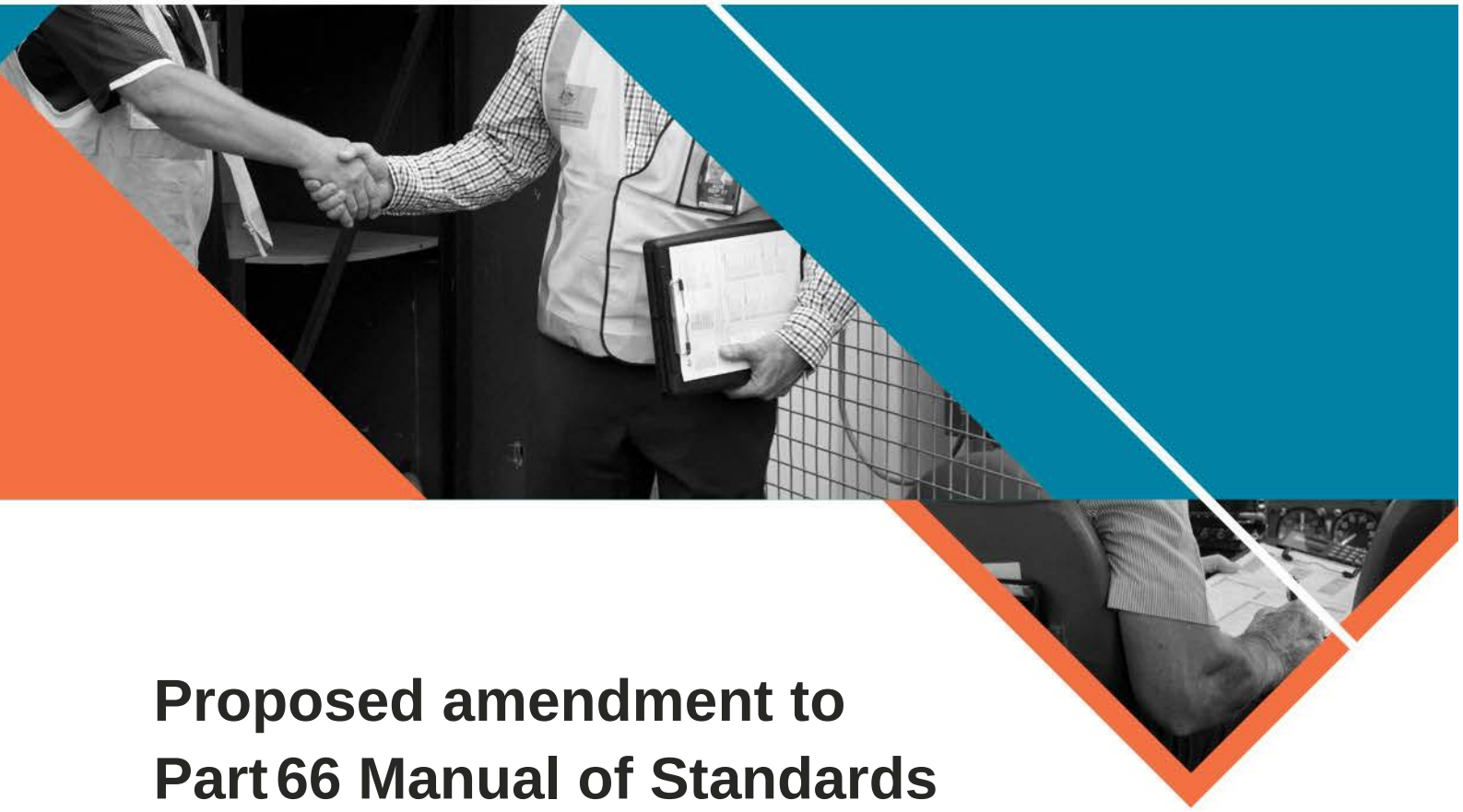
Australian Government
Civil Aviation Safety Authority

