



## Carriage of float-free EPIRBs on class 1, 2 and 3 vessels

### Consultation Draft

Consultation closes: 12 December 2017

#### Who needs to know about these proposed changes?

- Stakeholders who own or operate a class 1, 2 or 3 domestic commercial vessel (DCV) that operate beyond 2 nautical miles from shore;
- Manufacturers and suppliers of emergency position-indication radio beacons (EPIRBs) and associated appliances; and
- Accredited marine surveyors and recognised organisations.

#### What are the key changes?

From 1 January 2019, all class 1, 2 and 3 DCVs that are equal to or greater than 12 metres in length and operate beyond 2 nautical miles seaward from the coast, will be required to carry an EPIRB that is designed to automatically activate and floats free (float-free EPIRB).

Class 1, 2, or 3 DCVs that are less 12 metres in length operating in beyond 2 nautical miles will also need to carry a float-free EPIRB by 1 January 2019 but only if the vessel does not have level flotation. Vessels that are less than 12 metres with level flotation can continue to carry the kind of EPIRB currently required.

These changes will apply to vessels required to have a certificate of survey; vessels that are exempt from the requirement to have a certificate of survey; and existing ('grandfathered') vessels.

These changes will be implemented through amendments to the following instruments:

- **For vessels that are required to have a certificate of survey:** National Standard for Commercial Vessel (NSCV) Part C7B – Communications Equipment (for 'new vessels') and *Marine Order 503 (Certificates of survey – national law) 2013* (Marine Order 503) (for 'existing vessels'); and
- **For non-survey vessels:** *Marine Safety (Certificates of survey) Exemption 2017* (Exemption 02) (and NSCV Part G – Non survey) and *Marine Safety (Class C restricted operations) Exemption 2017* (Exemption 40).

To assist your review of the proposed changes we have prepared the following information:

**Part 1** – [reasons why](#) we are proposing to make these changes

**Part 2** – [specific questions](#) for stakeholder members' consideration

**Part 3** – [list of proposed changes](#) comparing old text and proposed text (wherever possible)

**Part 4** – [estimated impacts](#)



## What next?

AMSA will publish a Consultation Feedback Report outlining the feedback received during public consultation and our responses, when we publish the amended instruments on the AMSA website.

## Part 1 – Why are we proposing to make these changes?

### **Background**

- A number of incidents in Australia and internationally have highlighted the need for DCVs to carry float-free EPIRBs. In light of the safety benefits associated with float-free EPIRBs, AMSA considers that changes to the current regulatory requirements with respect to EPIRBs are necessary.
- In an emergency situation in which a vessel rapidly capsizes or sinks, the survival of passengers and crew often depends on the successful transmission of a distress signal to search-and-rescue resources.
  - Recent investigations conducted domestically<sup>1</sup> and internationally<sup>2</sup> have found that masters and crew may not be able to manually transmit a distress signal in an emergency situation for a number of reasons including an inability to access the distress-alerting device due to the speed that the vessel capsizes or sinks and/or the location of the device.
  - Importantly, these investigations considered the potential limitations of EPIRBs that are not designed to automatically activate and float free.
- A float-free EPIRB can signal a request for help within minutes without human-assisted activation. This functionality may have resulted in a material difference in past situations where a manually-activated EPIRB was carried on a vessel and, for various reasons, was not activated.
- The safety benefits of carrying float-free EPIRBs on commercial vessels operating at sea has also been considered by international maritime safety agencies. For example, Maritime New Zealand has recently consulted on a proposal to amend regulations to require float-free EPIRBs on all fishing vessels greater than 6 metres and less than 24 metres in length operating beyond enclosed waters, from 1 January 2020. More information on this proposal is available on the [Maritime New Zealand Consultation website](#).
- The proposed changes to NSCV Part C7B are consistent with AMSA's commitments in the [Statement of Regulatory Approach](#) and are in line with [AMSA's Annual Regulatory Plan 2017](#).

### **Current EPIRB requirements**

- The current NSCV Part C7B requires that DCVs that operate beyond 2 nautical miles from the coast must carry either a 'class 2' or a 'class 3' EPIRB. The EPIRB must also meet the technical specifications in AS/NZ4280.1.
- NSCV Part G, which applies to 'non-survey' vessels, has a comparable requirement for those vessels covered by that NSCV Part; however, Part G does not specify the class of EPIRB to be carried.
- The issue is that NSCV Part C7B allows for the carriage of EPIRBs that are not designed to automatically activate ('class 3' EPIRBs), in addition to those that do or are capable of automatically activating (class 1 or 2 EPIRB).

---

<sup>1</sup> [Inquest into death of Paul Gregory Clifford](#) and [Inquest into the suspected death of Peter Joseph Trcka](#).

<sup>2</sup> Marine Investigation Report (M15P0347), Transportation Safety Board of Canada, dated 25 October 2015.

- Further, it does not specify the kind of bracket the class 2 EPIRB needs to be fitted in - meaning EPIRBs can be fitted in either a bracket which allows the unit to float free ('category 1') or a bracket which requires the unit to be manually removed ('category 2').
- This proposed amendments would require that a class 2 EPIRB must be carried on specified DCVs, and that the EPIRB must be fitted in a category 1 bracket.
  - AS/NZ4280.1 provides technical specifications for 'float free arrangements' so this standard will continue to be the technical standard to which the EPIRB unit and bracket must meet.
- This change will affect class 1, 2 and 3 vessels that are:
  - equal to or greater than 12 metres in length and operate more than 2 nautical miles from coast; and
  - less than 12 metres in length that do not have level floatation operating more than 2 nautical miles from shore.
- These changes apply to existing ('grandfathered') vessels, as well as 'non-survey' vessels'. It is hoped that this leads to greater consistency in safety standards, and lead to better safety outcomes across the fleet. This includes:
  - vessels that are 'existing vessels', as defined in MO503; and
  - vessels that are exempt from survey under AMSA's general exemptions (i.e. EX02 and EX40).
- The current EPIRB carriage requirements in NSCV Part C7B and Part G only apply to vessels operating beyond 2 nautical miles. AMSA considers that the 2 nautical mile limitation continues to be appropriate.
- The proposal also provides for a one year transitional period to allow time for owners to purchase a float-free EPIRB (where necessary), and to provide EPIRB manufacturers and suppliers time to ensure sufficient stock is available for purchase.

## Part 2 – Specific questions for industry

We welcome your responses to the following eight questions:

**Question 1:** Do you think the proposed changes will improve safety for people on DCVs?

**Question 2:** Do you think that the requirement to carry a float-free EPIRB should apply to vessels that are class 1, 2 and 3, or should it only be limited to a particular class? If so, which class and why?

**Question 3:** Should the requirement to carry a float-free apply to class 4 vessels (e.g. class 4C vessels)?

**Question 4:** Are there any kinds of vessels which would be impacted by this proposal where it would be impracticable or of no safety benefits to carry a float-free EPIRB?

