



**Australian Government**

**Civil Aviation Safety Authority**

# **NOTICE OF PROPOSED RULE MAKING**

## **Carriage of Fuel on Flights to a Remote Island**

Proposed Amendment to  
Civil Aviation Order (CAO) 82.0

**This NPRM will be of interest to:**

- passenger-carrying aerial work, charter and RPT operators;
- flight crew of passenger-carrying aerial work, charter and RPT operators; and
- the travelling public.



## Foreword

This Notice of Proposed Rule Making (NPRM) is issued by the Civil Aviation Safety Authority (CASA) with a view to ensuring that Australian aviation safety requirements are current and appropriately address safety risks.

CASA's policies require that the aviation safety regulations must:

- be necessary to address known or likely safety risks;
- provide for the most efficient allocation of industry and CASA resources;
- be clear and concise; and
- where appropriate, be aligned with international standards and drafted in outcome based terms.

This amendment proposes additional requirements for commercial passenger-carrying flights to remote islands, in order to minimise the risk of an aeroplane's fuel being exhausted and therefore necessitating the flight crew to ditch the aircraft or attempt an unsafe landing.

The mechanism for implementing these additional requirements is an amendment to Civil Aviation Order (CAO) 82.0.

### **Proposed Changes in a Page**

The **time-conscious reader** will obtain a quick appreciation of this NPRM through the **Proposed Changes in a Page** (NPRM Section 2).

A **text synopsis** of the proposed changes is provided as background (NPRM Section 3).

### **Implementation Schedule**

Following consideration of responses to this NPRM, CASA will prepare a Summary of Responses, and make revisions to the draft CAO amendment where considered appropriate.

CASA will conduct further analysis of the extent of the impact these changes will have on operators and pilots to ensure an adequate timeframe is given for implementation. It is envisaged that a transition period of 3 to 6 months will be allowed to ensure operators have revised procedures in respect to these changes.

### **How you can help us**

**CASA is responsible under the Civil Aviation Act 1988, amongst other functions, for developing and promulgating appropriate, clear and concise aviation safety standards. In the performance of this function and the exercise of its powers, CASA must, where appropriate, consult with government, commercial, industrial, consumer and other relevant bodies and organisations.**

*Civil Aviation Act 1988 Paragraph 9(1)(c) and Section 16*

To ensure clear and relevant safety standards, we need the benefit of your knowledge as an aviator, aviation consumer and/or provider of related products and services **by completing the Response Form** (in this NPRM or online) **and returning it to CASA by 9 September 2010.**

I would like to thank you for expressing interest in this proposal and emphasise that no rule changes will be undertaken until all NPRM responses and submissions received by the closing date **9 September 2010** have been considered.



Rick Leeds  
Acting Executive Manager  
Standards Development and Future Technology

12 July 2010

## Contents

<b>Acronyms .....</b>	<b>4</b>
<b>1. The Consultation Process .....</b>	<b>5</b>
What CASA does with your comments .....	5
<b>2. Proposed Changes in a Page .....</b>	<b>6</b>
<b>3. Synopsis of Change Proposals .....</b>	<b>7</b>
3.1 Purpose of this NPRM.....	7
3.2 Background .....	7
3.3 Reasons for change .....	9
3.4 Objective .....	10
3.5 Key change proposals (to CAO 82.0).....	10
3.6 Benefits and impacts .....	11
3.7 Implementation and review .....	11
<b>NPRM Response Form .....</b>	<b>13</b>
<b>* <u>YOU CAN RESPOND ONLINE OR BY FAX, POST OR E-MAIL</u> *</b>	
A web-based online response form is offered as an alternative to the printed form in this NPRM. Online submission is the preferred method of sending your comments to CASA. If you are connected to the Internet, type <a href="http://casa.gov.au/newrules/ors">casa.gov.au/newrules/ors</a> into your web browser and follow the links for this NPRM.	
<b>Annex A – Proposed Amendment to Civil Aviation Order – CAO 82.0 – Air Operators’ Certificates – applications for certificates and general requirements .....</b>	<b>A1</b>

## Acronyms

<b>AOC</b>	Air Operator's Certificate
<b>CAR</b>	Civil Aviation Regulations 1988
<b>CASA</b>	Civil Aviation Safety Authority
<b>CASR</b>	Civil Aviation Safety Regulations 1998
<b>CAO</b>	Civil Aviation Order
<b>EDTO</b>	extended diversion time operations
<b>ICAO</b>	International Civil Aviation Organization
<b>NFRM</b>	Notice of Final Rule Making
<b>NPRM</b>	Notice of Proposed Rule Making
<b>RPT</b>	regular public transport
<b>SARP</b>	Standard and Recommended Practices