SUMMARY OF PROPOSED CHANGE



Proposed amendment to Part 66 Manual of Standards (MOS) aircraft engineer licensing training

Part 66 Manual of Standards

Date	August 2019
Project number	MS 16/05
File ref	D19/278683

Introduction

Part 66 of the *Civil Aviation Safety Regulations 1998 (CASR)* sets out the requirements for, the application for, the granting of, and the appropriate use of aircraft maintenance engineer licences and ratings. Part 66 was first introduced in June 2011 as part of the regulatory reform program and transitioned the aircraft maintenance licensing requirements from the *Civil Aviation Regulations 1988 (CAR)* to the CASR. The Part 66 licensing system adopted A, B1, B2 and C licence categories and aircraft type ratings in line with the European Aviation Safety Agency (EASA) system.

The detailed standards for the issue of aircraft engineer licences, ratings, other requirements (including training requirements) and privileges associated with the licence, are included in the Part 66 Manual of Standards (MOS); an essential part of Part 66 suite of legislation.

Why are we consulting?

Since the commencement of Part 66 in June 2011, CASA has conducted a comprehensive post-implementation review (PIR) of all Part 66 legislation and has received valuable feedback from stakeholders—including Part 66 licence holders and training organisations—on the implications and impacts of the legislation. The feedback has highlighted the opportunity to simplify and clarify some aspects of the legislation, address anomalies, gaps and unintended consequences.

In support of the PIR, CASA invited the aircraft maintenance sector to formally comment on matters relating to aircraft maintenance engineer licences and ratings, covered by Part 66 regulations, Part 66 MOS and associated advisory material.

One of the primary issues identified by the PIR and discussed by the Aviation Safety Advisory Panel's (ASAP) Part 66 Technical Working Group (TWG), was concern over industry's limited access to licence category training, examination and assessment for a Part 66 licence.

To address this issue and to more closely align Part 66 to EASA Part 66, CASA proposes to introduce a new training pathway to obtain a Part 66 maintenance engineer licence. The new pathway would provide industry a self-study option, as an alternative to the existing Part 147 Maintenance Training Organisation (MTO) requirements. A person could be granted a licence by:

- passing theory exams administered by CASA based on the 17 Part 66 basic knowledge modules that are contained in Part 66 MOS (the syllabus could be self-studied from CASA recognised EASA Part 66 textbooks)
- submitting to CASA a log demonstrating they have achieved the required practical maintenance experience on operating aircraft specific to the category of licence being applied for.

This summary of proposed change (SPC) provides the details for a number of proposed amendments to the Part 66 MOS that will accommodate the new self-study training pathway. CASA invites industry to provide comment and feedback on this proposal.

Purpose and scope of the proposed amendments

One of the issues identified by the PIR and discussed by the ASAP's Part 66 PIR TWG, was concern about industry's limited access to licence category training, examination and assessment for those persons applying for a Part 66 licence.

Australia's Part 66 legislation is based on EASA Part 66; however; there are differences between them. The Australian legislation does not provide a self-study and examination option as an alternative training pathway to the Part 147 MTO Vocational Education and Training (VET) system[1]. This policy was introduced in 2011 with Part 66 and officially concluded the previous CASA self-study licensing system (the CASA Basics examinations and Schedule of Experience (SOE)), that was available under the CARs. This is still being offered by CASA and will cease on 3 July 2020. These arrangements need to be ceased because they are based on the previous licensing system and syllabi as required under the CARs, resulting in Part 66 licences being issued with limited privileges due to differing training syllabi between the two licensing systems (CAR 31 to Part 66).

Submissions from industry identified that access to MTO training is difficult and expensive due to there being only six Part 147 MTOs, five of which are located in major cities on the east coast of the country. 'General consensus' by Part 66 TWG members was reached on this issue with support from all that an alternative training and examination option be considered by CASA to address industry's concerns.

This Part 66 MOS change proposal proposes to replace the current CASA Basics/SOE arrangements with a Part 66 self-study pathway compatible and aligned with the current licensing standards.

