

# Amendments to Marine Protection Rules Part 199: Prevention of Air Pollution from Ships

Invitation to comment  
**30 August 2022**





# Contents

- Explanation of terms used in this document.....ii
- Section 1 – Introduction and purpose ..... 1
  - Making submissions ..... 1
  - Submissions are public information..... 1
  - Regulatory Impact Statement..... 1
  - Legal authority for the amendment to Part 199..... 1
  - Next steps ..... 2
- Section 2 – Why are we reviewing the Part 199 Rules? ..... 3
  - There are some problems with the NO<sub>x</sub> rules in their current form ... 3
  - ... and we are seeking your comment on another NO<sub>x</sub> issue..... 3
  - The Part 199 Rules could be improved through the use of transport instruments..... 3
  - We are taking the opportunity to make some minor and technical adjustments..... 4
  - Objectives of the rules review ..... 4
- Section 3 – Background Part 199 Rules and NO<sub>x</sub>..... 5
  - The Part 199 Rules..... 5
  - Background to the NO<sub>x</sub> requirements ..... 5
- Section 4 – Proposals to address the issues, and their likely impact ..... 8
  - Criteria to assess options and determine whether individual proposals are appropriate for inclusion in the Marine Protection Rules..... 8
  - Proposal 1 – To enable domestic voyaging recreational ships to use alternatives to the Engine International Air Pollution Prevention (EIAPP) certificate for applicable new engines 9
  - Proposal 2 – to clarify how NO<sub>x</sub> requirements apply to domestic voyaging ships that become New Zealand ships on or after the commencement date of Section C3 of the Part 199 Rules..... 13
  - Proposal 3 – to enable the establishment of transport instruments for the Part 199 Rules .. 17
  - Proposal 4 – Minor and technical amendments ..... 19
- Appendix 1 – Annex VI NO<sub>x</sub> tiers ..... 21
- Appendix 2 – The four NO<sub>x</sub> documentation alternatives..... 22
- Appendices 3-6 – Draft marine protection rules and transport instruments..... 24

## Explanation of terms used in this document

This document discusses complex technical and legal requirements. The following list of terms is intended to help non-technical readers understand the proposals. The list does *not* apply to the Part 199 rules themselves. Terms in the rules are defined in the definitions and interpretation provisions (199.2 and 199.3).

Term	Definition
Applicable engine	An engine to which Proposal 1 applies. A compression-ignition (diesel fuel) engine used for propulsion on a domestic voyaging ship.
Class society/Classification society	A non-governmental organisation that establishes and maintains technical standards for the construction and operation of ships, and issues international certification to ships on behalf of flag States.
Commercial ship	A ship that is not a pleasure craft, and under the part 199 rules requires an IAPP or Annex VI endorsement for domestic voyages.
Director	The Director of Maritime NZ under the Maritime Transport Act may delegate specified powers or functions to other persons, but may not delegate the power to make a transport instrument.
Domestic voyaging ship/Domestic ship	A New Zealand ship that only voyages within New Zealand's jurisdiction. In this document, this term excludes New Zealand ships that voyage outside New Zealand's exclusive economic zone, even if they do not voyage to overseas ports.
Existing engine	An engine on a domestic voyaging ship that was installed, or underwent a major conversion, between 19 May 2005 and the date that the relevant provisions of the Part 199 Rules come into force.
New engine	An engine on a domestic voyaging ship that is installed, or undergoes a major conversion, on or after the date that the relevant provisions of the Part 199 rules come into force. Includes installation of second-hand engines.
Recreational ship	A New Zealand ship that is not subject to survey under New Zealand legislation when voyaging domestically; a pleasure craft as defined in the Maritime Transport Act.
Ship	As defined in Article 2(4) of MARPOL means "a vessel of any type whatsoever operating in the marine environment". A ship, boat or vessel of any size.

## Section 1 – Introduction and purpose

1. You are invited to comment on proposed changes to Marine Protection Rules Part 199: Prevention of Air Pollution from Ships (Part 199 Rules). These rules are a key part of the legislation bringing Annex VI of the International Convention for the Prevention of Pollution from Ships (MARPOL Annex VI) into effect in New Zealand. After a first round of consultation in July-August 2021, further changes are proposed to ensure that the rules work properly.
2. The main purpose of the changes is to make the nitrogen oxides (NO<sub>x</sub>) requirements of the Part 199 Rules more workable for operators of New Zealand ships that only voyage within New Zealand's jurisdiction (domestic voyaging ships).
3. Maritime New Zealand (Maritime NZ) and Te Manatū Waka Ministry of Transport (Te Manatū Waka) are also taking the opportunity to make a number of minor and technical changes to the Part 199 Rules, to fix small errors and ensure the rules work as intended.
4. The text of the proposed amendments is set out in Appendices 3-6. This is available as a separate document on the Maritime NZ website at <https://www.maritimenz.govt.nz/content/public/consultation/part199/default.asp>.
5. This invitation is issued to fulfil formal consultation requirements under the Maritime Transport Act 1994 (MTA).

## Making submissions

6. If you wish to comment on these proposed rule changes, please make a submission by:
  - email to [MARPOLAnnexVIProject@maritimenz.govt.nz](mailto:MARPOLAnnexVIProject@maritimenz.govt.nz) or
  - post to Regulatory Policy Design Unit, Maritime NZ, PO Box 25620, Wellington 6140.
7. The deadline for submissions is 5.00 pm 26 September 2022.

## Submissions are public information

8. Please indicate clearly if your comments are commercially sensitive, or if, for some other reason, you consider they should not be disclosed. If your submission is subject to an Official Information Act (OIA) request, Maritime NZ will consider your confidentiality request in accordance with the grounds for withholding information set out in the OIA. In addition, if you are an individual (i.e. your comments are made personally and not on behalf of a company or an organisation) please indicate if you consider for some reason that your identity should not be disclosed.
9. We will acknowledge all submissions that we receive. Once the rule is finalised a summary of submissions will be published.