**Question 5:** Do you agree that the requirement to carry a float-free EPIRB should apply to both 'new vessels' and 'existing vessels'?

**Question 6:** A one year 'transitional' period is proposed. AMSA considers that given the significant benefits for safety, a shorter transitional time is warranted. Do you think that a one year transitional period is reasonable? Should more/less time be allowed?

**Question 7:** Do you think the proposed changes to clauses 2.8 and 4.3 of NSCV Part C7B and item 8 of schedule 1 of NSCV Part G (below) are clear and easy to understand?

**Question 8:** Is there any specific guidance AMSA can provide to assist industry with the proposed changes, if implemented?

## Part 3 – List of proposed changes

A comparison of the current text against the proposed text is provided in the tables below and is separated out depending on whether vessels are required to be 'in survey' or are 'non-survey'.

### **Proposed of changes for class 1, 2 and 3 vessels that are required to have a certificate of survey**

<b>1. NSCV Part C7B</b>	
<p>The proposed changes will be made to clauses <b>1.5, 2.8</b> and <b>4.3</b> of NSCV Part C7B as outlined below and in the amending instrument at <b>Attachment 1</b>. This change will apply to DCVs that are 'new vessels'. These vessels will be required to carry a float-free EPIRB by 1 January 2019.</p>	
<p><b><u>Current text</u></b></p> <p>The terms 'class 2' and 'class 3' in the context of the different kinds of EPIRBs are not currently defined in NSCV Part C7B.</p>	<p><b><u>Proposed Text</u></b></p> <p><b><u>1.5 Definitions</u></b></p> <p><b>category 1 bracket —</b> a bracket for a <i>Class 2 EPIRB</i> that is designed to automatically deploy the <i>EPIRB</i> when submerged at depth.</p> <p><b>class 2 EPIRB —</b> an <i>EPIRB</i> that has a manual and water activation switch.</p> <p><b>class 3 EPIRB —</b> an <i>EPIRB</i> that has a manual activation switch only.</p>
<p><b><u>Current text</u></b></p> <p><b>2.8 Means to communicate distress, requests for assistance and location from vessel to shore</b></p> <p>A minimum of <i>two methods</i> must be provided for vessel to shore communication of a distress message or a request for assistance and to provide the vessel's location in order to initiate and facilitate rapid assistance or rescue.</p> <p>NOTE: Examples of assistance include breakdown requiring a tow where the vessel is not in imminent danger of foundering or an injury on board requiring external medical advice.</p>	<p><b><u>Proposed Text</u></b></p> <p><b>2.8 Means to communicate distress, requests for assistance and location from vessel to shore</b></p> <p>A minimum of <i>two methods</i> must be provided for vessel to shore communication of a distress message or a request for assistance and to provide the vessel's location in order to initiate and facilitate rapid assistance or rescue.</p> <p><b>For vessels operating in open water more than 2 nautical miles seaward from the coast, one method must be an EPIRB that complies with the requirements in clause 4.3.</b></p> <p>NOTE: Examples of assistance include breakdown requiring a tow where the vessel is not in imminent danger of foundering or an injury on board requiring external medical advice.</p>
<p><b><u>Current text</u></b></p> <p><b>4.3 Radiotelephone and satellite communications equipment</b> Class 1A, 2A and 3A vessels shall comply with the provisions of <i>Marine Order 27 (Safety of navigation and radio equipment) 2016</i>.</p>	<p><b><u>Proposed text</u></b></p> <p><b>4.3 Radiotelephone and satellite communications equipment</b> Class 1A, <b>1B Extended</b>, 2A, <b>2B Extended</b>, 3A and <b>3B Extended</b> vessels shall comply with the provisions of <i>Marine Order 27 (Safety of navigation and radio equipment) 2016</i>.</p>

All other vessels shall comply with—  
a) the provisions of Table 2 as applicable; or  
b) *Marine Order 27 (Safety of navigation and radio equipment) 2016*.

Portable hand held units should not be used as primary distress and safety equipment. Primary distress and safety equipment should be console mounted.

NOTES:

1. The risks of relying on portable hand held units as primary distress and safety equipment are that they could be lost, left behind on a voyage, dropped overboard or that the batteries may be holding insufficient charge.
2. The additional carriage of a waterproof VHF marine handheld radio as a contingency backup to the minimum required by this standard offers the ability to make a call for assistance even in the event that the primary radio communications equipment and/or batteries are rendered ineffective due to having been swamped or submerged.

In addition to the provisions of Table 2, the following shall apply:

- a) All vessels operating in open water more than 2 nautical miles seaward from the coast shall be fitted with an *EPIRB*.
- b) Class 1A, 2A and 3A vessels shall be fitted with an *EPIRB* in accordance with *Marine Order 27 (Safety of navigation and radio equipment) 2016*.
- c) All vessels operating in Operational Areas B or C or operating in open water more than 2 nautical miles seaward from the coast shall be fitted, as appropriate for the type of vessel, with a—
  - i) Class 3 *EPIRB*; or
  - ii) Class 2 *EPIRB*.

NOTES:

1. *EPIRB* signals on the 121.5/243 MHz frequencies will not be received by satellite systems after February 2009. Marine Authorities will begin to phase in, from July 2008, a requirement for vessels to be fitted with 406 MHz *EPIRB*s only.
2. 406 MHz *EPIRB*s must be registered in order to ensure vessel and contact details can be readily monitored by SAR organisations. Details for the registration of 406 MHz *EPIRB*s are contained in AS/NZS 4280.1 or may be obtained from AMSA.

The type and quantity of survival craft *EPIRB*s and radiotelephones shall comply with the provisions of NSCV Part C Subsection 7A.

All other vessels shall comply with—  
a) the provisions of Table 2 **that apply to the vessel**; or  
b) *Marine Order 27 (Safety of navigation and radio equipment) 2016*.

Portable hand held units should not be used as primary distress and safety equipment. Primary distress and safety equipment should be console mounted.

NOTES:

1. The risks of relying on portable hand held units as primary distress and safety equipment are that they could be lost, left behind on a voyage, dropped overboard or that the batteries may be holding insufficient charge.
2. The additional carriage of a waterproof VHF marine handheld radio as a contingency backup to the minimum required by this standard offers the ability to make a call for assistance even in the event that the primary radio communications equipment and/or batteries are rendered ineffective due to having been swamped or submerged.

