



# The need for a Strategic Fleet

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MUA Policy Briefing Paper



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## Introduction

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The MUA proposes that establishing and operating a strategic fleet be the centerpiece of a new national shipping policy.

Establishing a strategic fleet of ships, requiring about 30 ships, would create around 1,850 maritime jobs – approximately 740 direct seafarer jobs and around an additional 1,110 indirect maritime jobs.

The MUA defines national strategic fleet ships as ships which are of strategic importance to the nation, contribute to national sovereignty and to maintaining supply chain security, assist in achieving national self-sufficiency in critical supplies required by businesses and citizens and provide a social and or community service benefit to the nation.

The feature of these ships that distinguishes them from other Australian domestically operating ships is that they must be available to be requisitioned by government in times of national strategic need to perform functions on behalf of the government.

It is that factor which requires government to provide targeted policy support for national strategic fleet ships.

## The principles to guide the identification of strategic fleet ships – a national interest test

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National strategic fleet ships are identified by meeting a national interest test that could contain the following criteria:

- Contribution to national economic security, such as supply chain security e.g. petroleum tankers for fuel security, bulk carriers to support manufacturing production and distribution of building products and fertiliser (including ammonium nitrate), and container ships to maintain the flow of consumer goods and goods required for the operation of essential services e.g. health services.
- Contribution to the transportation of goods and people between the mainland and Tasmania, and to regional and remote communities.
- Contribution to meeting the nation's renewable energy supply needs e.g. offshore wind energy construction ships to expedite offshore wind farm development to help meet emissions reduction targets and energy security needs.
- Contribution to maritime skills needed for maritime employment e.g. to provide ship's berths for trainees and cadets to undertake mandatory sea time, necessary for the supply of skilled seafarers to meet Australia's onshore and on water maritime skill needs as required by the IMO Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 2010; as well as dedicated maritime training ships.
- Contribution to meeting Australia's marine environment protection e.g. emergency rescue and towage vessels.
- Contribution to national Defence and border protection capability.
- Contribution to national emergency response e.g. in times of bushfires or floods.
- Contribution to the national scientific research effort e.g. research, supply and oceanographic

ships such as those operated by or chartered to the CSIRO, the Australian Antarctic Division of the Department of Environment and Energy, and marine authorities such as the Great Barrier Reef Marine Park Authority.

## **The ship types that need to be included in a national strategic fleet**

### **Commercial ships**

- A core fleet of refined petroleum product (RPP) and oil tankers (liquid bulk ships) involved in domestic and international supply chains and providing national fuel security, and also temporary oil/RPP storage capacity to supplement onshore storage facilities;
- A core fleet of dry bulk commodity ships, necessary to service Australian heavy manufacturing industry;
- A core fleet of ships capable of transporting containerised cargo, essentially coastal feeder ships to service hub ports;
- A core fleet of multi-purpose ships (MPPs) to deliver machinery and other non-standard (over size/over mass [OS/OM]) cargoes required in particular for the agricultural and mining industries:
  - » Some of these ships are necessary to service Bass Strait; and also, regional and remote ports/communities (which by necessity involves a community service obligation (CSO));
- Offshore wind installation and maintenance ships:
  - » Offshore wind turbine installation and maintenance ships are included because of their strategic significance in developing and maintaining Australia's renewable energy resources required to meet Australia's greenhouse gas emissions target. These ships are in limited supply internationally, and only a small proportion are equipped to build the large turbines further offshore that are proposed for Australia. At December 2020 there are eight offshore wind projects under consideration throughout Australia. Offshore wind energy installation ships are purpose-built ships with more deck space than a typical offshore oil and gas support ship, they cope with more severe weather and as a result can reduce overall installation durations. They require support to ensure that Australia can access the limited global supply of these specialist ships for offshore wind turbine installation.

