



Singapore’s Decarbonisation Blueprint – working towards 2050

Singapore’s Decarbonisation Blueprint is an important initiative towards a greener future which may raise legal issues, writes [Henry Setiono](#), Senior Associate in CJC’s Singapore office.

Singapore is not one to kick the can down the road in matters relating to sustainability, and its Government, via the Maritime Port Authority (“MPA”), recently set out its decarbonisation blueprint (the “Blueprint”) for the maritime industry to achieve net-zero emissions by 2050. Published by the MPA in March 2022¹, the blueprint sets out specific targets and the steps to achieve those targets.

MPA identifies seven key focus areas to execute its decarbonisation initiatives:



- 1) Port Terminals
 - 2) Domestic Harbour Craft
 - 3) Future Marine Fuels, Bunkering Standards and Infrastructure
 - 4) Singapore Registry of Ships
 - 5) Efforts at the IMO and International Platforms
 - 6) Research & Development and Talent
 - 7) Carbon Awareness, Carbon Accounting and Green Financing
- (collectively the “7 Focus Areas”).

In brief, key aims are as follows:

The Target	Steps
Focus Area 1: Port Terminals	
<ul style="list-style-type: none"> - By 2030, to reduce absolute emissions by at least 60% from 2005 levels (about 650k tonnes of CO₂). - By 2050, the aim is to achieve net zero emissions 	<ul style="list-style-type: none"> - Greening port equipment and vehicles by electrification, relying on cleaner fuels such as LNG and phasing out combustion engines. - Green buildings and solar power to remove reliance from grid electricity. - Energy gained from improved port efficiencies such as 1) the digitalisation of “Smart Prime Movers”, by using AI to ‘drive’ them more efficiently; 2) the massive consolidation of all terminal operations into a single location – Tuas Mega Port (to be completed

¹ <https://www.mpa.gov.sg/web/portal/home/maritime-singapore/green-efforts/decarbonisation>

The Target	Steps
	by 2040) – improving physical proximity in the logistics ecosystem which will in turn significantly reduce emissions.
Focus Area 2: Domestic Harbour Craft	
<ul style="list-style-type: none"> - By 2030, to reduce absolute emissions by 15% from 2021 levels through adoption of lower-carbon energy solutions - By 2050, the aim is to halve 2030-level emissions by transitioning to full-electric propulsion and net-zero fuels 	<ul style="list-style-type: none"> - As a start, the pilot use of biofuel blends which are compatible with existing shipboard equipment and bunkering infrastructure. - Imposition of ‘Green’ licensing to require all harbour craft to operate on lower-carbon energy solutions. - Electrification of harbour craft, with green financing. This is approached by doing multiple studies with industry partners to cover 1) national standards for shore-charging infrastructure; 2) existing gaps in current grid infrastructure for shore charging; 3) technology cost of full-electric harbour craft and shipboard systems.
Focus Area 3: Future Marine Fuels, Bunkering Standards and Infrastructure	
To practically adopt low-carbon energy solutions for the maritime industry	<ul style="list-style-type: none"> - MPA’s contribution to the Castor Initiative, a multinational coalition that aims to design, build and commission the world’s first ammonia-fuelled tanker by 2026. - To pilot all available and viable fuel alternatives to enable the transition to lower-carbon energy solutions. - Develop a strategic framework for the maritime industry to transition towards lower-carbon energy solutions. MPA has identified seven ‘anchors’ to facilitate this transition: (1) technology trials and R&D; (2) supply – bunkering, storage and distribution; (3) regulations and standards development; (4) demand – market structure and policy; (5) financing; (6) talent and skill development; and (7) international partnerships.
Focus Area 4: Singapore Registry of Ships	
Using incentives, to have ship owners and ship operators jointly participate and engage with decarbonisation	<ul style="list-style-type: none"> - Awarding the ‘SRS Green Notation’ to Singapore-registered ships that reduce their carbon intensity. - Qualifying Singapore-registered ships will receive benefits such as a reduction in their Initial Registration Fees and/or their Annual Tonnage Tax. - Singapore’s long-standing ‘Green Ship Programme’ was extended and will be enhanced with maximum rebates or reductions to the Initial Registration Fees and Annual Tonnage Tax.
Focus Area 5: Efforts at IMO and International Platforms	
Shipping is naturally international – for Singapore to achieve its targets, Singapore needs the world to get on board	<ul style="list-style-type: none"> - To spearhead a greener future by being a ‘standards-setter’ for the world to follow. - Being a ‘bridge-builder’ to facilitate consensus between stakeholders in the maritime industry.

The Target	Steps
	<ul style="list-style-type: none"> - The IMO-Singapore ‘NextGEN’ initiative (“GEN” stands for “Green and Efficient Navigation), a knowledge and resource management/collaborative platform to share decarbonisation initiatives across the maritime industry.
Focus Area 6: <i>Research & Development and Talent</i>	
To be a global hub for maritime decarbonisation R&D solutions	<ul style="list-style-type: none"> - MPA, through the Global Centre for Maritime Decarbonisation (launched in 2021) (“MSGI”), intends to shape standards, deploy solutions, finance projects and foster collaboration across the sectors in the maritime industry. - To attract and retain the best talent, MPA will defray workforce costs incurred in Singapore that are associated with qualifying maritime decarbonisation activities. - Initiatives to encourage start-ups, research institutes and knowledge centres in Singapore.
Focus Area 7: <i>Carbon Awareness, Carbon Accounting and Green Financing</i>	
To be a Green Maritime Finance Hub	<ul style="list-style-type: none"> - Guide the industry to produce high-quality sustainability reports through MSGI’s ‘Maritime Sustainability Reporting Guide’, providing a framework and best practices for the industry to follow. - Leveraging the Singapore Government’s ‘LowCarbonSG’ platform, which seeks to consolidate all knowledge and resources across all industries in Singapore striving to decarbonise. - Exploring opportunities for voluntary carbon trading in the maritime sector through ‘Climate Impact X’, a carbon exchange and global marketplace established by DBS, the Singapore Exchange, Standard Chartered and Temasek.

CJC Perspective

The Blueprint will bring significant changes to the maritime industry, some of which are likely to create unexpected and unprecedented legal gaps in the system leading to an increase in disputes. This was a point raised at the recently held Singapore Maritime Week 2022², where the finger was pointed at complicated and confusing processes/formulas for calculating carbon emissions. These are complications on which challenges to objectivity could be based and over which disputes could arise. MPA’s current answer to this is its ‘Maritime Sustainability Reporting Guide’ of 2019 (Focus Area 7).

The Singapore Government, particularly MPA, is taking the lead in bringing the maritime industry towards a greener future. With considerable experience dealing with disputes arising from or relating to the seven focus areas, CJC’s Singapore office is well placed to assist in these uncharted waters.

² <https://www.smw.sg/media-room/show-dailies>

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