In addition to the provisions of Table 2, the following shall apply:

- a) **all** vessels operating in **waters** more than 2 nautical miles seaward from the coast shall be fitted with an *EPIRB* **that is registered with AMSA**.
- b) Class 1A, **1B Extended**, 2A, **2B Extended**, 3A and **3B Extended** vessels shall be fitted with an *EPIRB* in accordance with *Marine Order 27 (Safety of navigation and radio equipment) 2016*.
- c) **all** vessels operating in Operational Areas B or C or operating in **open waters** more than 2 nautical miles seaward from the coast shall be fitted, ~~as appropriate for the type of vessel~~, with a—
  - i) **until 1 January 2019** - **class 2 *EPIRB*** or **class 3 *EPIRB***; or
  - ii) **for vessels that are  $\geq 12$  m long – class 2 *EPIRB* fitted in a category 1 bracket; or**  
**for vessels that are  $< 12$  m long that do not meet the level flotation criteria mentioned in NSCV Section 6 – class 2 *EPIRB* fitted in a category 1 bracket; or**
  - iii) **for vessels that are  $< 12$  m long that meet the level flotation criteria mentioned in NSCV Section 6 – either a class 2 *EPIRB* or a class 3 *EPIRB*.**

~~NOTES:~~

- ~~1. *EPIRB* signals on the 121.5/243 MHz frequencies will not be received by satellite systems after February 2009.~~



	<p><del>Marine Authorities will begin to phase in, from July 2008, a requirement for vessels to be fitted with 406 MHz EPIRBs only.</del></p> <p><del>2</del> <i>Note for paragraph a)</i> 406 MHz EPIRBs must be registered in order to ensure vessel and contact details can be readily monitored by SAR organisations. Details for the registration of 406 MHz EPIRBs are contained in AS/NZS 4280.1 or may be obtained from AMSA.</p> <p><i>Note for paragraph c)</i> The use of class 3 EPIRBs on some domestic commercial vessels are being phased out. From 1 January 2019 only a class 2 EPIRB fitted in a category 1 bracket (that allows the EPIRB to float free) will satisfy the required outcomes of this sub-section for vessels <math>\geq 12</math> m long and vessels <math>&lt; 12</math> m long that do not have level flotation.</p> <p>The type and quantity of survival craft EPIRBs and radiotelephones shall comply with the provisions of NSCV Part C Subsection 7A.</p>
--	---

## 2. Marine Order 503

This proposed change is being made so that 'existing vessels' that are in survey will be required to carry a float-free EPIRB.

The proposed change to Marine Order 503 is to amend **section 8(a)** so that it requires compliance with clauses 2.8 and 4.3 of NSCV Part C7B from 1 January 2019.

### ***Proposes changes for class 1, 2 and 3 vessels exempt from having a certificate of survey***

## 3. Exemption 40

This proposed change is being made to Exemption 40 so that vessels that are exempt from survey under Exemption 40 will also be required to carry a float-free EPIRB.

The proposed change to Exemption 40 is to amend **item 3.1 of schedule 1** so that it requires, as a condition of exemption, that from 1 January 2019 a vessel that does not have level flotation must carry a float-free EPIRB (i.e. a class 2 EPIRB fitted in a category 1 bracket).

Exemption 40 only applies to vessels that are  $< 12$  metres long so the requirement to carry a float free EPIRB will only apply where the vessel do not have level flotation. Vessels that do have level flotation may continue to carry the existing EPIRB which may be a kind that does not float free (for example, a class 3 EPIRB or a class 2 EPIRB fitted in a category 2 bracket).

## 4. Exemption 02 – Divisions 2, 3 and 4 (NSCV Part G)

This proposed change is being made to NSCV Part G so that vessels that are exemption from survey under divisions 2, 3, and 4 of Exemption 02 will also be required to carry a float free EPIRB.

The proposed change to NSCV Part G is to amend **clause 1.4** and **item 8 of Schedule 1** as outlined below and in the amending instrument at **Attachment 1**. *Note: the requirement to **carry** an EPIRB is set out in chapter 3 of NSCV Part G. Schedule 1 of NSCV Part G sets out the **kind** of EPIRB to be carried. No changes are proposed for chapter 3.*

<p><b><u>Current Text</u></b></p> <p>The terms ‘class 2’ and ‘class 3’ in the context of the different kinds of EPIRBs are not currently defined in NSCV Part G.</p>			<p><b><u>Proposed Text</u></b></p> <p><b><u>1.4 Definitions</u></b></p> <p><b>category 1 bracket —</b> a bracket for a <i>Class 2 EPIRB</i> that is designed to automatically deploy the <i>EPIRB</i> when submerged at depth.</p> <p><b>class 2 EPIRB —</b> an <i>EPIRB</i> that has a manual and water activation switch.</p> <p><b>class 3 EPIRB —</b> an <i>EPIRB</i> that has a manual activation switch only.</p>														
<p><b><u>Current text</u></b></p> <table border="1"> <thead> <tr> <th>Item</th> <th>Kind of safety equipment</th> <th>Standards</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>EPIRB</td> <td>(1) Must transmit on 406 Mhz frequency and meet AS/NZS 4280.1 (2) Must be registered with AMSA (3) Must be stowed so that it may not be activated inadvertently</td> </tr> </tbody> </table>			Item	Kind of safety equipment	Standards	8	EPIRB	(1) Must transmit on 406 Mhz frequency and meet AS/NZS 4280.1 (2) Must be registered with AMSA (3) Must be stowed so that it may not be activated inadvertently	<p><b><u>Proposed Text</u></b></p> <table border="1"> <thead> <tr> <th>Item</th> <th>Kind of safety equipment</th> <th>Standards</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>EPIRB</td> <td>(1) Must transmit on 406 Mhz frequency and meet AS/NZS 4280.1 (2) Must be registered with AMSA (3) Must be stowed so that it may not be activated inadvertently (4) From 1 January 2019, the <i>EPIRB</i> must be a class 2 <i>EPIRB</i> fitted in a category 1 bracket on class 2 or 3 vessels that are: (a) &lt;12 metres long that do not meet level flotation criteria mentioned in Table 2; or (b) ≥12 metres long.</td> </tr> </tbody> </table>			Item	Kind of safety equipment	Standards	8	EPIRB	(1) Must transmit on 406 Mhz frequency and meet AS/NZS 4280.1 (2) Must be registered with AMSA (3) Must be stowed so that it may not be activated inadvertently (4) From 1 January 2019, the <i>EPIRB</i> must be a class 2 <i>EPIRB</i> fitted in a category 1 bracket on class 2 or 3 vessels that are: (a) <12 metres long that do not meet level flotation criteria mentioned in Table 2; or (b) ≥12 metres long.
Item	Kind of safety equipment	Standards															
8	EPIRB	(1) Must transmit on 406 Mhz frequency and meet AS/NZS 4280.1 (2) Must be registered with AMSA (3) Must be stowed so that it may not be activated inadvertently															
Item	Kind of safety equipment	Standards															
8	EPIRB	(1) Must transmit on 406 Mhz frequency and meet AS/NZS 4280.1 (2) Must be registered with AMSA (3) Must be stowed so that it may not be activated inadvertently (4) From 1 January 2019, the <i>EPIRB</i> must be a class 2 <i>EPIRB</i> fitted in a category 1 bracket on class 2 or 3 vessels that are: (a) <12 metres long that do not meet level flotation criteria mentioned in Table 2; or (b) ≥12 metres long.															

