



Explanatory Note to Decision 2021/011/R

Implementation of the latest CAEP amendments to ICAO Annex 16 Volumes I, II and III — CAEP/11 AMC and GM to Part 21, Issue 2, Amendment 13 CS-34 Amendment 4, CS-36 Amendment 6, CS-CO₂ Issue 2

RELATED NPA/CRD 2020-06 — OPINION NO 03/2020 — RMT.0514

EXECUTIVE SUMMARY

Commission Delegated Regulation (EU) 2021/1087 amending Article 9(2) of Regulation (EU) 2018/1139 was adopted on 7 April 2021. This amendment incorporates the latest amendments to Volumes I, II and III of Annex 16 to the Chicago Convention to align the European Union (EU) regulatory framework with the International Civil Aviation Organization (ICAO) Standards and Recommended Practices (SARPs).

Commission Delegated Regulation (EU) 2021/1088, amending Commission Regulation (EU) No 748/2012, was adopted by the European Commission on 7 April 2021. This amendment aligns the certification procedures for environmental protection with Volumes I, II and III of Annex 16 to the Chicago Convention.

The objective of this Decision is to support the application of these two Regulations by also aligning the related acceptable means of compliance (AMC) & guidance material (GM) and certifications specifications (CS) with the latest amended ICAO SARPs in Volumes I, II and III of Annex 16 to the Chicago Convention as well as with the guidance material in the related ICAO Doc 9501 Environmental Technical Manual (ETM).

To achieve the above-mentioned objective, this Decision amends the AMC & GM to Part 21, CS-34, CS-36 and CS-CO₂.

The amendments are expected to ensure a high uniform level of environmental protection and to provide a level playing field for all actors in the aviation market.

Action area:	Environmental protection		
Related rules:	AMC and GM to Part 21, CS-34, CS-36 and CS-CO ₂		
Affected stakeholders:	Design organisation approval (DOA) and production organisation approval (POA) holders		
Driver:	Environmental protection	Rulemaking group:	No
Impact assessment:	Yes (by ICAO/CAEP)	Rulemaking Procedure:	Standard

● EASA rulemaking process



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1. About this Decision

The European Union Aviation Safety Agency (EASA) developed ED Decision 2021/011/R in line with Regulation (EU) 2018/1139¹ ('Basic Regulation') and the Rulemaking Procedure².

This rulemaking activity is included in the European Plan for Aviation Safety (EPAS) [2021-2025](#) under rulemaking task (RMT).0514. The scope and timescales of the task were defined in the related Terms of Reference³.

All the interested parties were consulted on the proposed amendments through Notice of Proposed Amendment (NPA) 2020-06^{4,5}. 14 comments were received from industry and 10 from national aviation authorities.

EASA reviewed the comments received during the consultation. The comments received and the EASA responses to them are presented in Comment-Response Document (CRD) 2020-06⁶. Based on the comments received, EASA published Opinion No 03/2020 on 9 October 2020, which was addressed to the European Commission. The related following EU regulations were adopted:

- Regulation (EU) 2021/1087 adopted on 7 April 2021⁷; and
- Regulation (EU) 2021/1088 adopted on 7 April 2021⁸.

The final text of this Decision with the supporting AMC and GM to Part 21, CS-34, CS-36 and CS-CO₂ has been developed by EASA.

The major milestones of this rulemaking activity are presented on the title page.

¹ Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1535612134845&uri=CELEX:32018R1139>).

² EASA is bound to follow a structured rulemaking process as required by Article 115(1) of Regulation (EU) 2018/1139. Such a process has been adopted by the EASA Management Board (MB) and is referred to as the 'Rulemaking Procedure'. See MB Decision No 18-2015 of 15 December 2015 replacing Decision 01/2012 concerning the procedure to be applied by EASA for the issuing of opinions, certification specifications and guidance material (<http://www.easa.europa.eu/the-agency/management-board/decisions/easa-mb-decision-18-2015-rulemaking-procedure>).

³ <https://www.easa.europa.eu/document-library/terms-of-reference-and-group-compositions/tor-rmt0514>

⁴ In accordance with Article 115 of Regulation (EU) 2018/1139 and Articles 6(3) and 7 of the Rulemaking Procedure.

