

21 December 2018

Ministry of Transport

By email

maritime@transport.govt.nz

Sent by email:

**Submission on the New Zealand's potential accession to  
MARPOL Annex VI: Prevention of Air Pollution from Ships (Annex VI).**

Thank you for the opportunity to make a submission in respect of MARPOL Annex VI: Prevention of Air Pollution from Ships.

***Background***

Coastal shipping is a vital part of New Zealand's transport infrastructure. Recent events have shown that the coastal network is important for New Zealand economic, environmental and social welfare and vital during emergencies when road links are disabled.

New Zealand depends on coastal ships. For example:

- for delivery of important goods such as fuel oil and cement.
- for provision of a bridge for freight and passengers between Picton and Wellington.
- for moving containerised and bulk cargo around the coast
- when other modes of transport are not useable because roads or railways are broken

Central and local government decisions as well as port decisions affect the performance of the coastal network.

In the last 24 months, 4 new ships have joined the coastal fleet reflecting investments of over \$150million in the New Zealand economy.

The Federation is committed to working with decision-makers to ensure that the best policy settings are in place for the benefit of all New Zealanders. We are happy to work proactively to bring sector knowledge to support the policy-making process.

The Federation remains committed to safe, secure and clean shipping.

The New Zealand Shipping Federation began in 1906 and is the key representative body for New Zealand's coastal shippers. Members of the Federation are:

<b>Coastal Bulk Shipping</b>	<a href="http://www.coastalbulkshipping.co.nz">www.coastalbulkshipping.co.nz</a>	<i>Anatoki</i>	Bulk cargo
<b>Coastal Oil Logistics (COLL)</b>	<a href="http://www.coll.co.nz">www.coll.co.nz</a>		
<b>Holcim</b>	<a href="http://www.holcim.co.nz">www.holcim.co.nz</a>	<i>Buffalo</i>	Cement
<b>InterIslander</b>	<a href="http://www.interislander.co.nz">www.interislander.co.nz</a>	<i>Aratere</i>	Cook Strait ferry
		<i>Kaiarahi</i>	Cook Strait ferry
		<i>Kaitaki</i>	Cook Strait ferry
<b>NIWA</b>	<a href="http://www.niwa.co.nz">www.niwa.co.nz</a>	<i>Tangaroa</i>	Research
		<i>Kaharoa</i>	Research
<b>China Navigation</b>		<i>Aotearoa Chief</i>	Cement
	<a href="http://www.pacship.co.nz">www.pacship.co.nz</a>	<i>Spirit of Canterbury</i>	Container cargo
<b>Silver Fern Shipping</b>	<a href="http://www.sfsl.co.nz">www.sfsl.co.nz</a>	<i>Kokako</i>	Fuel
		<i>Matuku</i>	Fuel
<b>StraitNZ - Bluebridge Cook Strait Ferries</b>	<a href="http://www.Straitnz.co.nz">www.Straitnz.co.nz</a>	<i>Straitsman</i>	Cook Strait ferry
		<i>Strait Feronia</i>	Cook Strait ferry

Ship operations are highly regulated across all areas of their operations. This regulation comes from international standards, primarily from the International Maritime Organization (IMO) but also from the International Labour Organisation and treaties entered into by specific countries. Ship operators are well versed in international requirements.

Members of the Federation work closely with the New Zealand regulator, Maritime New Zealand, to ensure the smooth implementation of these international requirements in the New Zealand context. Federation members are aware of what is happening internationally in respect of MARPOL Annex VI and we understand why.

As measured by the volume of cargo carried, 88 out of 172 IMO member states have signed up to MARPOL Annex VI, representing 96% of World tonnage. Lots of individual countries have not signed but they do not have significant cargo volumes. Most of the SOLAS vessels on the NZ-international circuit are flagged to countries that have signed MARPOL Annex VI.

Annex VI seeks to control SO<sub>x</sub> emissions through limitations on the sulphur content of marine fuels. The sulphur content limits set by the annex are

- From January 2012                      3.5% by mass
- From January 2020                      0.5% by mass

Within the states that have already ratified the Annex, certain areas of the globe have been designated Sulphur Emission Control Areas (SECA's). Since 1 January 2015 the sulphur limit for fuel oil used by ships in these areas has been limited to 0.1% by mass.