## 5. Exemption 02 – Division 5

This proposed change is being made to Exemption 02 so that vessels that are exempt from survey under Exemption 02 will also be required to carry a float-free EPIRB.

The proposed change to Exemption 02 is to amend **division 5 of schedule 1** so that it requires, as a condition of exemption, compliance with clauses 2.8 and 4.3 of NSCV Part C7B from 1 January 2019. This is similar to the proposed changes to MO503 for existing vessels that *are* required to have a certificate of survey.

## Part 4 – Estimated impacts

The impacts of the proposal will depend on the kind of EPIRB currently being carried on a DCV. A summary of the expected impacts is expected to be as follows:

- Owners of DCVs carrying a class 3 EPIRB - It is expected that these stakeholders will be impacted the most by the proposed changes.
  - These stakeholders will need to replace their existing EPIRB unit with a class 2 EPIRB fitted in a category 1 bracket within the proposed one year transitional period. This may also require relocation of the EPIRB to a different location on the DCV to enable it to be clear of obstructions to floating free. There will be an upfront cost for the new unit however if the unit is aged and nearing expiry of the battery life, the impact for these stakeholders will be lessened.
  - After installation of the new unit, the hydrostatic release unit will need to be replaced every two years (except on unit replacement at end of battery life). The battery life of a class 2 unit is generally six years whereas the battery life of a class 3 unit is generally between eight and ten years meaning these stakeholders may need to replace their units at shorter intervals.
  - The ongoing replacement of the hydrostatic release unit can usually be performed by owners following the manufacturer's instructions, and in minimal time.
- Owners of DCVs carrying a class 2 EPIRB fitted in a category 2 bracket - It is expected that these stakeholders will be moderately impacted by the proposal.
  - Depending on the kind of EPIRB currently carried on the vessel, replacement of the existing EPIRB unit may not necessarily be required as it may be possible to purchase a 'conversion' kit, including bracket, which will convert the existing unit. This means that the EPIRB will be able to float free without having to purchase a brand new EPIRB unit and bracket package.
  - Depending on the age of the existing class 2 unit, this may be a more viable option than replacing the unit – that is, if the unit is relatively new, the cost to 'convert' the unit will be significantly less than purchasing a new unit. However AMSA understands that the option to 'convert' an existing class 2 unit that is currently on a category 2 bracket may not be possible for all brands of EPIRBs. Stakeholders are therefore encouraged to contact the manufacturers and/or local suppliers of their existing EPIRB to determine whether this is an option.
  - As noted above, the hydrostatic release unit will need to be replaced every two years (except on unit replacement at end of battery life). There will however be no change with respect to the intervals for unit replacement as the battery life of the unit remains the same for these stakeholders.
- Owners of DCVs carrying a class 2 EPIRB fitted in a category 1 bracket or a class 1 EPIRB unit – it is expected that there will be no impacts for these DCV owners as their existing EPIRB would comply with the proposed requirements.

While AMSA notes that there will be impacts (including cost impacts) for some DCV owners, AMSA considers that the impacts associated with this proposal is justified given the safety benefits outlined under Part 1 above.

AMSA also notes that there may be some impacts for businesses that supply and/or manufacture only class 3 EPIRBs because the demand for these kinds of units for use on commercial vessels may reduce. However class 3 units will still be carried on vessels less than 12 metres long with level flotation, in addition to recreational vessels and land-based use. The overall impacts for these suppliers and/manufacturers are therefore expected to be minor.



### ***Estimated Annual Regulatory Costs and Savings to Businesses***

AMSA is required to give consideration to the compliance costs (including time) imposed on business as a result of proposed regulatory changes. Stakeholder comments are invited on the regulatory costing and the underlying data and assumptions used in the calculations at **Attachment 2**.

- **Table 1** - provides a summary table showing the outcomes of this costing.
- **Table 2** - details the estimated additional costs incurred by business when complying with the proposed changed regulations.

This regulatory costing is consistent with the requirements of the Australian Government Regulatory Burden Measurement framework. It shows each compliance cost item covered by the framework and explains the cost calculations and assumptions used.

Further details about the Regulatory Burden Measurement framework and costing methodology are provided at: <http://www.dpmc.gov.au/office-best-practice-regulation/publication/regulatory-burden-measurement-framework-guidance-note>



**Australian Government**

**Australian Maritime Safety Authority**

## **National Standard for Commercial Vessels**

### **Part C Design and construction**

#### **Section 7 Equipment**

#### **Subsection 7B Communications Equipment**

### **Part G Non-survey vessels**

## **Amendment No. 4, 2017**

Approved by the National Marine Safety Regulator on *[insert date]* to commence on *[insert date]*.

© Australian Maritime Safety Authority

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, no part may be reproduced by any process without written permission of the Chief Executive Officer, Australian Maritime Safety Authority.

Published by Australian Maritime Safety Authority, GPO Box 2181 Canberra, ACT 2601. All inquiries to be addressed to the General Manager, Standards, Australian Maritime Safety Authority.

**CONSULTATION DRAFT**

---

**1 Name of instrument**

This instrument is *National Standard for Commercial Vessels, Parts C and G Amendment No.4, 2017*.

**2 Commencement**

This instrument commences on [insert date].

**3 Amendment**

- (1) Subsection C7B of the National Standard for Commercial Vessels (NSCV) is amended in accordance with Schedule 1.
- (2) Part G of the NSCV is amended in accordance with Schedule 2.

**Schedule 1 – NSCV Subsection C7B**

**[1] Clause 1.5, before definition of DSC Watchkeeping receiver**

*insert*

**category 1 bracket —**

a bracket for a *class 2 EPIRB* that is designed to automatically deploy the *EPIRB* when submerged at depth.

**class 2 EPIRB —**

an *EPIRB* that has a manual and water activation switch.

**class 3 EPIRB —**

an *EPIRB* that has a manual activation switch only.

**[2] Clause 2.8**

*substitute*

**MEANS TO COMMUNICATE DISTRESS, REQUESTS FOR ASSISTANCE AND LOCATION FROM VESSEL TO SHORE**

A minimum of *two methods* must be provided for vessel to shore communication of a distress message or a request for assistance and to provide the vessel's location in order to initiate and facilitate rapid assistance or rescue.

*For vessels operating in waters more than 2 nautical miles seaward from the coast, one method must be an EPIRB that complies with the requirements in clause 4.3.*

NOTE: Examples of assistance include breakdown requiring a tow where the vessel is not in imminent danger of foundering or an injury on board requiring external medical advice.

---

**[3] Clause 4.3**

*substitute*

**RADIOTELEPHONE AND SATELLITE COMMUNICATIONS EQUIPMENT**

Class 1A, **1B Extended**, 2A, **2B Extended**, 3A and **3B Extended** vessels shall comply with the provisions of *Marine Order 27 (Safety of navigation and radio equipment) 2016*.

