and make investments designed to accelerate maritime decarbonisation. Governments are increasingly combining demand creation, fuel production support, infrastructure development, and investment certainty to support commercial deployment at scale. Australia has an opportunity to link the supply of low carbon fuels to demand in the APAC market.

What do APAC first movers have in common

While approaches differ, South Korea, Japan, Singapore, and China share a common view of maritime decarbonisation as both an economic and environmental opportunity. They are integrating national maritime decarbonisation strategies into broader objectives around energy security, industrial competitiveness, and trade—all while supporting fuel production, vessel deployment, bunkering infrastructure, and international partnerships.

Collectively, these examples demonstrate the importance of coordinated action across the value chain. Green shipping corridors create links between these first movers, and early investments will set these countries up for success when international or regional green shipping rules are established.

The tables below provide a non-exhaustive snapshot of some of the key first-mover initiatives and enabling policies being implemented in the APAC region.

South Korea: Legislating for green shipping corridors

Green Shipping Corridor Support Act	A comprehensive maritime decarbonisation policy framework for enabling the development of green shipping corridors, alternative fuel infrastructure, and international cooperation.
Green shipping corridor partnerships with the United States, Australia, and Singapore	These partnerships demonstrate how international collaboration can support the development of future fuel supply chains and early demand.
2030 Green Ship-K Promotion Strategy	A full value chain approach that seeks to accelerate the deployment of low-emission vessels and associated technologies.
Eco-Friendly Ship Fuel Infrastructure Fund	A ₩1 trillion (A$1.1 billion) fund launched in 2025 to invest in marine fuel storage facilities and bunkering vessels for fuels such as methanol and ammonia.

Japan: Combining industrial policy with demand creation

Green Innovation Fund	This fund has grown to approximately ¥2.76 trillion (A$25 billion) and is providing long term support for technologies critical to the country's decarbonisation goals.
Japan's next-generation ship development programme as part of the Green Innovation Fund	This fund includes more than ¥40 billion (A$370 million) for zero-emission vessels and supporting fuelling infrastructure.
NYK Line completed the world's first ship-to-ship ammonia bunkering operation to an ammonia-fuelled vessel.	This project forms part of Japan's broader strategy to strengthen industrial competitiveness and establish itself as a leading market for clean marine fuels and associated technologies.
Japan's Green Transformation (GX) strategy	This strategy aims to strengthen industrial competitiveness through the development of hydrogen and ammonia supply chains.
Japan's Hydrogen Society Promotion Act	The act provides ¥3 trillion (A$27.03 billion) for contracts for difference to reduce the cost gap between low-carbon hydrogen, ammonia and conventional fuels.

Singapore: Building the future bunkering hub

Commercial methanol bunkering and ITOCHU-led ammonia bunkering project	As the world's largest bunkering hub, Singapore is positioning itself as a leading centre for alternative marine fuels, while supporting the development of end-to-end fuel value chains and associated port infrastructure.
Fortescue's Green Pioneer	This vessel conducted the world's first ammonia bunkering trial in 2024, helping to build operational experience and industry confidence in emerging fuel pathways.
Singapore-Australia Green Economy Agreement	Singapore is also deepening cooperation with potential fuel-exporting partners, such as Australia.
Green and Digital Shipping Corridor	Commitment between Australia and Singapore to develop joint supply chains for low-carbon fuels, support workforce training programs for fuel handling, and leverage digital technologies to optimise port activities.

China: Scaling maritime decarbonisation through industrial capability

Action plan for green development of the ship building industry and methanol- and ammonia-ready vessels	As the world's largest shipbuilding nation, accounting for more than half of global output and around two-thirds of new ship orders in 2025, China's green shipbuilding action plan supports the development and deployment of low- and zero-emission vessels and related technologies.
Shanghai Electric's Taonan green methanol facility, Shenzhen Energy, and International Centre for Green Shipping Fuel Bunkering and Trading	China is investing heavily in the production of zero- and near-zero emission fuels as well as certification of these fuels, particularly green methanol and renewable ammonia.
International Green Shipping Corridor Alliance	China is also taking an increasingly active role in international cooperation, signalling its intention to help shape emerging regional and global approaches to low-emission shipping.

Australia's role in the region

The big picture: Due to its comparative advantage in low-cost renewable energy and plant-based carbon, and its reputation as a reliable trading partner in the region, Australia has the potential to become a major producer and exporter of low-emission molecules within the APAC maritime decarbonisation landscape.

While countries such as South Korea, Japan, and Singapore are expected to become significant importers and users of these molecules, China represents an important partner through its growing capabilities in low-emission fuel production, shipbuilding, and maritime technology. Australia is therefore well placed to support and coordinate investments with emerging regional demand while strengthening collaboration and maintaining the competitiveness of its export industries.

South Korea: Korea's maritime decarbonisation strategy combines policy support, infrastructure investment, and international cooperation in ways that could directly support future trade with Australia. Korea's Green Shipping Corridor Act provides a framework for developing green shipping corridors, while its investments in bunkering infrastructure and low-emission vessels help create the conditions for future fuel demand. Together, these initiatives position the nation as one of the region's most significant potential importers and users of low-emission marine fuels.