⁵ <https://www.easa.europa.eu/document-library/notices-of-proposed-amendment/npa-2020-06>

⁶ <https://www.easa.europa.eu/document-library/comment-response-documents/crd-2020-06>

⁷ Commission Delegated Regulation (EU) 2021/1087 of 7 April 2021 amending Regulation (EU) 2018/1139 of the European Parliament and of the Council, as regards updating the references to the provisions of the Chicago Convention (OJ L 236, 5.7.2021, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1087&qid=1625475795826>).

⁸ Commission Delegated Regulation (EU) 2021/1088 of 7 April 2021 amending Regulation (EU) No 748/2012 as regards updating the references to the environmental protection requirements (OJ L 236, 5.7.2021, p. 3) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021R1088&qid=1625475890203>).

2. In summary — why and what

2.1. Why we need to amend the CSs, AMC and GM — rationale

At the fifth meeting of its 219th Session on 11 March 2020, the ICAO Council adopted the following amendments to Annex 16 to the Chicago Convention based on the proposal from the Committee on Aviation Environmental Protection agreed at its 11th formal meeting (CAEP/11) in February 2019:

- Amendment 13 to Annex 16 ‘Environmental Protection’ to the Convention on International Civil Aviation, Volume I ‘Aircraft Noise’, 20 July 2020;
- Amendment 10 to Annex 16 ‘Environmental Protection’ to the Convention on International Civil Aviation, Volume II ‘Aircraft Engine Emissions’, 20 July 2020;
- Amendment 1 to Annex 16 ‘Environmental Protection’ to the Convention on International Civil Aviation, Volume III ‘Aeroplane CO₂ Emissions’, 20 July 2020.

In addition to the amendments to Annex 16 to the Chicago Convention, CAEP/11 approved amendments to ICAO Doc 9501 ‘Environmental Technical Manual’ (ETM), Volume I ‘Procedures for the Noise Certification of Aircraft’, Volume II ‘Procedures for the Emissions Certification of Aircraft Engines’, and a new Volume III ‘Procedures for the CO₂ Emissions Certification of Aeroplanes’. The updated ETM volumes provide clarifications and additional guidance material to facilitate a harmonised implementation of Annex 16 to the Chicago Convention.

Following the publication of EASA Opinion No 03/2020, the reference to the latest amendments of Annex 16 Volumes I, II and III were included in Chapter III, Section I, Article 9(2) of the Basic Regulation, and Annex I (Part 21) to Regulation (EU) No 748/2012⁹ was amended.

The AMC and GM to Part 21 make direct reference to Volumes I, II and III of Annex 16 and the related ETM. CS-34, CS-36 and CS-CO₂ in their turn make direct reference to Part 21. These documents need to be amended to ensure that the latest ICAO SARPs and guidance material are consistently implemented.

2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This Decision will contribute to the achievement of the overall objectives by addressing the issues outlined in Section 2.1.

The specific objective of this Decision is, therefore, to contribute to a high, uniform level of environmental protection by supporting the application of the amended environmental protection requirements and by aligning with the ICAO guidance material in the related ICAO Doc 9501.

⁹ Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations (OJ L 224, 21.8.2012, p. 1) (<https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32012R0748&qid=1622482141838>).

2.3. How we want to achieve it — overview of the amendments

This Decision amends the AMC and GM to Part 21, CS-34, CS-36 and CS-CO2. These amendments take into consideration the comments received on NPA 2020-06 and some adaptations for consistent implementation.

The amendments are listed in the tables below.