All other vessels shall comply with:—

- a) the provisions of Table 2 that apply to the vessel; or
- b) *Marine Order 27 (Safety of navigation and radio equipment) 2016*.

Portable hand held units should not be used as primary distress and safety equipment. Primary distress and safety equipment should be console mounted.

NOTES:

- 1. The risks of relying on portable hand held units as primary distress and safety equipment are that they could be lost, left behind on a voyage, dropped overboard or that the batteries may be holding insufficient charge.
- 2. The additional carriage of a waterproof VHF marine handheld radio as a contingency backup to the minimum required by this standard offers the ability to make a call for assistance even in the event that the primary radio communications equipment and/or batteries are rendered ineffective due to having been swamped or submerged.

In addition to the provisions of Table 2, the following shall apply:

- a) all vessels operating in water more than 2 nautical miles seaward from the coast shall be fitted with an **EPIRB that is registered with AMSA**.
- b) Class 1A, **1B Extended**, 2A, **2B Extended**, 3A and **3B Extended** vessels shall be fitted with an **EPIRB** in accordance with *Marine Order 27 (Safety of navigation and radio equipment) 2016*;
- c) all vessels operating in Operational Areas B or C or operating in waters more than 2 nautical miles seaward from the coast shall be fitted, ~~as appropriate for the type of vessel,~~ with a:—
  - i) **until 1 January 2019 – class 2 EPIRB or a class 3 EPIRB; or**
  - ii) **for vessels that are  $\geq 12$  m long – class 2 EPIRB fitted in a category 1 bracket; or**
  - iii) **for vessels that are  $< 12$  m long that do not meet the level flotation criteria mentioned in NSCV Section 6 – class 2 EPIRB, fitted in a category 1 bracket; or**
  - iii) **for vessels that are  $< 12$  m long that meet the level flotation criteria mentioned in NSCV Section 6 – either a class 2 EPIRB or a class 3 EPIRB.**

NOTES:

---

~~1. EPIRB signals on the 121.5/243 MHz frequencies will not be received by satellite systems after February 2009. Marine Authorities will begin to phase in, from July 2008, a requirement for vessels to be fitted with 406 MHz EPIRBs only.~~

~~2. Note for paragraph a) 406 MHz EPIRBs must be registered in order to ensure vessel and contact details can be readily monitored by SAR organisations. Details for the registration of 406 MHz EPIRBs are contained in AS/NZS 4280.1 or may be obtained from AMSA.~~

~~Note for paragraph c) The use of class 3 EPIRBs on some domestic commercial vessels are being phased out. From 1 January 2019 only a class 2 EPIRB fitted in a category 1 bracket (that allows the EPIRB to float free) will satisfy the required outcomes of this sub-section for vessels  $\geq 12$  m long and vessels  $< 12$  m long that do not have level flotation. The construction and performance standards for a class 2 EPIRB fitted to in a category 1 bracket are contained in AS/NZS 4280.1.~~

The type and quantity of survival craft EPIRBs and radiotelephones shall comply with the provisions of NSCV Part C Subsection 7A.

Consultation Draft

---

## Schedule 2 – NSCV Part G

### [1] [1] Clause 1.4, after definition of *AMSA*

*insert*

**category 1 bracket** —

a bracket for a *class 2 EPIRB* that is designed to automatically deploy the *EPIRB* when submerged at depth.

**class 2 EPIRB** —

an *EPIRB* that has a manual and water activation switch.

**class 3 EPIRB** —

an *EPIRB* that has a manual activation switch only.

### [2] Schedule 1, item 8 of the table

*substitute*

Item	Kind of safety equipment	Standards
8	EPIRB	(1) Must transmit on 406 Mhz frequency and meet AS/NZS 4280.1. (2) Must be registered with AMSA. (3) Must be stowed so that it may not be activated inadvertently. (4) From 1 January 2019, the <i>EPIRB</i> must be a <i>class 2 EPIRB</i> fitted in a <i>category 1 bracket</i> on Class 2 or 3 vessels that are: (a) <12 m long that do not meet level flotation criteria mentioned in Table 2; or (b) ≥12 m long.



## **Attachment 2**

### **Impacts from proposed changes to the *National Standard for Commercial Vessels, Part C7B - Communication Equipment* Estimated Annual Regulatory Costs & Savings to Business**

AMSA is required to give consideration to the compliance costs (including time) imposed on business as a result of proposed regulatory changes.

This regulatory costing is consistent with the requirements of the Australian Government Regulatory Burden Measurement framework. It shows each compliance cost item covered by the framework and explains the cost calculations and assumptions used.

Stakeholder comments are invited on the below regulatory costing and the underlying data and assumptions used in the calculations.

**Table A** - provides a summary table showing the outcomes of this costing.

**Table B** - details the estimated additional (incremental) costs incurred by business when complying with the proposed changed regulations.

The Regulatory Burden Measurement framework considers the regulatory costs and savings imposed by regulations on businesses, community organisations and individuals. Costs are measured over a 10-year time frame against business as usual costs. Costs include administrative and delay costs. Some costs are excluded, such as fees paid to government and the costs of international treaty obligations. Further details about the framework and costing methodology are provided at:

<http://www.dpmc.gov.au/office-best-practice-regulation/publication/regulatory-burden-measurement-framework-guidance-note>

#### **Table A: Summary of Annual Net Regulatory Costs from this proposal**

Stakeholder Group	Total Annual Net Costs (\$000)
<b>Businesses</b>	\$ 996.26
<b>Community Organisations</b>	\$ -
<b>Individuals</b>	\$ -
<b>TOTAL</b>	<b>\$ 996.26</b>

**Table B: Estimated Annual Regulatory Costs & Savings to Businesses**

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
1	<p><b>New Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that would otherwise carry a Class 2 EPIRB with a Category 2 bracket that is not serviceable locally</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 2 EPIRB with a Category 2 (non float-free) bracket will need to purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket.</p>	Purchasing	9	\$ 435.00	\$ 4,125	Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 20% of the remaining affected new vessels would choose a Class 2 EPIRB with a Category 2 bracket and 30% of these would not be serviceable locally (based on AMSA data). The compliance cost to operators measures the cost difference between the average retail price of a compliant EPIRB and bracket set (\$649) and a Class 2 EPIRB with a Category 2 bracket (\$504) (based on online retail pricing). Time costs to operators making the purchase are excluded as these would already be incurred under current arrangements. Compliance costs are assumed to apply 1.67 times over a 10-year period to reflect the 6-year battery life of a Class 2 EPIRB.
2	<p><b>New Vessels - compliance costs for bracket installation to those operators that would otherwise carry a Class 2 EPIRB with a Category 2 bracket that is not serviceable locally</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 2 EPIRB with a Category 2 (non float-free) bracket will need to install the new compliant Category 1 (float-free) bracket to the vessel.</p>	Purchasing	9	\$ -	\$ -	There are no additional costs from this item because domestic commercial vessel operators currently install a bracket for a Class 2 EPIRB and the costs of this will remain the same under the proposed changes.