For Australia, there is an opportunity to align emerging fuel production with Korea's growing demand for alternative fuels and low-emission shipping services. Existing cooperation through the Australia-Korea green shipping corridor memorandum of understanding provides a platform to move beyond dialogue towards implementation, particularly along trade routes for major commodities like iron ore. A shared understanding of future fuel demand, infrastructure requirements, certification pathways, and timing assumptions could help reduce investment uncertainty on both sides.

South Korea's experience also highlights the importance of coordinated policy frameworks that support investment across the value chain, from fuel production to vessel deployment and

bunkering infrastructure. As Australia advances its Maritime Emissions Reduction National Action Plan (MERNAP), closer collaboration with Korea could strengthen bilateral trade competitiveness while providing a replicable model for green shipping corridors across the wider APAC region.

Japan: Japan's maritime decarbonisation efforts are creating demand for low-emission fuels across shipping, power generation, and heavy industry. Through its GX policies, support for next-generation vessels, and targets for ammonia co-firing in the electricity sector, Japan is helping establish clearer market signals for hydrogen and ammonia.

For Australia, this presents an opportunity to align future fuel exports with emerging Japanese demand. Existing Australia-Japan cooperation on hydrogen, clean fuels, and industrial decarbonisation, including through the Japan-Australia Partnership on Decarbonisation through Technology, provides a foundation for collaboration across fuel production, transport, and end-use applications. Australia can also build on its longstanding iron ore trade relationship with Japan by exploring opportunities to decarbonise steel value chains and related shipping routes.

Japan's approach highlights the value of combining supply-side support with demand-side measures. Joint initiatives, including potential H2Global-style approaches to better match fuel supply and demand, could help reduce investment uncertainty and accelerate the development of low-emission fuel trade between the two countries.

Singapore: Singapore's maritime decarbonisation efforts demonstrate how a major maritime hub can use policy, infrastructure investment, and industry partnerships to accelerate the transition to low-emission shipping. As one of the world's busiest ports and largest bunkering centres, Singapore has positioned itself as a testing ground for alternative marine fuels through regulatory frameworks, pilot projects, bunkering standards, and support for vessel deployment. Its approach recognises that maritime decarbonisation will require not only the availability of low-emission fuels, but also the supporting infrastructure, safety standards, workforce capabilities, and commercial arrangements needed to enable their adoption at scale.

For Australia, Singapore's experience highlights the importance of looking beyond fuel production and considering the broader maritime value chain. While Australia has the potential to become a major supplier of low-emission fuels, realising this opportunity will require moving beyond a traditional export-focused model and considering how it can participate across the broader maritime value chain, including fuel storage, bunkering, certification, and regional supply chain development. Collaboration with Singapore on fuel standards, certification frameworks, bunkering procedures, and port readiness could help reduce barriers to the future movement of low-emission fuels across the region.

China: China is leveraging its strengths in shipbuilding, manufacturing, and clean energy to support maritime decarbonisation. While Chinese shipyards are leading the construction of methanol- and ammonia-ready vessels, its energy sector is rapidly scaling the production of zero- and near-zero emission fuels, particularly green methanol and ammonia. Chinese producers have already begun exporting renewable ammonia commercially, signalling ambitions that extend beyond domestic decarbonisation towards becoming a major supplier of future fuels to international markets. These efforts are being supported by the rapid development of fuel supply infrastructure, with Shanghai, Dalian, and Yangpu establishing green bunkering capability. Together, these developments suggest China is seeking to establish a leading position in future maritime fuel supply chains.

While this signals potential competition for Australia in alternative fuel production and bunkering, the upside is that Chinese fuel supply provides the confidence first-movers urgently need to invest in dual-fuel vessels. As the size of the low-carbon fleet grows, it creates a larger accessible market for Australian green fuel producers. The geography of the APAC region is also vast; together with

the lower energy density of green fuels, this means a business case exists for bunkering at various locations in the region (e.g., at both ends of the Australia-China iron ore trade corridor). Due to the sheer size of the Australia-China iron ore trade, there are also outsized benefits to collaboration between these two countries, such as establishing alignment on certification and port access requirements as a blueprint for the rest of the region to leverage.

Regional trends: What emerges across these examples is that maritime decarbonisation is increasingly being pursued as a regional economic and industrial strategy, not solely an emissions reduction exercise. While China is scaling production and shipbuilding capability, South Korea is developing corridor-focused policy frameworks, Japan is creating future demand through industrial policy, and Singapore is building the infrastructure and standards needed to enable new fuel markets. Australia is well positioned to complement these efforts through its potential role as a producer of low-emission fuels and a trusted regional trading partner. As MERNAP progresses, the greatest opportunity may lie in coordinating with APAC first movers to align fuel supply, demand, infrastructure, and standards, helping establish the trade corridors and value chains that will underpin maritime decarbonisation across the region.