### **Government/non-commercial ships**

- Emergency towage vessels (ETVs - marine rescue and salvage ships) operated by the Australian Maritime Safety Authority (AMSA) under contract to commercial towage operators;
- Emergency response ships e.g. the *Aurora Australis* (if transitioned to an emergency response role now it has completed its Antarctic duty);
- Research, supply and oceanographic ships such as those operated by or chartered to the CSIRO, the Australian Antarctic Division of the Department of Environment and Energy, and marine authorities such as the Great Barrier Reef Marine Park Authority;
- Border Force ships;
- Certain Defence/Navy ships such as auxiliary fleet ships (particularly non-combat ships such as

auxiliary oiler replenishment (AOR) ships, supply ships, training ships etc.); and

- Training ships such as those operated by Registered Training Organisations (RTOs) that deliver courses derived from the Maritime Training Package (MTP) or the utilisation of Navy training ships such as the multi-role aviation training vessel (MATV), the *MV Sycamore*.

Those ship types fall into two broad categories: (i) commercial ships; and (ii) Government/non-commercial ships. In relation to commercial ships, the MUA has undertaken an analysis of cargo volumes in each of the main Australian domestic freight trades using data derived from the Coastal Trading Temporary License Voyage Reports produced by the Department of Infrastructure, Transport, Regional Development and Communications.<sup>1</sup> This is provided in **Table 1**.

Based on those trade volumes and the typical ship configuration suitable to that trade, we have identified the number of ships that the trade requires to transport current levels of demand for the cargo (2019-20 financial year data) – see column 4.

We have also identified from those ship numbers what we regard as ships constituting the “core” fleet of ships. The “core” fleet or floor level of Australian ships are defined as the minimum number of ships necessary to maintain the transportation of cargoes and people necessary for the base level functioning of Australian industries and the Australian economy. This is shown in column 5.

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<sup>1</sup> Department of Infrastructure, Transport, Regional Development and Communications, Temporary Licence Voyage Reports, [https://www.infrastructure.gov.au/maritime/business/coastal\\_trading/licencing/voyage\\_reports.aspx](https://www.infrastructure.gov.au/maritime/business/coastal_trading/licencing/voyage_reports.aspx)

**Table 1: Existing shipping trades and cargo volumes 2019-20, showing total ship numbers and the “core” fleet that constitutes the commercial component of a national strategic fleet**

Shipping trade	Domestic trade on int'l ships FY 2019-20	Change since 2018	Estimated number of full-time domestic ships required to maintain current trade	Core strategic fleet ships
<b>Bulk liquids (small multipurpose tankers)</b> <ul style="list-style-type: none"> <li>Sulphuric acid, ethanol, molasses</li> <li>Chemical and food industry</li> </ul>	404,259 MT 76 voyages	+75,685 MT	2-3	1
<b>Liquefied Petroleum Gas (specialised LPG tankers)</b> <ul style="list-style-type: none"> <li>Energy for heating, transport, cooking</li> </ul>	101,623 MT 73 voyages	+38,916 MT	3	1
<b>Liquid Ammonia (specialised ammonia/LPG tanker)</b> <ul style="list-style-type: none"> <li>For mining explosives and chemicals industry</li> <li>Potential use as a zero-carbon fuel and energy export</li> </ul>	400,525 MT 36 voyages	+25,695 MT	1-2	1
<b>Refined Petroleum Products – domestic trade</b> <ul style="list-style-type: none"> <li>Road transport, aviation, rail, defence and mining</li> </ul>	3,170,209 MT 279 voyages	-371,102 MT	3 domestic	10
<b>Refined Petroleum Products – international import</b> <ul style="list-style-type: none"> <li>Road transport, aviation, rail, defence, shipping and mining</li> </ul>	30,067,900 MT <sup>2</sup>	+108,800 MT	50-60 international	

<sup>2</sup> Australian Petroleum Statistics, July 2020, Table 4. Figures are for total refined petroleum imports, not including LPG. Australian Petroleum statistics are given in Megalitres, which have been converted to MT on the basis of the density of diesel, which makes up the majority of imports.