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
3	<p><b>New Vessels - compliance costs for the replacement of the hydrostatic release unit of an EPIRB to those operators that would otherwise carry a Class 2 EPIRB with a Category 2 bracket that is not serviceable locally</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 2 EPIRB with a Category 2 (non float-free) bracket will need to regularly replace the hydrostatic release unit in the new compliant EPIRB.</p>	Purchasing	9	\$ 917.88	\$ 8,704	<p>Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 20% of the remaining affected new vessels would choose a Class 2 EPIRB with a Category 2 bracket and 30% of these would not be serviceable locally (based on AMSA data). The compliance cost to operators measures the combined replacement unit cost (\$139 for the unit and \$11 for postage) and time cost of replacing the hydrostatic release unit in the new compliant EPIRB (based on service provider advice), assuming 15 minutes for online purchasing and DIY replacement. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will purchase and replace the unit. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to purchase and replace the unit), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 3 times over a 10-year period to reflect the 2-year life of a hydrostatic release unit and 6-year battery life of a Class 2 EPIRB, noting that non-compliant EPIRBs have no hydrostatic release unit.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
4	<b>New Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that would otherwise carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally</b>	Purchasing	22	-\$ 349.58	-\$ 7,735	Net savings are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 20% of the remaining affected new vessels would choose a Class 2 EPIRB with a Category 2 bracket and 70% of these would be serviceable locally (based on AMSA data). The compliance cost to operators measures the difference between the cost to add a new compliant bracket and recalibrate the hydrostatic release unit (\$275 for servicing and parts plus \$22 in postage, based on supplier advice) and the average retail price of a Class 2 EPIRB with a Category 2 bracket (\$504) (based on online retail pricing). Time costs to operators arranging the service assumes 20 minutes for online purchase and postage. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will arrange the service. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to arrange the service), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply once over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB and that a new EPIRB and bracket set will be purchased once the original EPIRB expires. It is assumed operators will arrange EPIRB servicing during normal periods of down time to avoid operational impacts.
	Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 2 EPIRB with a Category 2 (non float-free) bracket that is serviceable locally will be expected to utilise local servicing (where provided by the manufacturer) to initially purchase a new compliant Category 1 (float-free) bracket and have the EPIRB hydrostatic release unit recalibrated to comply with the new requirements as this will be cheaper than purchasing a new EPIRB and bracket set.					

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
5	<p><b>New Vessels - compliance costs for the purchase of a new EPIRB and bracket set to those operators that would otherwise carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally</b></p>	Purchasing	22	\$ 174.00	\$ 3,850	Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 20% of the remaining affected new vessels would choose a Class 2 EPIRB with a Category 2 bracket and 70% of these would be serviceable locally (based on AMSA data). The compliance cost to operators measures the cost difference between the average retail price of a compliant EPIRB and bracket set (\$649) and a Class 2 EPIRB with a Category 2 bracket (\$504) (based on online retail pricing). Time costs to operators making the purchase are excluded as these would already be incurred under current arrangements. Compliance costs are assumed to apply 0.67 times over a 10-year period to reflect the 6-year battery life of a Class 2 EPIRB and the expiry of the original unit.
	<p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 2 EPIRB with a Category 2 (non float-free) bracket that is serviceable locally will be expected to (after initially purchasing a new compliant Category 1 (float-free) bracket and recalibrating their existing EPIRB hydrostatic release unit to comply with the new requirements) purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket once the original EPIRB expires.</p>					
6	<p><b>New Vessels - compliance costs for bracket installation to those operators that would otherwise carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally</b></p>	Purchasing	22	\$ -	\$ -	There are no additional costs from this item because domestic commercial vessel operators currently install a bracket for a Class 2 EPIRB and the costs of this will remain the same under the proposed changes.
	<p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 2 EPIRB with a Category 2 (non float-free) bracket will need to install the new compliant Category 1 (float-free) bracket to the vessel.</p>					

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
7	<p><b>New Vessels - compliance costs for the replacement of the hydrostatic release unit of an EPIRB to those operators that would otherwise carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 2 EPIRB with a Category 2 (non float-free) bracket will need to regularly replace the hydrostatic release unit in the new compliant EPIRB.</p>	Purchasing	22	\$ 917.88	\$ 20,310	<p>Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 20% of the remaining affected new vessels would choose a Class 2 EPIRB with a Category 2 bracket and 70% of these would be serviceable locally (based on AMSA data). The compliance cost to operators measures the combined replacement unit cost (\$139 for the unit and \$11 for postage) and time cost of replacing the hydrostatic release unit in the new compliant EPIRB (based on service provider advice), assuming 15 minutes for online purchasing and DIY replacement. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will purchase and replace the unit. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to purchase and replace the unit), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 3 times over a 10-year period to reflect the 2-year life of a hydrostatic release unit and 6-year battery life of a Class 2 EPIRB, noting that non-compliant EPIRBs have no hydrostatic release unit.</p>