## 1. The Consultation Process

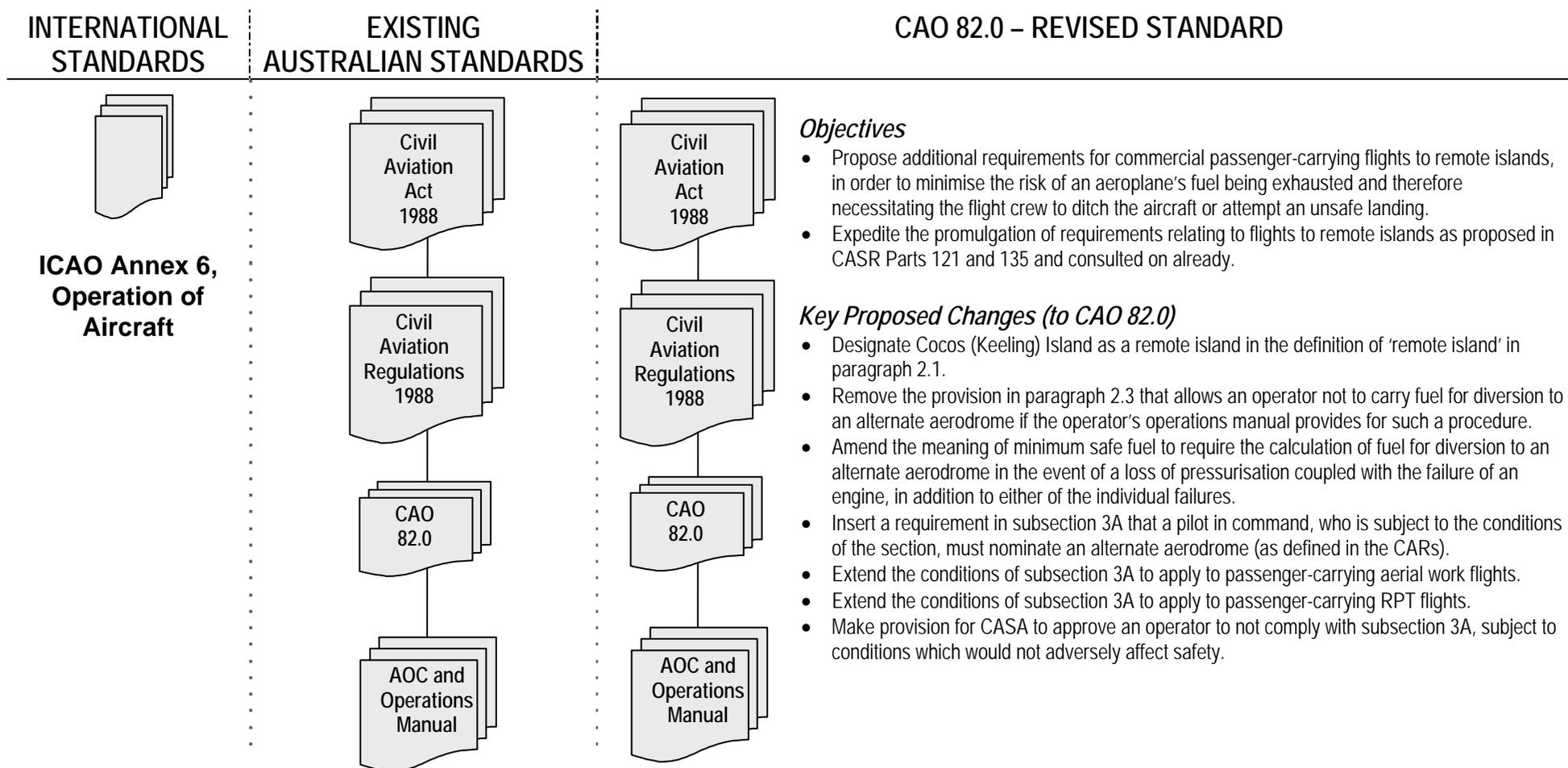
1.1 This NPRM is issued as part of CASA's standards development activities and invites consultation on a proposed amendment to the Civil Aviation Orders relating to the carriage of fuel on flights to a remote island for commercial passenger-carrying operations.