The amendments would also make some minor administrative changes, including updates to the tables of type rated aircraft types.

[1] Similar to other countries (USA, Canada and NZ).

The proposal

Under the EASA Part 66 licensing system, the self-study training option and the required practical experience provides the flexibility of **3 options** (described in the following table) for individuals to obtain a Part 66 licence.

- for all 3 options, an individual is required to sit knowledge module examinations, and these may be conducted by either the NAA or by the Part 147 training organisation
- the period of practical maintenance experience required differs for each option and is dependent on an individual's previous relevant technical training/experience.

Currently, CASA's only training pathway offered under Part 66 for all licence category outcomes is comparable to Option 3 in the table. A licence applicant is required to complete category training via a Part 147 MTO and satisfy practical experience requirements as prescribed in the Part 66 MOS.

The proposed self-study option would align Part 66 training pathways to those detailed in EASA Part 66; adopting all 3 options depicted in the table.

Currently, under the present self-study scheme (i.e. the CASA Basics and SOE), examinations are outsourced to a third-party provider and are administered by CASA's Maintenance Personnel Licensing (MPL) Specialist Services. Under this Part 66 self-study proposal, it is expected this same arrangement will be put in place.

Table 1 EASA Part 66 - 3 option system

Note: In the table, National Aviation Authority (NAA) refers to: *an EASA approved State/country).*

EASR Part 66 – 3 option system			
Licence category		**A, B1.2 and B1.4**	**B1.1, B1.3 and B2**
	Basic knowledge (theoretical) requirements all licence categories/subcategories	**Basic experience (practical) requirements**	
Option 1	**NAA or Part 147 conducted basic knowledge module examinations**	**3 years** of practical maintenance experience on operating aircraft, **if the applicant has no previous relevant technical training;** or	**5 years** of practical maintenance experience on operating aircraft, **if the applicant has no previous relevant technical training;** or
Option 2	**NAA or Part 147 conducted basic knowledge module examinations**	**2 years** of practical maintenance experience on operating aircraft and completion of training considered relevant by the competent authority **as a skilled worker, in a technical trade;** or	**3 years** of practical maintenance experience on operating aircraft and completion of training considered relevant by the competent authority **as a skilled worker, in a technical trade;** or
Option 3	**NAA or Part 147 conducted basic knowledge module examinations**	**1 year** of practical maintenance experience on operating aircraft and **completion of an approved Part 147 basic training course.**	**2 years** of practical maintenance experience on operating aircraft and completion of an **approved** Part 147 basic training course.

Consultation documents

To assist the reader's understanding of this proposal, the following documents are provided and should be read in conjunction with this 'proposed change' document:

- the *Part 66 Manual of Standards Amendment Instrument 2019 (No. 1),* and
- a 'compilation' version of the Part 66 Manual of Standards - which inserts the proposed amendments from the amendment instrument into the relevant areas of the MOS.

Details of each proposed amendment

The *Part 66 Manual of Standards Amendment Instrument 2019 (No. 1),* is comprised of 52 amendment items, seven—items 46 to 52 inclusive—are miscellaneous changes, including the type rating updates, that are unrelated to the self-study proposal. For administrative purposes they are being consulted as part of the one instrument.

The following schedule provides details for each amendment item:

Schedule of amendments

Item [1] Section 66.5 - Definitions

Item [1] updates the definition for an avionic system to reflect the EASA definition of this term.

Item [2] Section 66.5 - Definitions

Item [2] adds a definition for the *AMC/GM document* for Part 66 which is referenced by a note in subsequent amendment items.

Item [3] sub-sub-subparagraph 66.A.20 (a) 4. (ii) (E) - Privileges

Item [3] makes a minor editorial change.