No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
8	<p><b>New Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that would otherwise carry a Class 3 EPIRB (unit cost only)</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 3 EPIRB will need to purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket. This costing item measures the purchase price of the new EPIRB and bracket set. Time costs to operators making the purchase are measured in costing item 9 below.</p>	Purchasing	126	\$ 960.00	\$ 121,381	<p>Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 80% of the remaining affected new vessels would choose a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the cost difference between the average retail price of a compliant EPIRB and bracket set (\$649) and a Class 3 EPIRB (\$329) (based on online retail pricing). Compliance costs are assumed to apply 1.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
9	<p><b>New Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that would otherwise carry a Class 3 EPIRB (time cost only)</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 3 EPIRB will need to purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket. This costing item measures the time spent by operators when purchasing the new EPIRB and bracket set. Purchase price costs to operators are measured in costing item 8 above.</p>	Purchasing	126	\$ 16.30	\$ 2,061	<p>Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 80% of the remaining affected new vessels would choose a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the time cost of purchasing a compliant EPIRB and bracket, assuming 10 minutes for online purchasing. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will make the purchase. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to make the purchase), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 0.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB compared to a 10-year battery life for a Class 3 EPIRB, noting that time costs would already be incurred under current arrangements for one EPIRB purchase over a 10-year period.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
10	<p><b>New Vessels - compliance costs for bracket installation to those operators that would otherwise carry a Class 3 EPIRB</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 3 EPIRB will need to install the new compliant Category 1 (float-free) bracket to the vessel.</p>	Purchasing	126	\$ 23.97	\$ 3,031	<p>Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 80% of the remaining affected new vessels would choose a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the time cost of installing a Category 1 bracket, assuming 15 minutes for DIY installation. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will install the bracket. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to install the bracket), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 0.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB, assuming that a new bracket will be fitted when each new unit is purchased and noting that a bracket for a Class 3 EPIRB will already be installed once in a 10-year period.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
11	<p><b>New Vessels - compliance costs for the replacement of the hydrostatic release unit of an EPIRB to those operators that would otherwise carry a Class 3 EPIRB</b></p> <p>Affected new domestic commercial vessels that would, in the absence of the proposed changes, have otherwise purchased a Class 3 EPIRB will need to regularly replace the hydrostatic release unit in the new compliant EPIRB.</p>	Purchasing	126	\$ 917.88	\$ 116,056	<p>Additional costs are based on an estimated average of 299 affected new domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that, in the absence of the proposed changes, 5% of affected new vessels would choose a compliant EPIRB and bracket, while an estimated 80% of the remaining affected new vessels would choose a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the combined replacement unit cost (\$139 for the unit and \$11 for postage, based on supplier advice) and time cost of replacing the hydrostatic release unit in the new compliant EPIRB, assuming 15 minutes for online purchasing and DIY replacement. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will purchase and replace the unit. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to purchase and replace the unit), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 3 times over a 10-year period to reflect the 2-year life of a hydrostatic release unit and 6-year battery life of a Class 2 EPIRB, noting that non-compliant EPIRBs have no hydrostatic release unit.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
12	<p><b>Existing Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally and 4 or more years old</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is serviceable locally but 4 or more years old will be expected to purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket as this will be cheaper than purchasing a new compliant bracket and recalibrating the hydrostatic release unit in their existing EPIRB.</p>	Purchasing	45	\$ 435.00	\$ 19,741	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 20% of affected existing vessels currently carry a Class 2 EPIRB with a Category 2 bracket, with an estimated 70% of these EPIRBs being serviceable locally and 80% being 4 or more years old (based on AMSA data). The compliance cost to operators measures the cost difference between the average retail price of a compliant EPIRB and bracket set (\$649) and a Class 2 EPIRB with a Category 2 bracket (\$504) (based on online retail pricing). Time costs to operators making the purchase are excluded as these would already be incurred under current arrangements. Compliance costs are assumed to apply 1.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB.</p>
13	<p><b>Existing Vessels - compliance costs for bracket installation to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally and 4 or more years old</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket will need to install the new compliant Category 1 (float-free) bracket to the vessel.</p>	Purchasing	45	\$ -	\$ -	<p>There are no additional costs from this item because domestic commercial vessel operators currently install a bracket for a Class 2 EPIRB and the costs of this will remain the same under the proposed changes.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
14	<p><b>Existing Vessels - compliance costs for the replacement of the hydrostatic release unit of an EPIRB to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally and 4 or more years old</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket will need to regularly replace the hydrostatic release unit in the new compliant EPIRB.</p>	Purchasing	45	\$ 917.88	\$ 41,654	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 20% of affected existing vessels currently carry a Class 2 EPIRB with a Category 2 bracket, with an estimated 70% being serviceable locally and 80% of these being 4 or more years old (based on AMSA data). The compliance cost to operators measures the combined replacement unit cost (\$139 for the unit and \$11 for postage, based on supplier advice) and time cost of replacing the hydrostatic release unit in the new compliant EPIRB, assuming 15 minutes for online purchasing and DIY replacement. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will purchase and replace the unit. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to purchase and replace the unit), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 3 times over a 10-year period to reflect the 2-year life of a hydrostatic release unit and 6-year battery life of a Class 2 EPIRB, noting that non-compliant EPIRBs have no hydrostatic release unit.</p>



No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
15	<b>Existing Vessels - compliance costs for the purchase of a new bracket and recalibration of the hydrostatic release unit of the EPIRB to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally and less than 4 years old</b>	Purchasing	11	-\$ 349.58	-\$ 3,966	Net savings are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 20% of affected existing vessels currently carry a Class 2 EPIRB with a Category 2 bracket, with an estimated 70% of these EPIRBs being serviceable locally and 20% being less than 4 years old (based on AMSA data). The compliance cost to operators measures the difference between the cost to add to a new compliant bracket and recalibrate the hydrostatic release unit (\$275 for servicing and parts plus \$22 in postage, based on service provider advice) and the average retail price of a Class 2 EPIRB with a Category 2 bracket (\$504) (based on online retail pricing). Time costs to operators arranging the service assumes 20 minutes for online purchase and postage. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will arrange the service. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to arrange the service), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply once over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB and that a new EPIRB and bracket set will be purchased once the original EPIRB expires. It is assumed operators will arrange EPIRB servicing during normal periods of down time to avoid operational impacts.
	Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is serviceable locally but less than 4 years old will be expected to utilise local servicing (where provided by the manufacturer) to initially purchase a new compliant Category 1 (float-free) bracket and have the EPIRB hydrostatic release unit recalibrated to comply with the new requirements as this will be cheaper than purchasing a new EPIRB and bracket set.					

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
16	<p><b>Existing Vessels - compliance costs for the purchase of a new bracket and recalibration of the hydrostatic release unit of the EPIRB to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally and less than 4 years old</b></p>	Purchasing	11	\$ 174.00	\$ 1,974	Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 20% of affected existing vessels currently carry a Class 2 EPIRB with a Category 2 bracket, with an estimated 70% of these EPIRBs being serviceable locally and 20% being less than 4 years old (based on AMSA data). The compliance cost to operators measures the cost difference between the average retail price of a compliant EPIRB and bracket set (\$649) and a Class 2 EPIRB with a Category 2 bracket (\$504) (based on online retail pricing). Time costs to operators making the purchase are excluded as these would already be incurred under current arrangements. Compliance costs are assumed to apply 0.67 times over a 10-year period to reflect the 6-year battery life of a Class 2 EPIRB and the expiry of the original unit.
	<p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is serviceable locally but less than 4 years old will be expected to (after initially purchasing a new compliant Category 1 (float-free) bracket and have their existing EPIRB hydrostatic release unit recalibrated to comply with the new requirements) purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket once the original EPIRB expires.</p>					
17	<p><b>Existing Vessels - compliance costs for bracket installation to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally and less than 4 years old</b></p>	Purchasing	11	\$ -	\$ -	There are no additional costs from this item because domestic commercial vessel operators currently install a bracket for a Class 2 EPIRB and the costs of this will remain the same under the proposed changes.
	<p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is serviceable locally but less than 4 years old will need to install the new compliant Category 1 (float-free) bracket to the vessel.</p>					