Shipping trade	Domestic trade on int'l ships FY 2019-20	Change since 2018	Estimated number of full-time domestic ships required to maintain current trade	Core strategic fleet ships
<b>Coal Tar, Liquid Carbon Pitch (specialised heated tankers)</b> <ul style="list-style-type: none"> <li>Aluminium smelters in NSW, Vic, Qld Tasmania</li> </ul>	76,372 MT 20 voyages	-34,214 MT	1	1
<b>Bauxite (90,000 DWT bulk carriers)</b> <ul style="list-style-type: none"> <li>Alumina refineries in Gladstone</li> </ul>	9,609,711 MT <sup>3</sup>	-2,591,945 MT	10	5
<b>Small dry bulk cargos less than 10,000 tonnes</b> <ul style="list-style-type: none"> <li>(10,000-15,000 DWT multipurpose bulk carriers)</li> <li>Steelmaking</li> <li>Fertiliser</li> <li>Ammonium nitrate</li> <li>Zinc and lead refining</li> <li>Limestone for cement industry</li> </ul>	1,401,659 MT 261 voyages	+85,922 MT	5-7	2
<b>Alumina (40,000-50,000 DWT dry bulk carrier)</b> <ul style="list-style-type: none"> <li>Aluminium smelters in NSW, Vic, Tasmania</li> </ul>	2,029,460 MT 63 voyages	+122,210 MT	2	1

<sup>3</sup> Data is total bauxite imports on international-crewed ships in 2017-18 from Australian ports to Gladstone, calculated based on total imports from Gladstone Ports Corporation website, less cargos carried by Australian-crewed ships. There are four Australian-crewed Singapore-flagged shipped which mainly operate domestically.

Shipping trade	Domestic trade on int'l ships FY 2019-20	Change since 2018	Estimated number of full-time domestic ships required to maintain current trade	Core strategic fleet ships
<b>Medium dry bulk cargos up to 45,000 tonnes</b> <ul style="list-style-type: none"> <li>Food: Barley, sugar</li> <li>Building industry: Cement, Clinker, Fly ash, gypsum</li> <li>Steelmaking: Coal, magnetite, manganese</li> <li>Mineral sands</li> </ul>	10,975,149 MT 456 voyages	+421,386 MT	10-12	2
<b>Iron Ore (170,000 DWT dry bulk carriers)</b> <ul style="list-style-type: none"> <li>Steelmaking</li> </ul>	3,599,143 MT 31 voyages	+1,250,162 MT	3	1
<b>Containers (1,500 TEU container and ro-ro ship)</b> <ul style="list-style-type: none"> <li>Food</li> <li>Consumer goods</li> </ul>	948,102 MT 440 voyages 2,636 units 118 voyages	+208,486 MT +1,412 units	4+ (with considerable consolidation)	4
<b>Bass Strait general cargo</b>	-	-	6 (current full-time vessels)	6
<b>Qld coastal shipping service</b>	-	-	1 (to be established)	1
<b>TOTAL</b>			106-120	36

Source: MUA analysis, based on a review of all coastal cargo volumes, October 2020.

Note: The core strategic fleet number is higher by 6 ships than in a companion paper on the job creation opportunities that is created by establishing a strategic fleet as this paper includes the 6 Bass Strait cargo ships.

As can be seen in Table 1, the data shows that between 106 to 120 commercial trading ships, operating at near capacity (on all but ballast legs), are required to transport these important cargoes required for manufacturing of essential goods for Australian industries and consumers.

Currently, the overwhelming majority of those ships are foreign registered ships operating under Temporary Licenses, and chartered on the spot market, though a few operate more or less permanently in coastal trading. Only 6 are Australian registered. Of the foreign registered ships less than 10 are crewed by Australian seafarers, mainly in the Qld intrastate bauxite trade.

Based on our definition of what constitutes a core ship, 36 are required - approximately 10 transporting oil/refined petroleum products; 6 in Bass Strait trade, 4 in bauxite and the remainder spread across a range of trades.

The commercial component of the core strategic fleet as proposed would create employment for around 740 direct seafarers and around an additional 1,100 indirect maritime jobs (for an overall employment impact of around 1,850 jobs).

**It is these 36 ships that we say should constitute the commercial component of the national strategic fleet.**

## **The energy (fuel) security rationale for establishing a national strategic shipping fleet**

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An essential part of the package for delivering energy security for Australia is to ensure a proportion of the vessels needed for seaborne transportation of the cargos below are Australian registered:

- (i) oil for Australia's remaining refineries;
- (ii) RPPs from refineries and RPP import storage facilities to population centres around the Australian coast; and
- (iii) gas from gas producing areas for distribution to mobile floating storage and regassification units (FSRUs) located in regional ports and to supply imported gas (from Australian and international gas producing regions) to enter the domestic gas distribution network.