Item [4] paragraphs 66.A.25 (b) to (e) - basic knowledge and competency requirements

Item [4] makes changes to existing text to:

a. subparagraphs (b) (i) & (ii) – reduce the complexity of the language used and more closely align the knowledge requirements to the EASA Part 66 licensing system.
b. paragraph (c) – clarify the knowledge requirements of the category C licence (in line with EASA requirements).
c. paragraph (d) 2. – introduce **self-study** as an optional training pathway for applicants to gain the required knowledge for grant of a licence via use of CASA-recognised EASA Part 66 knowledge module textbooks.
d. paragraph (e) – clarify that examination of knowledge gained through training conducted by a Part 147 maintenance training organisation (MTO) must be conducted by the MTO.
e. paragraph (ea) – clarify that examination of the knowledge gained through the self-study option must be conducted by CASA.
f. paragraph (eb) – clarify—to align with EASA Part 66 requirements—that the training courses and examination of subject modules must have been passed by an applicant for the granting of an initial licence, or the addition of a category or subcategory to an existing licence, within 10 years prior to application. Currently 66.A.25 (h) states a 5-year requirement. This amendment proposes to increase that timeframe to 10 years to align with EASA.
g. paragraph (ec) – clarify that an applicant who has undertaken training conducted by the MTO, must also hold the requisite units of competency listed and coded in Appendix IV to the Part 66 MOS, applicable to the licence being applied for.

Item [5] paragraph 66.A.25 (f)

Item [5] clarifies that an applicant who has undertaken training conducted by the MTO and who is seeking additional privileges, such as for wooden structures, fabric surfaces, or propellers, must also hold the relevant optional units of competency from the additional privileges being applied for.

Item [6] paragraph 66.A.25 (h)

Item [6] is consequential to item [4] and deletes paragraph (h). This removes the current 5-year requirement for when knowledge and assessment must be gained prior to applying for a licence. This time requirement is now covered under proposed paragraph (eb) - see item [4] above.

Item [7] paragraph 66.A.25 (ha)

Item [7] is consequential to item [6] and makes a minor editorial change to correct mention of reference to paragraph (ha) - (2 instances), to (h).

Item [8] paragraph 66.A.25 (i)

Item [8] is consequential to item [6] and makes a minor editorial change to correct the mention of reference to paragraph (h) - (2 instances), to (g).

Item [9] subparagraphs 66.A.30 (a) 1. and 2.

Item [9] makes changes to existing text to:

a. Align the practical maintenance experience requirements for each category and subcategory of licence to the EASA Part 66 licensing system.
b. Support the EASA self-study training option by providing the flexibility of **3 options** to satisfy the practical maintenance experience to obtain a Part 66 licence:
    i. for all 3 options, an individual may sit knowledge module examinations conducted by either CASA or by the Part 147
    ii. the amount of practical experience required differs for each option and is dependent on an individual's previous relevant technical training/experience.

Item [10] sub-subparagraph 66.A.30 (a) 3. (iii)

Item [10] provides a 66 MOS reference to the 'academic qualifications' pathway requirements for grant of a Category C licence and specifies the practical maintenance experience requirements for those academic degree holders.

Item [11] paragraph 66.A.30 (b) to (d)

Item [11] makes the following changes:

a. paragraph (b) – provides a table from the equivalent section of EASA Part 66 legislation, which specifies the practical maintenance experience requirements for adding a new category or subcategory to an existing licence.
b. paragraph (c) – specifies the requirements that must be met by an individual for the practical maintenance experience mentioned in the table provided at (b).
c. paragraph (ca) – provides—in line with EASA Part 66—a 50% reduction in the amount of practical maintenance experience mentioned in the table provided by (b), if the applicant has successfully completed a category training course, relevant to the category or subcategory being applied for, and conducted by an MTO.
d. paragraph (d) – clarifies the type and amount of recent practical maintenance experience required by an individual who applies for an initial issue of an aircraft engineer licence.

e. paragraph (da) – clarifies the amount of recent practical maintenance experience required by an individual who applies to add a category or subcategory to an existing aircraft engineer licence.

Item [12] subparagraph 66.A.30 (e) 1.

Item [12] makes a minor editorial change.