### **What CASA does with your comments**

1.2 At the end of the response period for public comments, all submissions will be analysed, evaluated and considered. Subsequent to the closing date for comments, a Notice of Final Rule Making (NFRM) will be prepared, and made publicly available in conjunction with the making of the Final Rule.

1.3 CASA is required to register each comment and submission received, but will not individually acknowledge a response unless specifically requested. However, the names of contributors will be published in the subsequent NFRM, except where CASA is specifically requested not to do so.

## 2. Proposed Changes in a Page



### 3. Synopsis of Change Proposals

#### 3.1 Purpose of this NPRM

3.1.1 The purpose of this NPRM is to consult on a proposed change to CAO 82.0 relating to the carriage of fuel for flights to remote islands. A ‘remote island’ is currently defined as Lord Howe Island; Norfolk Island; or Christmas Island.

3.1.2 Presently, CAO 82.0, subsection 3A requires all passenger-carrying charter flights in aeroplanes to a remote island to carry enough fuel for flight from the remote island to an alternate aerodrome, unless an operator’s operations manual states otherwise. There are no similar provisions for passenger-carrying aerial work, regular public transport (RPT), private or cargo-only charter flights.

3.1.3 The NPRM proposes an amendment to the Order which will require the carriage of enough fuel for flight from a remote island to an alternate aerodrome for all passenger-carrying aerial work, charter and RPT flights in aeroplanes, unless CASA approves otherwise.

3.1.4 The NPRM also proposes to re-designate Cocos (Keeling) Island as a remote island for the purposes of CAO 82.0.

#### 3.2 Background

3.2.1 Under Aeronautical Information Publication (AIP) En Route (ENR) 1.1, Section 73, the pilot in command of an aircraft must make provision for flight to an alternate aerodrome when weather conditions, radio navigation aid and runway lighting considerations are assessed on specified criteria. These requirements apply to flights to all aerodromes in Australia. However, CASA considers that additional safety threats (and potential consequences) may exist for flights to remote islands which warrant the need to require the provision for diversion to an alternate aerodrome regardless of the standard criteria mentioned above.

3.2.2 Prior to 1991, the then Civil Aviation Authority (CAA) had specific fuel requirements for flights to remote island destinations. Flights to Lord Howe Island required enough fuel to return to the mainland, and for flights to Norfolk Island and Cocos (Keeling) Island an additional minimum of 2 hours holding fuel was required irrespective of the forecasted weather. This requirement was known as an ‘island reserve’. At this time Christmas Island was not designated as a remote island.

3.2.3 In 1991, the Civil Aviation Regulations 1988 (CARs) were enacted and required the operator and pilot in command of an aircraft to ensure sufficient fuel is carried on an aircraft for a particular flight. However, no additional requirement was placed on flights to remote islands.

3.2.4 Since August 1999, CAO 82.0 has included additional requirements for passenger-carrying charter flights in aeroplanes for the carriage of fuel on flights to a remote island (defined as Lord Howe Island, Norfolk Island and Christmas Island). All aircraft subject to subsection 3A of the Order are required to carry fuel for flight from the destination aerodrome (remote island) to an alternate aerodrome. This requirement does not extend to RPT, aerial work, private or cargo-only charter flights. It does not include Cocos (Keeling) Island which was previously designated as a remote island.

3.2.5 In addition to fuel for diversion to an alternate, at present CAO 82.0, subsection 3A, also requires calculation of other scenarios when determining the minimum safe fuel for a flight to a remote island. The Order requires the calculation of the minimum amount of fuel that would, if the failure of an engine or a loss of pressurisation were to occur during the flight, enable the aeroplane:

- to fly to its destination aerodrome or to its alternate aerodrome for the flight; and
- to fly for 15 minutes at holding speed at 1500 ft above that aerodrome under standard temperature conditions; and
- to land at that aerodrome.

3.2.6 Therefore, the minimum safe fuel for a flight to a remote island under subsection 3A of the Order is the greatest of the engine failure/loss of pressurisation scenario mentioned above; and the fuel for diversion from the destination aerodrome to the alternate aerodrome. This determination of minimum safe fuel does not, however, take into consideration a loss of pressurisation coupled with a loss of an engine—a possibility envisaged by CAR 234 (3) (c). CASA considers that the possibility of this double failure occurring, along with the consequences of this occurring on a passenger-carrying flight to a remote island, is significant enough to require the carriage of enough fuel for flight from the most critical point of the flight to a suitable aerodrome. This reflects, in part, the requirements for extended diversion time operations (EDTO) in CAO 82.0.