## Regulatory Impact Statement

10. This paper has information on the potential impact of the proposed rule changes. As it covers the substantive elements of a regulatory impact assessment, no separate regulatory impact assessment is provided.

## Legal authority for the amendment to Part 199

11. The authority for making marine protection rules is found in Part 27 of the MTA. The authority for making transport instruments is found in section 452A of the MTA.

12. Marine protection rules and transport instruments are secondary legislation under the Legislation Act 2019. Under that Act, the rules are required to be presented to the House of Representatives. The House of Representatives may, by resolution, disallow any secondary legislation. The Regulations Review Committee is the select committee responsible for considering rules under the Legislation Act.

### **Next steps**

13. Once consultation has closed officials from Maritime NZ and Te Manatū Waka will analyse the submissions, and consider whether to recommend changes to the proposals in the light of the submissions received. The Associate Minister of Transport will then decide whether any of the proposals in the document will be progressed into rules. Subsequently, the Director of Maritime NZ will decide whether to progress any transport instruments under Part 199.

## Section 2 – Why are we reviewing the Part 199 Rules?

### There are some problems with the NO<sub>x</sub> rules in their current form ...

14. We have identified the following issues with the current Part 199 Rules relating to nitrogen oxides (NO<sub>x</sub>) emissions from ships.
- **Domestic voyaging recreational ships cannot feasibly obtain an EIAPP certificate for a new engine.**
  - **The rules requiring that engines on ships joining the New Zealand fleet after the rules come into effect must meet the Annex VI NO<sub>x</sub> limits does not achieve its intended purpose.**
15. If these issues are not addressed, these parts of the rules will be unworkable, unclear and not achieve their intended outcome. To avoid this, the relevant part of the rules remains suspended while this consultation on proposed solutions is under way.

These issues are discussed in Section 4 of this document.

### ... and we are seeking your comment on another NO<sub>x</sub> issue

16. Since the Part 199 rules were published, Maritime NZ has heard from several industry stakeholders about another potential issue relating to NO<sub>x</sub> requirements.

**A number of domestic voyaging ships may have engines installed on or after 1 January 2011 that meet the Tier I limits, not the Tier II limits as MARPOL Annex VI requires for those engines (see Appendix 1 for an explanation of the Annex VI NO<sub>x</sub> tiers). Under the current rules these engines will be non-compliant and need to be replaced with Tier II engines. This may impose undue compliance costs on these operators.**

17. Maritime NZ has considered whether this information justifies amending the rules to enable existing operators to retain Tier I engines that would otherwise have to be replaced. The preferred approach is **not** to amend the rules. Amending the rule would reduce the environmental benefits of the NO<sub>x</sub> requirements, and would be contrary to the policy approach consulted on in 2021, that the rules for domestic operators should mirror the Annex VI requirements as closely as possible. In addition, Maritime NZ does not have good evidence on the scale of this issue, how many operators would be impacted and what the costs to operators would be.
18. We welcome your submissions on this issue.

**Question**

In your view, what is the impact of requiring existing engines installed on or after 1 January 2011 to meet Annex VI Tier II NO<sub>x</sub> emission limits?

### The Part 199 Rules could be improved through the use of transport instruments

19. Another reason to have a fresh look at Part 199 is the opportunity presented by a 2021 amendment to the MTA that enables maritime regulations and rules to be more responsive to future changes. The amendment introduced a new form of legislation, transport instruments. A transport instrument can be made by the Secretary for Transport or the Director of Maritime NZ (the Director) in association with a maritime regulation or rule, but with quicker processes so it is able to be updated more easily. Transport instruments are designed to cover non-controversial, technical material such as technical standards for equipment.

20. The forms of evidence that may be used to demonstrate that an engine complies with the MARPOL Annex VI NO<sub>x</sub> emission levels include technical standards and/or formal certification. They may therefore be appropriate for inclusion in a transport instrument.
21. We are also proposing to enable the Director to make transport instruments for equivalents (equipment, systems, etc that achieve an equivalent outcome to MARPOL Annex VI controls) under rule 199.22.

**Transport instruments are discussed in Section 4 of this document.**

## **We are taking the opportunity to make some minor and technical adjustments**

22. We are proposing some minor and technical amendments to the rules, including fixing editing errors and adjustments to ensure that the rules work as intended. These amendments do not involve a change to the policy positions already consulted on in July-August 2021. We seek your comment on these proposed changes, which are marked up in the draft rules.

**Minor and technical amendments are discussed in Section 4 of this document.**

## **Objectives of the rules review**

23. The objectives of the rules review are:
- to make the Part 199 rules affordable and workable, without resulting harmful effects on the environment, and
  - to ensure that New Zealand moves progressively towards a clean domestic fleet with low NO<sub>x</sub> emissions.



## Section 3 – Background Part 199 Rules and NO<sub>x</sub>

### The Part 199 Rules

24. The Part 199 Marine Protection Rules (the rules/Part 199 Rules) are a key part of the legislation bringing MARPOL Annex VI into effect in New Zealand.
25. The rules are intended to prevent and reduce air pollution from a variety of substances produced and carried by ships. They apply to New Zealand ships anywhere in the world and to foreign ships in New Zealand. They do not apply to ships on fresh water (rivers and lakes).
26. Consultation on the draft rules took place in July and August 2021. The Minister of Transport signed the Part 199 Rules on 16 March 2022. The rules were gazetted on 4 April 2022. However, they did not commence immediately because at that time New Zealand had not yet acceded to MARPOL Annex VI. Most of the rules will come into force on 26 August 2022, three months after New Zealand's accession to MARPOL Annex VI was lodged with the International Maritime Organization (IMO). Some of the rules will come into force on 1 November 2022. This aligns with amendments made by the IMO to MARPOL Annex VI that are scheduled to come into force worldwide on that date.
27. Part C3 of the Part 199 Rules (the NO<sub>x</sub> requirements for domestic ships) remain suspended while this consultation is being done.