We note that there are health issues in respect of SO<sub>x</sub> but MARPOL does not specifically address particulate emissions.

Australia has ratified the Annex. It already imports most of its fuel and is expected to import 0.5% fuel when required to meet the lower standard.

### **The refinery and availability of low sulphur fuels**

SOLAS vessels in NZ are generally using fuel that is well below the 3.5% requirements, either because of the Annex or as a commercial decision. The fuel produced by the NZ refinery is approximately 1.9 – 2.8% (depending on viscosity/grade) and any vessel bunkering in NZ will be using this.

Note that fishing vessels and recreational vessels generally use automotive gas oil (known as AGO, i.e., fuel available at gas stations that goes in trucks and cars) so they are not part of this discussion.).

The refinery does not currently blend marine diesel oil (MDO). MDO is a blend of AGO mixed with light fuel oil to create a fuel that does not require heating but is cheaper than AGO.

### **Retooling the Marsden Point refinery to produce low sulphur fuel**

The cost of retooling Marsden Point to convert all high-sulphur residues to MARPOL-compliant product will be high and probably prohibitively expensive.

Whether Marsden Point eventually produces low SO<sub>x</sub> fuel will be a commercial decision for the refinery. Federation members are not aware of the refinery's intentions.

Currently, high sulphur by-products from refining have commercial value to Marsden Point. Once the 0.5 % sulphur requirement comes into force, this situation may change, affecting the refinery's business model in this regard. In the event that there is a major shift to low SO<sub>x</sub> fuels, there is an open question as to how the high sulphur residues (currently burnt on ships) will be disposed of or used.

The use of on-board systems to remove sulphur from fuel will create its own set of problems, relating to availability of fuel and the disposal of watery wastes.

### **Fuel usage in practice**

Ministry of Transport officials believe that IMO sulphur fuel requirements will not affect domestic shipping until such time as New Zealand accedes to Annex VI, should Government make such a decision. Federation members do not agree. If the rest of the world moves to implement Annex VI, then the fuel companies, as global players, will respond and supply fuels accordingly. NZ is a very small fish at the end of the supply chain; we will be affected by Annex VI, irrespective of NZ government decisions.

Regardless of what the New Zealand government does in respect of Annex VI, SOLAS vessels going internationally will need to comply with both the requirements of their flag state and also the requirements of the state they are visiting. Port State Control has the power to enforce this under 'no more favourable treatment' provisions. New Zealand flagged coastal ships going to Sydney or Singapore, typically for survey or repair, will be affected by this.

Federation members are already making decisions in response to MAROL Annex VI. Factors to be considered include assumed availability of fuels, supply infrastructure, cost of fuel, cost of changes to technology and equipment and the operating requirements (such as heating and filtration) of particular engines. In some cases, decisions have already been made to operate using diesel.

There has been some discussion in the media about vessels using a variety of fuels. Because vessels have multiple tanks, the opportunity for fuel switching exists but it is effectively prohibited by the IMO requirement that ships are clean. This means that they must be carrying no high sulphur fuel when they go to a state that has ratified the Annex.

### **The future and the policy picture**

The maritime sector experience is that every time NZ deviates from accepted international regulation, it makes it harder for vessel operators to comply, not easier. If there is one set of rules for coastal operations, and then another set when the same vessels go outside of New Zealand's EEZ, there will be additional costs and confusion

Even if NZ does not sign up to Annex VI, all international ships calling here will still need to comply with the requirements, and all New Zealand based ships (coastal vessels) travelling internationally, will still need to comply. As such, the vast majority of fuel supplied to ships in NZ, will need to be compliant with the 0.5% sulphur cap. Only a small portion of fuel would be exempt from this limit.

As Annex VI stands, there are two likely routes to compliance.

- Vessel operators can continue to use high sulphur fuels (above the 0.5% cap), but need to have fitted an exhaust gas treatment system (also known as "scrubbers"). This is generally considered to be uneconomic for the current New Zealand coastal fleet. Retro-fitting scrubbers on existing vessels poses significant practical problems, for example because of their size and the complexity of incorporating them into the engine system. Scrubbers have not been widely implemented on international trading ships.

**Or**

- Vessels operators can use fuels with less than 0.5% sulphur content. At this time, the only fuel available in NZ that meets this specification is diesel. In NZ, there is only one grade of diesel supplied by the refinery for all users – marine and road going. This is relatively expensive amounting to approximately **up to 50%** higher cost. The actual cost increase to each user varies and is confidential.