3.2.7 In 2002, CASA published NPRM 0211OS to consult on proposed Part 121A of the Civil Aviation Safety Regulations 1998 (CASRs). CASR Part 121A was to have applied to air transport operations in large aeroplanes (>5700 kg maximum take-off weight (MTOW)), which is legislatively an amalgamation of the regulation of the operation of aeroplanes engaged in RPT (scheduled) and charter (unscheduled) flights. This NPRM included a requirement for the carriage of additional fuel for diversion to a suitable and adequate alternate aerodrome when flying to a remote island regardless of whether the operation was scheduled or unscheduled. Those alternate aerodromes, for safety reasons, could not be remote island destinations. No negative comments were received on that aspect of the NPRM.

3.2.8 In 2008, CASA published NPRM 0808OS to consult on a proposed CASR Part 135. This Part will apply to passenger transport services (amalgamated RPT and charter operations) in aeroplanes with 9 or less passenger seats. In standardisation with CASR Part 121, this NPRM also included a requirement for the carriage of additional fuel for diversion to a suitable alternate aerodrome when flying to a remote island. No negative comments were received on that aspect of the NPRM.

3.2.9 In August 2009, CASA established a standards development project to review the fuel and alternate requirements for all flights in Australia. This project is ongoing and incorporates this CAO 82.0 proposal as part of its scope.

### 3.3 Reasons for change

3.3.1 The application of the additional remote island fuel requirements in CAO 82.0 which is currently limited to passenger-carrying charter operations was reviewed in the early stage of the project. As the safety of passengers is CASA's highest priority, it was considered that excluding other passenger-carrying operations in the aerial work and RPT categories from the remote island fuel requirements had no justifiable safety reasons.

Note: The term "passenger" is defined in CAR 2 as meaning "any person who is on board an aircraft other than a member of the operating crew". The term "operating crew" is defined in CAR 2 as meaning "any person who is on board an aircraft with the consent of the operator of the aircraft and has duties in relation to the flying or safety of the aircraft".

3.3.2 As the future CASR Parts 121 and 135 will require the carriage of sufficient fuel for an aeroplane to divert to a suitable alternate aerodrome on flights to designated remote islands, it is considered necessary, in the interests of aviation safety, to expedite the implementation of these requirements via CAO 82.0. This will alleviate the potential for fuel exhaustion events on flights to a remote island in the future, prior to the making of CASR Parts 121 and 135.

3.3.3 Due to the island's remote nature, it is also proposed to re-designate Cocos (Keeling) Island as a remote island. It is considered that weather alone (which for Cocos (Keeling) Island may be comparatively predictable due to its terrain) should not be the sole determinant of the requirement for the carriage of alternate fuel. Rather, other factors such as aerodrome closure, radio navigation aid failure, or other unpredictable events are also considered a threat to the safe completion of a commercial passenger-carrying flight.

3.3.4 It was considered whether the former 'island reserve' requirement of 2 hours holding fuel would be an appropriate mitigator. However, it is considered that a diversion to an alternate aerodrome, rather than remaining committed to a landing at the proposed destination, would provide for a safer outcome. It was also determined that in most cases, for many types of aeroplanes (particularly turbofan-engine aeroplanes), the amount of additional fuel for flight to an alternate aerodrome would equate to less than 2 hours holding fuel. In the most extreme scenario identified, where a flight would need to divert from Cocos (Keeling) Island to an alternate aerodrome (the nearest suitable being Jakarta – a total of 685 nm direct), this would equate to the equivalent of approximately 2 hours holding fuel for many turbofan-engine aeroplanes types.

### 3.4 Objective

3.4.1 The objective of this NPRM is to propose additional requirements for commercial passenger-carrying flights to remote islands, in order to minimise the risk of an aeroplane's fuel being exhausted and therefore necessitating the flight crew to ditch the aircraft or attempt an unsafe landing.

3.4.2 Implementing the proposal in this NPRM will expedite the promulgation of requirements relating to flights to remote islands as proposed in CASR Parts 121 and 135 and consulted on already.

### 3.5 Key change proposals (to CAO 82.0)

3.5.1 Designate Cocos (Keeling) Island as a remote island in the definition of 'remote island' in paragraph 2.1. Note that 'Cocos (Keeling) Islands' is the legal name for the territory within which the collection of islands are located, including the island on which the Cocos (Keeling) Island aerodrome is located.

3.5.2 Remove the provision in paragraph 2.3 that allows an operator not to carry fuel for diversion to an alternate aerodrome if the operator's operations manual provides for such a procedure.