### Background to the NO<sub>x</sub> requirements

#### What MARPOL Annex VI requires

28. Ships cause emissions of nitrogen oxides (NO<sub>x</sub>) from the combustion of fuels in engines. NO<sub>x</sub> gases react to form smog and acid rain and form fine particles and ground level ozone, all of which can harm public health.
29. To reduce the level of NO<sub>x</sub> emissions, engines must be designed and approved to meet NO<sub>x</sub> emissions standards. Annex VI sets out limits on NO<sub>x</sub> emissions for certain ships, and sets requirements for testing, survey and certification of marine engines in compliance with the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (the NO<sub>x</sub> Technical Code 2008).
30. MARPOL Annex VI is focused on the content of emissions from engines with an output power of over 130 kW operating on liquid or dual fuel, regardless of the type of fuel, the gross tonnage, or whether the ship is used for commercial or recreational purposes. While the MARPOL Annex VI text refers to "marine diesel engines", this document refers simply to "engines".

#### The Engine International Air Pollution Prevention (EIAPP) certificate

31. The EIAPP certificate provides evidence of an engine's compliance with the limits for NO<sub>x</sub> emissions in Regulation 13 of MARPOL Annex VI, and with the NO<sub>x</sub> Technical Code which contains detailed specifications for the construction, testing, maintenance and survey of ship engines.
32. An essential prerequisite for the issue of an EIAPP certificate is a technical file which includes specifications, operating values, and procedures to maintain and verify the engine's compliance with the required NO<sub>x</sub> limits. The technical file and the EIAPP certificate are specific to an individual engine and one or both documents will include the engine's serial number.

#### NO<sub>x</sub> emission tiers

33. Three levels (tiers) of control apply to engines based on the ship construction date and where it voyages (see Appendix 1). Within any particular tier the NO<sub>x</sub> limit value is determined by the engine's rated speed.

34. The NO<sub>x</sub> emission limits of MARPOL Annex VI apply to:
- engines of over 130 kW output power installed on any ship on or after 1 January 2000
  - engines that have undergone a major conversion<sup>1</sup> on or after 1 January 2000 – this includes replacement of an engine, except with an identical engine.

### **New Zealand variations for domestic voyaging ships**

35. While MARPOL Annex VI applies to all ships operating in the marine environment, party States are able to vary certain Annex VI requirements relating to domestic voyaging ships (ships that remain within territorial waters). New Zealand has varied the NO<sub>x</sub> requirements for domestic voyaging ships in the Part 199 rules as follows:

### **The Part 199 Rules exclude engines installed before 19 May 2005**

36. The NO<sub>x</sub> emission limits in Annex VI apply to engines installed on ships constructed since 1 January 2000. States have the option to apply the limits to engines installed, and not subsequently replaced, on ships constructed before 19 May 2005 that do not voyage to overseas ports.
37. Consultation indicated that applying a retroactive requirement to engines installed as far back as 2000 was likely to be unduly onerous for New Zealand operators. The Part 199 Rules therefore exclude engines installed before 19 May 2005 on ships constructed before that date. If a new engine is subsequently installed on the ship or a major conversion is made to the engine, it is captured by the requirements.

### **The Part 199 Rules include alternative controls to ensure domestic travelling ships meet the NO<sub>x</sub> emission limits**

38. Under MARPOL Annex VI, States have the option to exclude ships that only voyage within New Zealand's jurisdiction if they are subject to alternative controls.
39. New Zealand has opted to impose alternative control measures on domestic voyaging ships. These measures are in the Part 199 Rules and enable operators to provide alternative forms of documentation instead of an EIAPP certificate. If an operator cannot produce an EIAPP certificate or acceptable alternative documentation, the engine cannot be shown to comply with the NO<sub>x</sub> limits and will have to be replaced.
40. The alternative controls were introduced in response to concerns raised by stakeholders about:
- how the rules would apply to engines that are ineligible for an EIAPP certificate (e.g. petrol engines, or engines not originally designed for marine use)
  - the feasibility and cost of obtaining an EIAPP certificate retrospectively for an existing engine (an engine installed between 19 May 2005 and the date the rules commence).
41. There are four available alternatives for documentation. See Appendix 2 for more information on each alternative.
- i) A Technical File and Engine International Air Pollution Prevention (EIAPP) Certificate as per MARPOL Annex VI.

---

<sup>1</sup> The engine's conversion is considered to be major when:

- the engine is replaced by a marine diesel engine or another engine is installed on the ship (except with an identical engine) – this includes installation of a second-hand engine; or
- any substantial modification, as defined by the NO<sub>x</sub> Technical Code 2008, is made to the engine; or
- the maximum continuous rating of the engine is increased by more than 10 percent compared to the maximum continuous rating of the original certification of the engine.

- ii) A manufacturer's declaration/certificate of conformity to a listed standard. **This option is available only for spark-ignition (petrol) engines and for stationary or auxiliary engines not used for propulsion.**
- iii) A Technical File of the parent engine in a family or group, approved by a MARPOL Annex VI party State administration or class society. This option is **currently valid only for existing engines.**
- iv) Other acceptable evidence. This option is **valid only until 30 June 2032, and only for existing engines.** These forms of documentation (such as manufacturers' manuals) are less robust than documentation issued by a maritime administration or class society. After 30 June 2032, operators must obtain an EIAPP or another valid form of certification.