A strategic fleet of commercial Australian ships transporting oil, refined petroleum products (RPP) and gas will contribute to Australia's energy security in several ways, including:

- Contributing to Australia's fuel security by ensuring Australian sovereignty over the shipping transportation aspects of international importation, and domestic distribution, of RPP;
- Contributing to an increase in gas supply for households and manufacturing industry through provision of control over mobile floating storage and regassification units (FSRUs) located in regional ports and to supply imported gas (from Australian and international gas producing regions) to enter the domestic gas distribution network;
- Providing a reliable supply of gas fuel for the next generation of ships powered by gas fired propulsion systems that will enter service arising from implementation of the IMO sulphur emissions regulations, which saw the global sulphur limit drop from 3.5% to 0.5% by 2020.



## **The positive spin offs from an Australian strategic shipping fleet**

There are several positive spin-offs to be gained from a strategic fleet:

- Provision of ships on which seafarer training can take place, including mandatory sea time in gaining occupational licenses and VET qualifications;
- Reliability of supply of gas to keep Australia's manufacturing plants open with positive consequences for well-paid secure jobs – in industries such as steel, cement and other building products, aluminium, fertiliser and other chemicals/explosives etc; and
- The capacity for the Defence forces and emergency management agencies to requisition ships to supplement Navy ships in times of national emergency.

## **Step one in an implementation plan:**

### **Establish a strategic fleet task force**

The MUA has proposed that government establish an independently chaired stakeholder and government strategic fleet task force to advise on implementation details for a national strategic fleet, which will:

- Undertake a comprehensive assessment of domestic and international seaborne freight supply chain and national security risk to determine the minimum number of Australian ships required to guarantee supply chain security in all critical and essential industries and to therefore form the commercial section of the national strategic fleet. This would require an examination of:
  - » The cargo types and shipping routes in supply chains where cargo volumes could commercially sustain one or more Australian ships as strategic fleet ships, including an examination of:
    - ▶ Any backloading, cross trading and triangulation opportunities that would increase ship utilisation rates; and
    - ▶ The type, size and loading/discharge characteristics of ships that would be suitable and commercially viable for such trades and routes.
- Identify an industrial policy incentives package to support commercial shipowners/operators participating in the strategic fleet;

- Develop cost attribution arrangements to equitably apportion the differential costing for operating Australian strategic fleet ships, including the community service obligations (CSO) and commercial opportunities arising from public support for a national strategic fleet. This would require an examination of:
  - » The ship purchase or chartering options available to secure strategic fleet ships that would operate commercially at all times they are not required for requisitioning by Defence or emergency management agencies, that identifies, for each option, the role of the Government, the ship operator, the shipper (cargo interest) and the crewing supply entity, including identification of which entity bears the commercial risk, and options for mitigating risk such as:
    - ▶ Securing the right entrepreneurial partner or partners to commercially operate strategic fleet ships (who are prepared to share the risk);
    - ▶ Types of industry policy support that may be available from government to support private ship owners, including taxation, support for crew training costs, relief or partial relief from AMSA levy charges;
    - ▶ A commitment by trade unions to a continuity of supply agreement.
  - » Identification of Australian shipping taxation incentives that strategic fleet ships would be eligible for and the estimated annual benefit of that tax incentive to the beneficiary entity;
  - » The potential commercial partners (shipowners/operators/investors) that might work with the Australian Government to ensure the strategic fleet model as envisaged is successful;
  - » The crewing, training and skill development aspect of the operation of strategic fleet ships; and
- Design a phasing-in strategy for the strategic fleet.

## Requisitioning of ships

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Government support for the strategic fleet would provide it with the right to requisition such ships in times of national emergency, which could be civilian (a major climate event) or military (war or peace keeping) or foreign aid (a humanitarian mission) purpose.

The remainder of the time the ships would be operated on a commercial basis (or cost recovery basis or by government funding where involved in a non-commercial pursuit).

Ship requisitioning provisions may require implementation through legislation.