3.5.3 Amend the meaning of minimum safe fuel to require the calculation of fuel for diversion to an alternate aerodrome in the event of a loss of pressurisation coupled with the failure of an engine, in addition to either of the individual failures. This possibility is envisaged by CAR 234 (3) (c) and as such it is proposed to align the requirement in CAO 82.0 with the intent of the CARs, and the requirements applicable to EDTO flights.

3.5.4 Insert a requirement in subsection 3A that a pilot in command, who is subject to the conditions of the section, must nominate an alternate aerodrome (as defined in the CARs). The nomination of an alternate aerodrome would therefore be needed to be specified on a flight plan, and be planned for accordingly.

3.5.5 Extend the conditions of subsection 3A to apply to passenger-carrying aerial work flights. This would capture certain air ambulance flights, surveillance flights, and other aerial work flights where the carriage of persons other than operating crew members occurs.

3.5.6 Extend the conditions of subsection 3A to apply to passenger-carrying RPT flights. This is consistent with the proposals in CASR Parts 121 and 135.

3.5.7 Make provision for CASA to approve an operator to not comply with subsection 3A, subject to conditions which would not adversely affect safety. This is consistent with the proposals in CASR Part 121 and 135.

### **3.6 Benefits and impacts**

3.6.1 This proposal makes a legislative requirement for the carriage of sufficient fuel for flight from a remote island to an alternate aerodrome. The benefits of this are obvious, in that it significantly reduces adverse consequences when a safe landing is not able to be made at a remote island.

3.6.2 It is acknowledged that many operators and pilots in command who would be captured by this proposal already meet the proposed requirements in day-to-day operations.

3.6.3 For operators and pilots in command of aeroplanes to whom this proposal would apply and who do not already meet the requirements, the carriage of additional fuel on flights to a remote island would be necessary, unless CASA approves otherwise.

3.6.4 Prior to the making of the proposed rule, an assessment of business compliance costs will be undertaken in accordance with the Office of Best Practice Regulation guidelines. If required, a Business Cost Calculator Report or Regulation Impact Statement will be prepared.

3.6.5 The draft CAO amendment makes some machinery amendments to the affected provisions to align with current drafting standards. The draft amendment also makes a consequential amendment relating to EDTO which is necessary to ensure consistency throughout the provisions of the Order.

### **3.7 Implementation and review**

3.7.1 Following consideration of responses to this NPRM, CASA will prepare a Summary of Responses, and make revisions to the draft CAO amendment where considered appropriate.

3.7.2 CASA will conduct further analysis of the extent of the impact these changes will have on operators and pilots to ensure an adequate timeframe is given for implementation. It is envisaged that a transition period of between 3 and 6 months will be allowed to ensure operators have revised procedures in respect to these changes.

3.7.3 Following the making of the proposed CAO amendment, affected operators will be expected to revise their operations manual(s) and/or fuel policy to incorporate the proposed requirements. This should occur during the 3 to 6 month transition period. Failure to do so could result in CASA issuing a formal Direction to an Air Operator's Certificate (AOC) holder to update their operations manual(s) accordingly.

3.7.4 In addition to changes to the relevant CAO, CASA also intends to review Civil Aviation Advisory Publication (CAAP) 234-1 relating to fuel requirements. This review is being undertaken in two phases: the first to enhance the guidance for fuel planning and in-flight fuel-related decision making on flights to remote destinations (including remote islands); and secondly a holistic review of guidelines for fuel and alternate planning.

3.7.5 The Standards and Recommended Practices (SARPs) promulgated by the International Civil Aviation Organization (ICAO) in relation to fuel and alternate requirements are currently being revised by ICAO, with amendments expected in the next 2 years. CASA is considering these changes and where considered appropriate, will propose to amend the relevant regulations in accordance with the revised ICAO SARPs.

3.7.6 As previously mentioned, proposed CASR Parts 121 and 135 (passenger transport services in aeroplanes) already include requirements of similar intent to what is proposed in this NPRM. Proposed CASR Part 136 which deals with aerial work operations in aeroplanes will be updated to reflect the addition of passenger-carrying aerial work operations within the scope of the additional remote island fuel requirements.

3.7.7 The monitoring and review of the new regulations would be conducted on an ongoing basis during the implementation/transition phase. Thereafter, following the commencement of the regulations, monitoring and review would be conducted on an as required basis and (within 5 years) as required by the Government.