## Section 4 – Proposals to address the issues, and their likely impact

42. This section contains a detailed assessment of proposals that respond to the identified issues. They are:
- Proposal 1 – to enable domestic voyaging recreational ships to use alternatives to the EIAPP certificate, for applicable new engines.
  - Proposal 2 – to clarify how the NO<sub>x</sub> requirements apply to engines on ships that become New Zealand ships on or after the commencement date of Section C3 of the Part 199 Rules.
  - Proposal 3 – to enable the establishment of transport instruments for the Part 199 Rules.
  - Proposal 4 – minor and technical amendments.
43. The proposed rule changes are intended to enhance New Zealand's control of air pollution from ships by making it affordable and comparatively easy for operators to comply, and making it clear what the options are for operators.
44. It is not considered that making these amendments will have a significant impact on environmental quality. Commercial ships with existing engines installed since 2005 will have to comply with Annex VI NO<sub>x</sub> emission limits, but may use alternative documentation to demonstrate compliance. Non-compliant engines must be replaced. New engines on all ships, including recreational ships, will need to comply with the Annex VI NO<sub>x</sub> emission limits and have robust evidence that their engines are compliant.
45. The amendments will not affect New Zealand's compliance with MARPOL Annex VI. The convention provides discretion for member States to develop their own alternative NO<sub>x</sub> controls for domestic ships, and the impacted ships will be covered by these controls.

### Criteria to assess options and determine whether individual proposals are appropriate for inclusion in the Marine Protection Rules

46. The criteria set out in the box below were used to analyse the options and determine whether each proposal is appropriate for inclusion in the Part 199 Rules.

**Effective** – will the proposal control air pollution?

**High quality** – Will the controls be based on robust evidence? Will the rules create an incentive for domestic operators to comply fully with annex VI where possible?

**Cost effective** – is the proposal cost effective, and will it not impose undue costs on individuals, businesses or agencies?

**Clear** – will the proposal make the rules clear and consistent?

47. The assessment has also considered the following matters that must be taken into account before marine protection rules are made (MTA section 392). These include:
- the need to:
    - protect the marine environment
    - maintain and improve maritime safety
  - whether the proposed rule:
    - assists economic development
    - improves access and mobility
    - promotes and protects public health

- ensures environmental sustainability
- the recommended international practices of the IMO relating to protection of the marine environment
- the costs of implementing measures for which the rule is being proposed
- the risk to the marine environment if the proposed rule is not made
- such other matters as the Minister or the Director, as the case may be, considers appropriate in the circumstances.

## Proposal 1 – To enable domestic voyaging recreational ships to use alternatives to the Engine International Air Pollution Prevention (EIAPP) certificate for applicable new engines

### Proposal

The proposal is to enable owners of domestic voyaging recreational ships to utilise alternative documentation as evidence that an applicable new engine complies with the Annex VI limits. This alternative is already available for existing engines. The proposed change is to broaden the rules to make this alternative available to new engines on recreational ships. This change will be achieved by listing these alternatives in a new transport instrument.

The proposal is summarised in the table below. Black text shows the documentation options currently permitted by the rules (see Appendix 2 for more detail). Red text is the proposed expansion to the scope of the documentation options.

These amendments are in rules 199.22 and 199.381.4, and the proposed transport instruments.

Documentation option (see Appendix 2 for more information)	Engine type	Existing/ new engine	Duration
Option 1 – a Technical File and Engine International Air Pollution Prevention (EIAPP) Certificate as per MARPOL Annex VI	Marine compression-ignition engine used for propulsion	Existing or new	Life of engine or until major conversion
Option 2 – a manufacturer’s declaration/ certificate of conformity to a listed standard	Spark-ignition (petrol) OR stationary/ auxiliary engine not used for propulsion	Existing or new	Life of engine or until major conversion
Option 3 – a Technical File of the parent engine in a family or group, approved by a MARPOL Annex VI party State administration or class society	Marine compression-ignition engine used for propulsion	Existing	Life of engine or until major conversion
		<b>New recreational</b>	
Option 4 – other acceptable evidence	Marine compression-ignition engine used for propulsion	Existing	Until June 2032

Table 1 Proposal 1

## What is the problem?

It is not feasible for most domestic voyaging recreational ships to obtain an engine-specific EIAPP certificate and technical file when installing an engine, or to meet the ongoing survey requirements specified in the NO<sub>x</sub> Technical Code. Implementing the rules in their current form is likely to result in ongoing non-compliance by recreational operators who cannot afford EIAPP certificates or to have their ships regularly surveyed. This will have negative effects on air quality from continued use of older engines, and may encourage the development of a black market in non-compliant engines.

## Rationale for change

See also the detailed options analysis on page 12.

Under the currently suspended NO<sub>x</sub> Part 199 Rules, an EIAPP certificate is required for applicable<sup>2</sup> new engines of over 130 kW (174 HP) installed on domestic ships. The EIAPP certificate provides evidence of an engine's compliance with the limits for NO<sub>x</sub> emissions in Regulation 13 of MARPOL Annex VI, and with the NO<sub>x</sub> Technical Code which contains detailed specifications for the construction, testing, maintenance and survey of ship engines.

### **It is not feasible for domestic voyaging recreational ships to obtain an EIAPP and technical file**

Issuance of a technical file requires a survey of an individual engine at flag State or class society level, which is unaffordable for most recreational operators. Without a technical file, a ship cannot hold an EIAPP certificate.

The EIAPP certificate is linked to the NO<sub>x</sub> Technical Code, which requires ongoing surveys to ensure a specified maintenance schedule is complied with. There is no regime of regular surveys for domestic recreational ships in New Zealand.

### **Robust criteria need to apply to any alternative documentation for new engines**

To be applicable for the life of the engine, like the EIAPP, the alternative documentation must be:

- based on robust testing
- issued by a maritime administration or a trusted independent third party<sup>3</sup>.

Reliance on documentation issued by overseas authorities or trusted third parties is considered appropriate in view of New Zealand's relatively low capability and capacity for testing and surveying engines. It is also consistent with methods used in other industries to gain assurance of emissions levels e.g. the automotive industry.

### **There is one type of document that fits these criteria**

The only document known to fit these criteria is **a technical file for the parent engine of an engine family or group, which has been approved by a MARPOL Annex VI party State administration or a class society as meeting the Annex VI emissions levels.**

Unlike the EIAPP, such documents are not specific to each individual engine. They are generally similar in concept to the "type approval" used for other kinds of equipment such as incinerators, which provides approval for the model rather than the individual item of equipment.