Item [13] Section 66.A.30

Item [13] inserts new paragraph (ea) which specifies (in line with EASA Part 66), a 10 year timeframe for which the practical maintenance experience mentioned in section 66.A.30 (a) or (b) must have been gained prior to application for a licence.

Item [14] paragraph 66.A.30 (f)

Item [14] makes two minor editorial changes to correct a reference.

Item [15] paragraph 66.A.45 (e)

Item [15] makes a minor editorial change to correct a reference.

Item [16] paragraph 66.A.45 (i)

Item [16] makes a minor editorial change.

Item [17] Appendix I, Part 1, paragraph immediately under the subheading 'Levels of knowledge', first sentence

Item [17] makes a change that clarifies the level of knowledge required by a person who is applying for a Category C licence.

Item [18] Appendix I, Part 2, paragraph immediately preceding the table

Item [18] makes a minor editorial change to provide clarity.

Item [19] Appendix I, Part 2, table, heading for column 1

Item [19] makes a minor editorial change to the column heading.

Item [20] Appendix I, Part 2, table

Item [20] replaces existing module 11 with module 11A and module 11B, to align this module to EASA's module 11. This change splits the module into two separate modules:

- 11A – turbine aeroplane aerodynamics, structures and systems, and
- 11B – piston aeroplane aerodynamics, structures and systems.

Item [21] Appendix I, Part 2, table

Item [21] makes minor editorial changes to the titles of module 13 and module 14, to align with EASA titles for these modules.

Item [22] Appendix I, Part 3, Module 3, item 3.10, paragraph (b)

Item [22] makes a minor editorial change to align with EASA item.

Item [23] Appendix I, Part 3, Module 5

Item [23] makes changes to the subcategories of licences mentioned in the four columns that provide the detail for "level of knowledge for the category", to align these same columns to EASA's module 5.

Item [24] Appendix I, Part 3, Module 7, item 7.5

Item [24] makes a minor editorial change.

Item [25] Appendix I, Part 3, Module 7, item 7.7

Item [25] makes an editorial change to item 7.7—to align to EASA item 7.7—to introduce knowledge requirements for electrical wiring interconnection system (EWIS).

Item [26] Appendix I, Part 3, Module 10, item 10.6, heading

Item [26] makes an editorial change to the heading for item 10.6 to align to EASA.

Item [27] Appendix I, Part 3, Module 10, item 10.7, paragraph (b)

Item [27] makes an editorial change to item 10.7 to align to EASA.

Item [28] Appendix I, Part 3, Module 11

Item [28] replaces the content of existing module 11 with module 11A and module 11B, to align this module to EASA's module 11. This change splits the module into two separate modules:

- 11A – turbine aeroplane aerodynamics, structures and systems, and
- 11B – piston aeroplane aerodynamics, structures and systems.

Item [29] Appendix I, Part 3, Module 12

Item [29] makes a change to the heading for the column that details the "level of knowledge" for the category A licence, to clarify that module 12 is applicable to subcategory A3 and A4 licences. This change aligns the module to EASA's module 12.

Item [30] Appendix I, Part 3, Module 12, item 12.4

Item [30] makes minor changes to the heading and content of this item to align to EASA item 12.4.

Item [31] Appendix I, Part 3, Module 12, item 12.12

Item [31] makes a minor change which adds the subject of 'filters' to the item, to align to EASA item 12.12.

Item [32] Appendix I, Part 3, Module 12, item 12.13

Item [32] makes a minor change which adds the subject of 'wiper systems' to the item, to align to EASA item 12.13.

Item [33] Appendix I, Part 3, Module 12, item 12.14

Item [33] makes a minor change which adds the subject of 'air-ground sensing' to the item, to align to EASA item 12.14.

Item [34] Appendix I, Part 3, Module 12, item 12.17

Item [34] makes a minor editorial change.

Item [35] Appendix I, Part 3, Module 13, heading

Item [35] makes a minor change to the heading, to align to EASA module 13.

Item [36] Appendix I, Part 3, Module 13, item 13.8, heading

Item [36] makes a minor change to the heading for item 13.8, to align to EASA heading for item 13.8.