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
18	<p><b>Existing Vessels - compliance costs for the replacement of the hydrostatic release unit of an EPIRB to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is serviceable locally and less than 4 years old</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is serviceable locally but less than 4 years old will need to regularly replace the hydrostatic release unit in the new compliant EPIRB.</p>	Purchasing	11	\$ 917.88	\$ 10,414	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 20% of affected existing vessels currently carry a Class 2 EPIRB with a Category 2 bracket, with an estimated 70% of these EPIRBs being serviceable locally and 20% being less than 4 years old (based on AMSA data). The compliance cost to operators measures the combined replacement unit cost (\$139 for the unit and \$11 for postage, based on supplier advice) and time cost of replacing the hydrostatic release unit in the new compliant EPIRB, assuming 15 minutes for online purchasing and DIY replacement. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will purchase and replace the unit. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to purchase and replace the unit), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 3 times over a 10-year period to reflect the 2-year life of a hydrostatic release unit and 6-year battery life of a Class 2 EPIRB, noting that non-compliant EPIRBs have no hydrostatic release unit.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
19	<p><b>Existing Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is not serviceable locally</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is not serviceable locally will be expected to purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket.</p>	Purchasing	24	\$ 435.00	\$ 10,575	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 20% of affected existing vessels currently carry a Class 2 EPIRB with a Category 2 bracket, with an estimated 30% of these EPIRBs not being serviceable locally (based on AMSA data). The compliance cost to operators measures the cost difference between the average retail price of a compliant EPIRB and bracket set (\$649) and a Class 2 EPIRB with a Category 2 bracket (\$504) (based on online retail pricing). Time costs to operators making the purchase are excluded as these would already be incurred under current arrangements. Compliance costs are assumed to apply 1.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB.</p>
20	<p><b>Existing Vessels - compliance costs for bracket installation to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is not serviceable locally</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is not serviceable locally will need to install the new compliant Category 1 (float-free) bracket to the vessel.</p>	Purchasing	24	\$ -	\$ -	<p>There are no additional costs from this item because domestic commercial vessel operators currently install a bracket for a Class 2 EPIRB and the costs of this will remain the same under the proposed changes.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
21	<p><b>Existing Vessels - compliance costs for the replacement of the hydrostatic release unit of an EPIRB to those operators that currently carry a Class 2 EPIRB with a Category 2 bracket that is not serviceable locally</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 2 EPIRB with a Category 2 (non float-free) bracket that is not serviceable locally will need to regularly replace the hydrostatic release unit in the new compliant EPIRB.</p>	Purchasing	24	\$ 917.88	\$ 22,315	<p>Additional costs are based on an estimated average of 729 affected existing Domestic Commercial Vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 20% of affected existing vessels currently carry a Class 2 EPIRB with a Category 2 bracket, with an estimated 30% of these EPIRBs not being serviceable locally (based on AMSA data). The compliance cost to operators measures the combined replacement unit cost (\$139 for the unit and \$11 for postage, based on supplier advice) and time cost of replacing the hydrostatic release unit in the new compliant EPIRB, assuming 15 minutes for online purchasing and DIY replacement. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will purchase and replace the unit. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to purchase and replace the unit), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 3 times over a 10-year period to reflect the 2-year life of a hydrostatic release unit and 6-year battery life of a Class 2 EPIRB, noting that non-compliant EPIRBs have no hydrostatic release unit.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
22	<p><b>Existing Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that currently carry a Class 3 EPIRB (unit cost only)</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 3 EPIRB will need to purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket. This costing item measures the purchase price of the new EPIRB and bracket set. Time costs to operators making the purchase are measured in costing item 23 below.</p>	Purchasing	324	\$ 960.00	\$ 311,181	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 80% of affected existing vessels currently carry a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the cost difference between the average retail price of a compliant EPIRB and bracket set (\$649) and a Class 3 EPIRB (\$329) (based on online retail pricing). Compliance costs are assumed to apply 1.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
23	<p><b>Existing Vessels - compliance costs for the purchase of a new compliant EPIRB and bracket set to those operators that currently carry a Class 3 EPIRB (time cost only)</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 3 EPIRB will need to purchase a new compliant Class 2 EPIRB with a Category 1 (float-free) bracket. This costing item measures the time spent by operators when purchasing the new EPIRB and bracket set. Purchase price costs to operators are measured in costing item 22 above.</p>	Purchasing	324	\$ 16.30	\$ 5,284	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 80% of affected existing vessels currently carry a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the time cost of purchasing a compliant EPIRB and bracket, assuming 10 minutes for online purchasing. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will make the purchase. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to make the purchase), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 0.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB compared to a 10-year battery life for a Class 3 EPIRB, noting that time costs would already be incurred under current arrangements for one EPIRB purchase over a 10-year period.</p>

No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
24	<p><b>Existing Vessels - compliance costs for bracket installation to those operators that currently carry a Class 3 EPIRB</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 3 EPIRB will need to install the new compliant Category 1 (float-free) bracket to the vessel.</p>	Purchasing	324	\$ 23.97	\$ 7,771	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 80% of affected existing vessels currently carry a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the time cost of installing a Category 1 bracket, assuming 15 minutes for DIY installation. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will install the bracket. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to install the bracket), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 0.67 times over a 10-year period to reflect the 6-year battery life of a compliant Class 2 EPIRB compared to a 10-year battery life for a Class 3 EPIRB, assuming that a new bracket will be fitted when each new unit is purchased and noting that a bracket for a Class 3 EPIRB will already be installed once in a 10-year period.</p>



No.	Proposed new or changed requirement	Cost category	Number of affected businesses per year	Average annual cost or saving per business	Total annual net cost	Comments
25	<p><b>Existing Vessels - compliance costs for the replacement of the hydrostatic release unit of an EPIRB to those operators that currently carry a Class 3 EPIRB</b></p> <p>Affected existing domestic commercial vessels that currently carry a Class 3 EPIRB will need to regularly replace the hydrostatic release unit in the new compliant EPIRB.</p>	Purchasing	324	\$ 917.88	\$ 297,529	<p>Additional costs are based on an estimated average of 729 affected existing domestic commercial vessels per year over a 10-year period, with an estimated average of 1.8 vessels per business (based on AMSA data). It is assumed that there is 3.5% in fleet growth per year (as per NSAMS 4 RIS). It is estimated that 80% of affected existing vessels currently carry a Class 3 EPIRB (based on AMSA data). The compliance cost to operators measures the combined replacement unit cost (\$139 for the unit and \$11 for postage, based on supplier advice) and time cost of replacing the hydrostatic release unit in the new compliant EPIRB, assuming 15 minutes for online purchasing and DIY replacement. It is estimated that 95% of affected operators are small owner-operators where the vessel Master will purchase and replace the unit. An estimated \$80.50 per hour wage rate is used for Masters (based on publicly available national wage rates for masters of applicable vessels), including on-costs and overheads at standard OBPR rates. For the estimated 5% of large affected operators (who will have other staff to purchase and replace the unit), the standard OBPR employed wage rate of \$68.79 per hour is used, including on-costs and overheads. Compliance costs are assumed to apply 3 times over a 10-year period to reflect the 2-year life of a hydrostatic release unit and 6-year battery life of a Class 2 EPIRB, noting that non-compliant EPIRBs have no hydrostatic release unit.</p>

**Total Annual Net Cost \$ 996,256**