The evidential standard of this type of document is high because it is issued by a party State administration or class society based on robust testing of the parent engine against the requirements of the NO<sub>x</sub> Technical Code.

---

<sup>2</sup> The requirement applies to compression ignition (diesel fuel) engines used for propulsion. There are exceptions to this requirement for spark-ignition (petrol) engines and for stationary engines (e.g. winch engines) that are originally designed for land-based applications.

<sup>3</sup> Some of the alternatives available for existing engines, such as manufacturers' manuals, do not fit these criteria and therefore have an expiry date of June 2032. We are not proposing to make these alternatives available for new engines.

Such documents are easily obtained from an engine supplier, sometimes at no extra cost.

**Enabling commercial operators to use alternatives to the EIAPP was considered, but is not the preferred option.**

For commercial operators, the initial outlay for a technical file specific to a new engine can be costly. The estimated cost is between \$3,000 and \$10,000 per engine, in addition to purchase and installation costs. However, the benefit of enabling alternatives is balanced against these factors.

- Unlike recreational ships, commercial ships are already subject to regular surveys for compliance. The ongoing additional costs of NO<sub>x</sub> survey are only marginally more than existing survey costs.
- Commercial operators already have a range of alternative documentation options for existing engines. A parent engine technical file can be used for the life of the engine, and other alternative documentation is valid until June 2032. This enables them to predict and plan for the required outlay.
- The availability of an alternative may discourage commercial operators from getting an EIAPP. Without an EIAPP, a ship will not be able to travel or be sold overseas. This could affect its resale value and may have a negative impact on the overall reputation of the New Zealand commercial fleet.

**Anticipated impact**

The proposal will affect operators of recreational domestic ships who install a new compression-ignition propulsion engine over 130 kW.

While the proposals will continue to impose compliance requirements to ensure these engines meet the NO<sub>x</sub> emission limits, the changes will make these requirements practically achievable and affordable for recreational ship owners, thus removing a significant barrier to compliance.

The proposal will also increase clarity for recreational ship owners by introducing a transport instrument that transparently sets out what forms of documentation are acceptable.

EIAPP certification will remain an option for domestic ships, and will be a prerequisite for recreational and commercial ships to receive international certification and voyage internationally.

**Proposed mitigation**

Targeted communications to affected parties prior to the rules entering into force.

**Entry into force**

Entry into force will be 28 days after notification of the updated rules in the New Zealand Gazette.

**Questions**

1.1 Should operators of domestic voyaging ships be able to use specified alternative documentation to the Engine International Air Pollution Prevention (IAPP) certificate for new engines?

- a) Yes – only for new engines on recreational ships **[preferred option]**
- b) Yes – for new engines on commercial and recreational ships
- c) No

What are the reasons for your response?

## Proposal 1 option analysis

Key: ✓✓ criteria likely to be fully met, ✓ criteria likely to be partially met, -- no impact/status quo, ✗ criteria unlikely to be met, ✗✗ significant negative impact

### Proposal 1. To amend the rule to enable specified domestic voyaging ships to use alternatives to the Engine International Air Pollution Prevention (EIAPP) certificate for applicable new engines.

Option	Effective: air pollution is controlled	High quality: based on robust evidence; operators have incentives to meet international standards where possible	Cost effective: no undue costs on individuals, businesses or agencies	Clear: the rules will be clearer and easier to understand
1.1 Allow alternative documentation for recreational ships only <b>[preferred option]</b>	✓ Well-maintained engines with alternative documentation will be highly likely to meet Annex VI NO <sub>x</sub> emissions levels	✓ Alternatives must be issued by maritime administration or trusted third parties and based on robust evidence	✓✓ Removes the prohibitive cost barrier for recreational ships to obtain an EIAPP	✓ Transport Instrument will make the alternative documentation options clear
1.2 Allow alternative documentation for recreational and commercial ships	✓ Well-maintained engines with alternative documentation will be highly likely to meet Annex VI NO <sub>x</sub> emissions levels	✗ Alternatives must be issued by maritime administration or trusted third parties and based on robust evidence  May discourage commercial operators from getting an EIAPP. This may affect the resale value of ships and reputation of the NZ fleet	✓✓ Significantly cheaper than obtaining an EIAPP for commercial operators  Reduces cost of EIAPP approval for Maritime NZ  Reduces perceived inequity between commercial and recreational operators	✓ Transport Instrument will make the alternative documentation options clear
1.3 No change – status quo	✗✗ Likely to result in ongoing non-compliance for operators who cannot afford EIAPP certificates, with downstream impacts such as <ul style="list-style-type: none"> <li>Negative effects on air quality from continued use of older engines</li> <li>Development of a black market in non-compliant engines</li> </ul>	✗ Low incentive for recreational ships to meet international standard due to cost barrier	✗✗ Will effectively prevent many recreational boat owners from legally obtaining new engines by making it prohibitively expensive to do so.  Non-compliance likely, with resulting enforcement costs for Maritime NZ.	✗ Alternative documentation options are currently in guidance for surveyors and may be difficult to find, including for existing engines

Table 2 Proposal 1 options analysis



## **Proposal 2 – to clarify how NO<sub>x</sub> requirements apply to domestic voyaging ships that become New Zealand ships on or after the commencement date of Section C3 of the Part 199 Rules**

### **Proposal**

The proposal will clarify that ships that become New Zealand ships and will be domestic voyaging on or after the commencement date of the relevant rules will be treated as if they had a new engine.

- i) Such engines must meet Annex VI Tier II emission levels, regardless of the date of construction of the ship, and
- ii) They may use the same alternatives to an EIAPP as new engines on existing New Zealand ships.

These amendments are in rules 199.384 and 199.387.

### **What is the problem?**

The Part 199 Rules do not achieve their intended effect. The policy intention is that engines on ships that become NZ ships after the commencement of the rules (i.e. imported ships) should be treated as “new” engines. This is intended to prevent importation of old ships with high-emission engines into New Zealand, and progressively reduce emissions from the New Zealand fleet.