Item [37] Appendix I, Part 3, Module 13, item 13.8

Item [37] makes a minor change which adds the subject of 'glass cockpit' to the item, to align to EASA item 13.8.

Item [38] Appendix I, Part 3, Module 13, item 13.20

Item [38] makes a minor editorial change.

Item [39] Appendix I, Part 3, Module 14, heading

Item [39] makes a minor change to the heading, to align to EASA module 14.

Item [40] Appendix II, clause 1, heading

Item [40] makes a minor change to the heading, to align to EASA Appendix II, clause 1.

Item [41] Appendix II, subclause 1.1

Item [41] makes a minor editorial change to align to EASA subclause 1.1.

Item [42] Appendix II, subclause 1.4

Item [42] makes a minor editorial change to align to EASA subclause 1.4.

Item [43] Appendix II, subclause 1.7

Item [43] makes a minor editorial change to align to EASA subclause 1.7.

Item [44] Appendix II, subclauses 1.11 to 1.13

Item [44] makes editorial changes to align to EASA subclauses 1.11 to 1.13.

Item [45] Appendix II, clause 2

Item [45] makes changes to align to EASA Appendix II, clause 2, which now includes exam question information for modules 11A and 11B.

Miscellaneous amendment items (unrelated to the self-study proposal)

Item [46] Appendix IV, table

Item [46] inserts unit of competency *MEA362 – Maintain aircraft vapour cycle air-conditioning systems, to* align the 66 MOS requirements to a recent amendment made to the Aeroskills training package by the Aerospace Industry Reference Committee (IRC).

Item [47] Appendix IX, Table 1, item dealing with Type Certificate (TC) holder, BOMBADIER

Item [47] inserts a new aircraft type rating for an aircraft that will be registered on the Australian civil aircraft register, last quarter of 2019.

Item [48] Appendix IX, Table 1, item dealing with Type Certificate (TC) holder, DASSAULT AVIATION

Item [48] inserts a new aircraft type rating for an aircraft that will be registered on the Australian civil aircraft register, last quarter of 2019.

Item [49] Appendix IX, Table 1, item dealing with Type Certificate (TC) holder, EMBRAER

Item [49] inserts a new aircraft type rating for an aircraft that will be registered on the Australian civil aircraft register, last quarter 2019.

Item [50] Appendix IX, Table 2, Part 1, item dealing with TC holder, EMBRAER

Item [50] inserts a new aircraft type rating, the training of which, may be controlled or delivered by the approved maintenance organisation (AMO).

Item [51] Appendix IX, Table 2, Part 1

Item [51] inserts two new aircraft type ratings, the training of which, may be controlled or delivered by the AMO.

Item [52] Appendix IX, Table 2, Part 2

Item [52] inserts a new aircraft type rating, the training of which, may be controlled or delivered by the AMO.

Previous consultations

In support of the Part 66 PIR, CASA invited submissions and feedback from 21 February 2017 to 26 May 2017. The objective of this consultation was to provide an opportunity for the aircraft maintenance sector to comment on matters relating to aircraft maintenance engineer licences

and ratings, covered by Part 66, the Part 66 Manual of Standards (MOS) and associated advisory material.

At the conclusion of the consultation period, CASA received a total of 70 submissions. Comments made demonstrated that the majority of issues could be grouped into three main areas:

a. 1. Part 66 of CASR, the Part 66 MOS and associated advisory material:
    i. complexity of Part 66 regulations
    ii. complexity of the Part 66 MOS
    iii. the Part 66-related ACs and Part 66 AMC/GM document are not easily understood
    iv. lack of true harmonisation with EASA (as originally intended)
    v. lack of clarity and understanding of the Part 66 regulations and Part 66 MOS
    vi. continued use of two sets of regulations (Civil Aviation Regulations 1988 (CAR) and CASR)
b. licence privileges:
    i. lack of understanding of privileges/limitations
    ii. complexity of exclusions on licences
    iii. maintaining licence currency (6 months in 24-month requirement)
    iv. B1 licence privilege:
        A. understanding what is a 'simple test'
        B. understanding avionic line replaceable unit (LRU) privileges
c. Aeroskills training (that leads to grant of a Part 66 licence):
    i. structure of the training, including knowledge requirements (EASA modules/units of competency)
    ii. training pathways
    iii. cost of training
    iv. type training too complex/difficult
    v. access to training by individuals in remote parts of the country
    vi. RPL problems.