# NPRM Response Form

## CARRIAGE OF FUEL ON FLIGHTS TO A REMOTE ISLAND – PROPOSED AMENDMENT TO CAO 82.0

**Please complete your response by 9 September 2010 and  
return it by one of the following means:**

**Online (preferred method)** [casa.gov.au/newrules/ors](http://casa.gov.au/newrules/ors)

**Fax** 1800 653 897 (free call)

**Post (no stamp required)**  
CASA Standards Development Branch  
Reply Paid 2005  
Canberra ACT 2601, Australia

**E-mail** [nprm1003os@casa.gov.au](mailto:nprm1003os@casa.gov.au)

\* A web-based online response form is offered as an alternative to the printed form in this NPRM. Online submission is the preferred method of sending your comments to CASA. If you are connected to the Internet, type [casa.gov.au/newrules/ors](http://casa.gov.au/newrules/ors) into your web browser and follow the links for this NPRM.

### Your Details

Please provide relevant information below and indicate your acceptance or otherwise of the proposal presented in this Notice of Proposed Rule Making by ticking [✓] the appropriate boxes.

Your name: \_\_\_\_\_ ARN\* (if known): \_\_\_\_\_

Organisation: \_\_\_\_\_ ARN\* (if known): \_\_\_\_\_

\*Aviation Reference Number, usually your CASA-issued licence or certificate number

Address: \_\_\_\_\_

Your telephone number (optional): \_\_\_\_\_ (to enable the Project Leader to contact you as necessary)

Do you consent to have your name published as a respondent to this NPRM? YES [ ] NO [ ]

Signed: ..... Date: .....

### How are you responding to this questionnaire/proposal, i.e. whose views are represented in your response?

Private individual     Aviation industry body/association     Staff association/union     Government agency/authority/department/council     Aviation business owner/service provider     Other

### Please advise your main involvement in aviation:

Passenger/public consumer of aviation services     Air crew for passenger-carrying activities     Air crew for non-passenger-carrying activities     Ground support for passenger-carrying activities     Ground support for non-passenger-carrying activities     Other (specify below\*, e.g. parachutist)

\* **Details:** \_\_\_\_\_

### Are you satisfied with CASA's consultation on this issue?

Very satisfied     Satisfied     No opinion     Dissatisfied     Very dissatisfied

### Key Change Proposals (refer to NPRM Section 3)

CASA invites you to advise your comments on the subject matter proposed in this NPRM by indicating your preference by ticking [✓] the appropriate box and commenting below:

***Designate Cocos (Keeling) Island as a remote island in the definition of ‘remote island’ in paragraph 2.1***

- proposal is acceptable without change
- changes would improve it, but it is acceptable (please provide details below)
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts if applicable): \_

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***Remove the provision in paragraph 2.3 that allows an operator not to carry fuel for diversion to an alternate aerodrome if the operator’s operations manual provides for such a procedure***

- proposal is acceptable without change
- changes would improve it, but it is acceptable (please provide details below)
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts if applicable): \_\_\_

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***Amend the meaning of minimum safe fuel to require the calculation of fuel for diversion to an alternate aerodrome in the event of a loss of pressurisation coupled with the failure of an engine, in addition to either of the individual failures***

- proposal is acceptable without change
- changes would improve it, but it is acceptable (please provide details below)
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts if applicable): \_

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***Insert a requirement in subsection 3A that a pilot in command, who is subject to the conditions of the section, must nominate an alternate aerodrome (as defined in the CARs)***

- proposal is acceptable without change
- changes would improve it, but it is acceptable (please provide details below)
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts if applicable): \_\_\_

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***Extend the conditions of subsection 3A to apply to passenger-carrying aerial work flights***

- proposal is acceptable without change
- changes would improve it, but it is acceptable (please provide details below)
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts if applicable): \_\_\_

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***Extend the conditions of subsection 3A to apply to passenger-carrying RPT flights***

- proposal is acceptable without change
- changes would improve it, but it is acceptable (please provide details below)
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts if applicable): \_\_\_

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***Make provision for CASA to approve an operator to not comply with subsection 3A, subject to conditions which would not adversely affect safety***

- proposal is acceptable without change
- changes would improve it, but it is acceptable (please provide details below)
- changes would make it acceptable (please provide details below)
- not acceptable under any circumstances

Comments or suggested changes (including an estimate of additional costs/impacts if applicable): \_\_\_

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Additional information is available from:

**Nick Strange, Project Leader**

**Post (no stamp required) Reply Paid 2005**

Standards Development Branch

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