However, the rules are silent on what NO<sub>x</sub> emissions tier these engines are expected to meet (see Appendix 1 for the Annex VI NO<sub>x</sub> emissions tiers). On a plain reading of the rules, ship arriving in New Zealand with an engine installed before 2005 may only have to comply with the limits stated in Annex VI, i.e. no limits at all. Similarly, a ship with an engine installed before 2011 may only have to comply with Tier I emissions limits.

This document considers whether this requirement should be changed to allow alternative documentation, in line with Proposal 1 for recreational ships.

### **Rationale for change**

See also the detailed options analysis on page 15.

The proposal is to change the rules to require engines on ships imported to New Zealand on or after the commencement date of the rules to meet the Tier II limits, regardless of the date of construction of the ship or installation of the engine. This clarifies the policy intention and makes it enforceable.

Under the current rules eligible engines on imported domestic voyaging ships will require an EIAPP certificate. The proposed amendment will enable engines on recreational ships imported to New Zealand on or after the commencement date of the rules to use the same alternative documentation that is available for new engines on recreational ships (see Proposal 1). This will be in line with the treatment of engines on imported ships as “new”, and will provide clarity and consistency for operators.

### **Anticipated impact**

Proposal 2 affects operators who bring older ships into New Zealand from overseas intending to use them domestically. Domestic operators will have to take care that engines on ships they purchase from overseas have engines that are compliant with Tier II of the NO<sub>x</sub> requirements.

Recreational ships will be able to use the alternative documentation provided for in Proposal 1. Commercial ships will need an EIAPP and technical file specific to the engine, unless they have alternative documentation for spark-ignition or stationary engines.

The intention of the rules will be clear so that there is no ambiguity about which requirements apply.

## Proposed mitigation

Targeted communications to affected parties prior to the rules entering into force.

## Entry into force

Entry into force will be 28 days after notification of the updated rules in the New Zealand Gazette.

### Questions

2.1 What NO<sub>x</sub> tier level should apply to engines on domestic voyaging “imported” ships (new to New Zealand after the commencement date of the relevant rules)?

- a) Engines must meet Tier II NO<sub>x</sub> levels regardless of date of construction of ship **[preferred option]**.
- b) Engines must meet Tier I if ship constructed at any date before 1/1/2011, Tier II otherwise.
- c) No change – status quo.

What are the reasons for your response?

2.2 Should the same alternative documentation allowed for new engines on existing domestic voyaging New Zealand ships be allowed for engines on domestic voyaging “imported” ships (new to New Zealand after the commencement date)?

- a) Yes **[preferred option]**
- b) No

What are the reasons for your response?

## Proposal 2 option analysis

**Key:** ✓✓ criteria likely to be fully met, ✓ criteria likely to be partially met, -- no impact/status quo, ✗ criteria unlikely to be met, ✗✗ significant negative impact

**Proposal 2. To clarify how NO<sub>x</sub> requirements apply to domestic voyaging ships that become New Zealand ships on or after the commencement date of Section C3 of the Part 199 Rules.**

Option	Effective: air pollution is controlled	High quality: based on robust evidence; operators have incentives to meet international standards where possible	Cost effective: no undue costs on individuals, businesses or agencies	Clear: the rules will be clearer and easier to understand
<b>2.1 What is the required NO<sub>x</sub> tier level for domestic voyaging ships that become New Zealand ships on or after the commencement of section C3?</b>				
<b>2.1a.</b> Engines must meet Tier II NO <sub>x</sub> levels regardless of date of ship construction or engine installation <b>[preferred option]</b>	✓✓ Prevents ships with older, higher-emissions engines from joining the New Zealand fleet	✓✓ Some operators will be required to exceed the relevant Annex VI emissions standard for the age of their ship	✗ Has some cost impacts as operators will need lower emission engines. Offset by environmental gains	✓ Makes intention of the rules clear
<b>2.1b.</b> Engines must meet Tier I if engine installed at any date before 1/1/2011, Tier II otherwise	✓ Prevents ships with very old engines with no NO <sub>x</sub> controls from joining the New Zealand fleet, but allows some older engines through with their existing NO <sub>x</sub> controls	✓ Some operators will be required to exceed the relevant Annex VI emissions standard for the age of their ship	✗ Has some cost impacts as operators will need lower emission engines. Offset by environmental gains	✓ Makes intention of the rules clear
<b>2.1c.</b> No change – status quo	✗✗ Rules as they stand do not achieve desired effect of progressively reducing emissions. Ships may enter the New Zealand fleet with their current level of NO <sub>x</sub> controls (which may include no controls)	-- No incentive for ships to exceed relevant standards	-- Will allow operators to purchase cheaper but higher emission engines	✗✗ Rules are silent on required tier levels and intention of the rules is unclear
<b>2.2 Should the same alternative documentation allowed for new engines on existing domestic voyaging recreational ships be allowed for eligible engines on domestic voyaging recreational ships that become New Zealand ships on or after the commencement of section C3?</b>				
<b>2.2a</b> Yes (may use EIAPP or applicable alternative documentation) <b>[preferred option]</b>	✓ Well-maintained engines with alternative documentation will be highly likely to meet Annex VI NO <sub>x</sub> emissions levels	✓ Alternatives must be issued by maritime administration or trusted third parties and based on robust evidence	✓ Offsets to some extent the cost of lower-emission engine	✓ Transport Instrument will make the alternative documentation options clear  Consistent treatment of all new and “NZ-new” engines

Option	Effective: air pollution is controlled	High quality: based on robust evidence; operators have incentives to meet international standards where possible	Cost effective: no undue costs on individuals, businesses or agencies	Clear: the rules will be clearer and easier to understand
<b>2.2b</b> No (must have EIAPP)	✓✓ Very high standard of NO <sub>x</sub> compliance imposed	✗ May have a negative effect on ongoing quality of NZ fleet due to operator unwillingness to obtain EIAPP, continued use of older ships	✗ Some cost impacts for EIAPP compliance. Offset by environmental gains. May be seen as inequitable	-- No change to status quo

## Proposal 3 – to enable the establishment of transport instruments for the Part 199 Rules

### Proposal

The proposal is to enable the Director to make transport instruments for the following content:

- approved equivalents to requirements in the Rules (Rule 199.22)
- approved alternative NO<sub>x</sub> controls for domestic voyaging ships (Part 199 Rules Section C3).