In further support of the Part 66 PIR, CASA established a CASA/industry Part 66 PIR Technical Working Group (TWG) which met in Canberra for a workshop from 4th to 6th April 2018. During this workshop, the group, using their relevant technical expertise and industry sector insight, carried out an analysis and review of issues identified from the 66 PIR comment period, to develop proposed solutions and recommendations for improvements to the Part 66 legislation and associated advisory material.

One of the primary issues discussed was concern over industry's limited access to licence category training, examination and assessment for a Part 66 licence. ‘General consensus’ by the TWG members was reached on this issue with support from all in attendance, that an alternative training and examination option be considered by CASA to address industry’s concerns.

The alternative training and examination option is the subject of this proposal.

Impact on industry

CASA estimates that introduction of self-study for Part 66 licence category training, as an alternative training pathway to the existing vocational education training (VET) Part 147 MTO pathway, will provide the following benefits to industry:

a. Cost savings to an individual undertaking the self-study pathway compared to the current Part 147 training pathway. Under this new training scheme, CASA will charge an individual a fixed fee (to be determined) for each Part 66 knowledge module examination sitting. This type of examination sitting fee, is comparable to the current scheme on offer for individuals who sit CASA Basics exams.
b. Easier access to training by individuals located in remote parts of the country. Given majority of CASA approved Part 147 MTOs are geographically located on the east coast of Australia, a licence applicant is not restricted by his/her physical location, as to where the self-study is undertaken.
c. The ability to sit CASA Part 66 knowledge module exams at numerous 'exam sitting' locations across the country. Currently, under the CASA Basics and SOE self-study training scheme, CASA provides numerous exam sitting locations and it is expected this same flexibility will be available under this Part 66 self-study scheme
d. The individual's ability to study at own pace and to sit when ready each module exam required for a particular category of licence.
e. The flexibility to sit any Part 66 module exam at any of the designated CASA exam sitting locations, or alternatively, sit the exam at a Part 147 MTO approved by CASA as an exam sitting location.

Negative effects of this proposal on industry are:

a. The costs incurred for the purchase of (CASA recognised) EASA knowledge module text books by individuals who choose self-study as the method of theoretical training.
b. The possible impact on existing Part 147 training organisation's student enrolment numbers.
c. The self-study training pathway may result in longer timeframes for completion of the knowledge component of training to qualify for a Part 66 licence. This will be dependent upon the individual's ability to devote time and apply oneself to studying.
d. The self-study training pathway results in the longest period of practical maintenance experience required to qualify for a Part 66 licence. Under this proposal (see Table 1, EASR Part 66 - 3 option system), the amount of practical experience required differs for each training option and is dependent on an individual’s previous relevant technical training/experience.

Regulation impact statement

The introduction of a Part 66 ‘self-study’ pathway will introduce flexibility into the Australian licensing system. It is likely to provide a significant benefit to those applicants who are not located in close proximity to a Part 147 organisation. There will be no negative impact on applicants as the proposed ‘self-study’ pathway is in addition to the existing Part 66 training pathway. CASA will submit a preliminary impact assessment to the Office of Best Practice Regulation (OBPR) and expects that a Regulation Impact Statement (RIS) will not be required because there is no negative impact from the introduction of an optional ‘self-study’ pathway.

Closing date for comment

CASA will consider all comments received as part of this consultation process and incorporate changes as appropriate. Comments on the draft Part 66 Manual of Standards Amendment Instrument 2019 (No. 1) should be submitted through the online response form by close of business 27 September 2019.