None of the New Zealand fuel companies have yet stated what fuels they propose to supply post 1 Jan 2020. We believe that most of them will be waiting to see if IMO adhere to this date or defer implementation to 2025. However, it seems unlikely that they would simultaneously supply both high and low sulphur grades of fuel in the NZ market.

Any low sulphur fuel is almost certain to be imported from Singapore as costs to modify Marsden Point to produce this are likely to be prohibitive. This would likely lead to international ships ceasing to bunker in New Zealand and choosing to bunker elsewhere,

probably in Singapore (with larger tanks). We understand, Refining NZ is still evaluating whether the supply of some 0.5% bunker fuel is possible.

Ships, and the fuel infrastructure that supplies them, are long term assets. Both ship owners and fuel companies need certainty of policy to ensure that good investment choices are made.

### Implications of implementation of MARPOL Annex VI requirements

The members of the Federation are differently affected by MARPOL Annex VI and they reserve the right to submit separately from the Federation to ensure that their specific issues are raised. The table below sets out the general position for each vessel within the federation's membership.

#### MARPOL Annex VI: Implications for vessels owned/operated by Federation members

Vessel	Flag	Fuel	Dry Dock	How affected by 1/1/2020 start date for foreign flagged vessels		How affected post NZ Ratification
Anatoki	NZ	AGO	NZ			
Buffalo	NZ	AGO	NZ			
Aratere	NZ	80cst	O'seas			
Kaiarahi	UK	80cst	O'seas	Change fuel		
Kaitaki	NZ	80cst	O'seas			
Tangaroa	NZ	AGO	NZ			
Aotearoa Chief	NZ	380cst	NZ			
Spirit of Canterbury	NZ	380cst	NZ			
Kokako	NZ	380cst	O'seas			
Matuku	NZ	380 cst	O'seas			
Straitsman	NZ	80cst	O'seas			
Strait Feronia	NZ	80cst	O'seas			
	<ul style="list-style-type: none"> <li>Uncertainty about ongoing supply of 80cst and 380cst by NZ refinery, given the smaller market.</li> <li>Estimate is that the NZ domestic fleet uses approximately a year 80,000m<sup>3</sup> (approx. which is 2 Matuku-sized loads) and there is no information available to us about how the refinery is going to react to changes in bunkering demand by non-NZ flagged vessels</li> </ul>					
	Needs to change fuel to low emissions alternative					
	Uncertainty as to how to meet strict <b>clean vessel</b> requirements when going outside NZ (dry dock and commerce)					

Fuel is generally the greatest cost for any ship operations. This is true on an annual basis even for the Cook Strait passenger ferries which have high crewing requirements during the peak summer sailings. The cost of fuel motivates many aspects of a ship's operation such as hull cleaning in addition to mandated requirements, speed and route choices.

Any alternative to the current fuel requirements has cost implications. This arises both in respect of the capital costs of new or used replacement vessels and the running costs.

### **Impact much wider than ships**

We believe that the discussion document and released Cabinet Paper under-emphasises the likely impact of higher prices and difficulty of sourcing supply. World-wide impacts of the change in fuels are already being felt, by way of surcharges on freight and route or speed choices. This is the case even though the switch-over, to new fuels or alternative technology, is only just beginning.

MARPOL Annex VI will impact on shipping but will also impact on all users of oil-based fuel and all users of products which rely on oil in their supply chain. We believe that the impact of this has been underestimated.

### **Timeline to the future**

As mentioned above, ship operators need to know the timeline to ratification and implementation by New Zealand. We can already see the impact world-wide with the implementation of additional surcharges to cover the costs of implementation and use of alternatives to high sulphur fuels. This starts much earlier than the switch-over itself. Decisions about vessels purchases and modifications are made years in advance and may take years to complete. Sudden changes in the rules, especially at a time when the availability and price of alternatives is unknown, are very difficult for business to weather.

Thank you for the opportunity to make a submission.

**Annabel Young**

Executive Director

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**P O Box 10739, The Terrace, Wellington 6143**

**021 429 216**

**Email [annabel.young@shipfed.co.nz](mailto:annabel.young@shipfed.co.nz)**

**[www.nzsf.org.nz](http://www.nzsf.org.nz)**