These proposed amendments are in rules 199.2 and 199.22. In addition, rule 199.383(4)(c) is proposed to be revoked, as the ability for the Director to determine alternative control measures will be covered by the ability to make transport instruments.

A further proposal is to establish three transport instruments specifying alternative NO<sub>x</sub> controls for domestic voyaging ships. These transport instruments would be where documentation alternatives 2, 3 and 4 (see Appendix 2) are specified. The transport instruments are in the appendices to the draft Part 199 Rules amendments (Appendix 3).

### What is the problem?

The part 199 rules currently provide for the Director to approve equivalent means of compliance (199.2.2), but do not specify how those equivalents are to be communicated. A transport instrument would ensure that this information is transparent and accessible.

The part 199 rules currently provide for alternative NO<sub>x</sub> controls to be specified in surveyor performance requirements. While this provides a transparent and accessible location for this information, the surveyor performance requirements impose obligations on surveyors, not ship operators. A transport instrument would enable the alternative controls to be specified in a way that makes them clearly applicable to ship operators.

The rules provide for only a limited range of alternative NO<sub>x</sub> controls, applying to existing engines, spark-ignition engines and non-propulsion engines. There is no provision to make alternative controls applying to new engines.

### Rationale for change

The proposed content for Part 199 transport instruments meets four key criteria:

- **It is non-controversial** – the content is reasonably straight-forward and unambiguous. Changes to the content are not major policy decisions and are unlikely to elicit significantly disparate or contested views.
- **It outlines prescriptive or detailed requirements** – the content is prescriptive, technical and detailed. Decision-making is at the level of the Director, which is appropriate to the level of authority and technical expertise required.
- **It allows for flexibility or innovation** – MARPOL Annex VI requires ongoing revision in response to changes in emissions standards and technologies, e.g. the development of alternative marine fuels. The content may have to be frequently amended to reflect these changes.
- **It has a contained or minimal impact** – the transport instruments will apply to specific ships in specific circumstances and will not have a wide impact.

### Anticipated impact

Establishing transport instruments for Part 199 equivalents and alternative NO<sub>x</sub> controls is expected to increase efficiencies for users of the system and Maritime NZ as a regulator. For Maritime NZ, transport instruments will be faster and cost-effective to amend. For system participants, transport instruments will set out the information in a clear and accessible form. Transport instruments can be updated to include new or innovative approaches soon after the Director has approved them. This contributes to the flexibility and transparency of the regime, and may reduce the need for operators to seek exemptions in respect to the relevant requirements.

## Proposed mitigation

Targeted communications to affected parties prior to the rules entering into force.

## Entry into force

Entry into force will be 28 days after notification of the updated rules in the New Zealand Gazette.

### Questions

3.1 Do you agree with the proposal to enable the establishment of transport instruments for alternative NO<sub>x</sub> controls on domestic voyaging ships?

- a) Yes
- b) No

What are the reasons for your response?

3.2 Do you agree with the proposal to enable the establishment of transport instruments for equivalents under Rule 199.22?

- a) Yes
- b) No

What are the reasons for your response?

3.3 Do you agree with the proposed content of the transport instruments for alternative NO<sub>x</sub> controls on domestic voyaging ships?

- a) Yes
- b) No

What are the reasons for your response?

## Proposal 4 – Minor and technical amendments

### Proposal

A number of minor and technical amendments are proposed to the rules, including fixing editing errors, and clarifications to ensure that the rules work as intended. These amendments do not involve a change to the policy positions already consulted on in July-August 2021 and we consider that they will have little or no impact. We seek your comment on these proposed changes, which are marked up in the draft rules at Appendix 3.

Purpose of change	Rules to be amended
Amendment 2.1 Fix editing error in rule titles – clarify that rules for approved method apply to engines of more than 5,000 kW power output.	199.82. 199.382
Amendment 2.2 Clarify that ships under 400 GT require approval from a surveyor or the Director of Maritime NZ, if there is a change to applicable equipment, systems, fittings, arrangements, or material outside of a survey.	199.20(b)
Amendment 2.3 Several points of clarification on survey and certification: <ul style="list-style-type: none"> <li>• Clarify who signs the Annex VI endorsement and who can conduct the survey. The person making the Annex VI endorsement must be a MOSS surveyor.</li> <li>• For ships 400 GT or more, the surveyor must be recognised under rule 199.680. Ships under 400 GT may be surveyed by the holder of a Certificate of Surveyor Recognition under Rules Part 44.</li> <li>• Ships not on international voyage are not required to have an annual survey.</li> <li>• Insert “if applicable” in 199.341(a) to clarify that IEE certificate is not required for unmanned non-self-propelled barges.</li> <li>• Insert “where applicable” in 199.342, to clarify that surveys not under MOSS may not have a survey plan.</li> </ul>	199.55, 57 199.341, 342
Amendment 2.4 Clarify that fuel sampling can be carried out on foreign ships.	199.603(1)
Amendment 2.5 Change survey cycles to align with later date of accession to MARPOL Annex VI and the continued suspension of section C3.	Schedule 1.2
Amendment 2.6 Align terminology between rules relating to shipboard incineration for international and domestic voyaging ships – change “revoke” to “cancel”.	199.445(4)
Amendment 2.7 Align terminology for surveyors and holders of Certificate of Surveyor Recognition 199.681, 199.682.	199.681, 199.682
Amendment 2.8 Update to include a link to Annex VI regulation 5.4.6 for verification of the SEEMP when the Carbon Intensity Index comes into force.	199.201, 199.501
Amendment 2.9 Better align New Zealand’s NO <sub>x</sub> discretions for non-international voyaging ships with Annex VI requirements <ul style="list-style-type: none"> <li>• The exclusion for ships constructed before 19 May 2005 applies to ships that voyage only between New Zealand ports and terminals.</li> <li>• Alternative NO<sub>x</sub> controls apply to ships that voyage only in New Zealand’s jurisdiction.</li> </ul>	199.381(3)(a), 199.383(1)(b)

**Questions**

4.1 Do you agree with the proposed minor and technical amendments to Rules Part 199?

- a) Yes
- b) No

What are the reasons for your response?



## Appendix 1 – Annex VI NO<sub>x</sub> tiers

### Tier I, II and III NO<sub>x</sub> emission limits

Tier	Ship construction date	Total weighted cycle emission limit (g/kWh) n = engine's rated speed (rpm)		
		n < 130	n = 130 - 1999	n ≥ 2000
I	On or after 1/1/2000 (19/5/2005 for ships not on international voyage) <b>OR</b> 1/1/1990 to 31/12/1999 if Approved Method <sup>4</sup> available	17.0	<b>45.n<sup>(-0.2)</sup></b> e.g. 720 rpm – 12.1	9.8
II	On or after 1/1/2011	14.4	<b>44.n<sup>(-0.23)</sup></b> e.g. 720 rpm – 9.7	7.7
III	On or after 1/1/2016 <b>AND</b> voyaging in ECA <sup>5</sup>	3.4	<b>9.n<sup>(-0.2)</sup></b> e.g. 720 rpm – 2.4	2.0

<sup>4</sup> An Approved Method is a technological measure that can be introduced to a particular type of engine to reduce the overall NO<sub>x</sub> emissions. Approved methods apply to engines over 5,000 kW output power and with a per cylinder displacement at or above 90 litres, on ships constructed 1990-1999. Very few Approved Methods have been notified to IMO, and none since 2014. Approved Methods are included in the Part 199 Rules but they are unlikely to apply to New Zealand-flagged vessels.

<sup>5</sup> Tier III is included for completeness, but does not apply to ships voyaging within New Zealand jurisdiction as there is no ECA (emissions control area) in New Zealand waters.

## Appendix 2 – The four NO<sub>x</sub> documentation alternatives

Further information on these alternatives is available in the booklet *New environmental rules for domestic commercial ships under 400 GT* at this link.

[www.maritimenz.govt.nz/MARPOL](http://www.maritimenz.govt.nz/MARPOL)

### 1. A Technical File and Engine International Air Pollution Prevention (EIAPP) certificate

These documents are specified in Annex VI and are internationally recognised.

A Technical File is normally provided with compliant compression ignition engines by the manufacturer at the time of purchase. It may be possible to get these from the engine supplier at a later date.

The Technical File needs to have the specific engine's serial number and details from either the specific engine or the parent engine.

### 2. A manufacturer's declaration/certificate of conformity to an acceptable Standard

Operators with the following types of engine over 130 kW may hold documentation to show that the engine meets a particular standard, as listed below<sup>6</sup>.

For spark-ignition (petrol) engines only, a manufacturer's declaration/certificate of conformity to one of the following standards:

- Directive 2013/53/EU of the European Parliament and of the Council on recreational craft and personal watercraft
- USA EPA Air Pollution Controls 40 CFR Part 1045 – Control of emissions from spark-ignition propulsion marine engines and ships
- Australian Product Emissions Standards Rules 2017.

For stationery/auxiliary engines not used for propulsion only (e.g. engines used for power generation or to power machinery such as cranes or winches), a manufacturer's declaration/certificate of conformity to one of the following standards:

- USA EPA Tier 2 non-road diesel engine emission standards (or higher – e.g. Tier 3 and 4 also acceptable)
- Euro Stage II non-road emissions standards (or higher – e.g. Stage II, IV and V also acceptable).

### 3. Technical File of a parent engine in a family or group, approved by a party State administration or class society

A ship operator using this option must hold a copy of the Technical File for the parent engine of the engine family or group applicable to the engine. It must show that the engine meets the required Annex VI emissions tier, and must have been approved by either a class society or an Annex VI party State administration.

The documentation must have information on the level of NO<sub>x</sub> emissions from the engine, so it can be determined whether the engine meets the required emissions tier for that ship. See Appendix 1.

For domestic voyaging ships, these approved Technical Files are acceptable on their own without an attached EIAPP certificate. Ship operators can use either of these documents as evidence of compliance with the NO<sub>x</sub> emission limits for the life of the engine, or until the engine has a major conversion.

---

<sup>6</sup> These are the standards currently accepted by Maritime NZ. Standards may be added to this list in future.

#### **4. Other acceptable evidence (until June 2032 – existing engines only)**

Until 30 June 2032, the following documentation can be used to demonstrate an existing engine is compliant, if the document at Options 1, 2 or 3 are not held:

- the engine manufacturer's product manual
- correspondence from the engine manufacturer
- other emissions certification issued by (or on behalf of) an IMO member State
- evidence that the engine meets an overseas standard for engines – not listed at Option 2 – that equals or exceeds the Annex VI NO<sub>x</sub> emission standard (as appropriate for the type of engine in question – e.g. cannot use a land-based engine standard for a marine engine).

The evidence must contain information on the level of NO<sub>x</sub> emissions from the engine, so it can be determined whether the engine meets the required emissions tier or not. (See Appendix 1).

Whether this evidence is accepted as legitimate or not is at the discretion of the surveyor (or Maritime Officer in an audit).

## **Appendices 3-6 – Draft marine protection rules and transport instruments**

The text of the proposed amendments is set out in Appendices 3-6. This is available as a separate document on the Maritime NZ website at

<https://www.maritimenz.govt.nz/content/public/consultation/part199/default.asp>