AMC and GM to Part 21	
Amended points	Rationale
GM1 21.A.21(a)(3)(i)	<ul style="list-style-type: none"> — Different from NPA 2020-06: <ul style="list-style-type: none"> ○ Renumbering due to renumbering of the related point
AMC2 21.A.130(b)	<ul style="list-style-type: none"> — Update of the exemption statement according to ICAO Doc 9501 Volume II
AMC1 21.A.130(b)(4)(i)	<ul style="list-style-type: none"> — Update of the general information on the exemption process according to ICAO Annex 16 Volume II — Addition of provisions related to exemptions according to ICAO Annex 16 Volume II — Deletion of the 'evaluation' section since it can be found in ICAO Doc 9501 Volume II — Different from NPA 2020-06: <ul style="list-style-type: none"> ○ Simplification of the text; the reference to ICAO Doc 9501 Volume II is sufficient and avoids ambiguity
GM1 21.A.130(b)(4)(i)	<ul style="list-style-type: none"> — Update of the reference in the title (addition of (i)) — Update of the applicability dates according to ICAO Annex 16 Volume II — Addition of clarification — Moved after AMC 21.A.130(b)(4)(i)
AMC1 21.A.130(b)(4)(ii)	<ul style="list-style-type: none"> — Addition of provisions related to exemptions according to ICAO Annex 16 Volume III
AMC2 21.A.163(c)	<ul style="list-style-type: none"> — Update of the exemption statement according to ICAO Doc 9501 Volume II
AMC1 21.A.165(c)(3)	<ul style="list-style-type: none"> — Update of the general information on the exemption process according to ICAO Annex 16 Volume II — Addition of provisions related to exemptions according to ICAO Annex 16 Volume II — Deletion of the 'evaluation' section since it can be found in ICAO Doc 9501 Volume II — Different from NPA 2020-06: <ul style="list-style-type: none"> ○ Simplification of the text; the reference to ICAO Doc 9501 Volume II is sufficient and avoids ambiguity
GM1 21.A.165(c)(3)	<ul style="list-style-type: none"> — Update of the applicability dates according to ICAO Annex 16 Volume II — Addition of clarification
AMC1 21.A.165(c)(4)	<ul style="list-style-type: none"> — Addition of provisions related to exemptions according to ICAO Annex 16 Volume III



GM1 21.B.85(a)	<p>— Different from NPA 2020-06:</p> <ul style="list-style-type: none"> ○ Point (1): explanation of the meaning of environmental protection requirements in ICAO Annex 16 Volumes I, II and III ○ Point (2): reference to Attachments to ICAO Annex 16 Volume I and ICAO Doc 9501 Volume I. Linked to 21.B.85(a)(1) ○ This GM is moved from GM 36.1 (CS-36) since the GM shall directly relate to the corresponding requirements in 21.B.85(a). The requirements in ICAO Annex 16 Volume I are contained in 21.B.85(a) not in CS-36 (CS 36.1 refers to 21.A.21 of Part 21) ○ Point (3): reference to the ICAO Doc 9501 Volume II added. Linked to 21.B.85(a)(2) (initially proposed in GM 34.1 in NPA 2020-06) ○ Point (4.1): reference to an Attachment in ICAO Annex 16 Volume II and ICAO Doc 9501 Volume II. Linked to 21.B.85(a)(3) ○ This GM is moved from GM 34.2 (CS-34) since the GM directly relates to the corresponding requirements in 21.B.85(a); the requirements in ICAO Annex 16 Volume II are contained in 21.B.85(a) not in CS-34 (CS 34.2 refers to 21.A.21 of Part 21) ○ Point (4.2): Explanation for the new requirement for inventory and modelling purposes. Linked to 21.B.85(a)(5). (proposed in NPA 2020-06 as GM 21.B.85(a)(5)) ○ Point (5): reference to ICAO Doc 9501 Volume III. Linked to 21.B.85(a)(4) ○ This GM is moved from GM CO2.1 (CS-CO₂) since the GM directly relates to the corresponding requirements in 21.B.85(a); the requirements in ICAO Annex 16 Volume III are contained in 21.B.85(a) not in CS-CO₂ (CS CO2.1 refers to 21.A.21 of Part 21)
AMC-ELA No 1 to 21.A.145(b) and GM 21.A.145(b)(2)	<p>— Different from NPA 2020-06:</p> <ul style="list-style-type: none"> ○ Editorial corrections proposed in NPA 2020-06 are not included at this stage

CS-34	
Amended points	Rationale
CS 34.1	— Update of the reference to the point of Part 21 for the applicant requirements for the issuance of a type certificate (TC) or restricted type certificate (RTC) (point 21.A.21)
GM1 34.1	<p>— Addition of the explanation of the reference to point 21.A.21 of Part 21</p> <p>— Different from NPA 2020-06:</p>



	<ul style="list-style-type: none"> ○ The reference to ICAO Doc 9501 Volume II, initially proposed in NPA 2020-06, is moved to GM 21.B.85(a) to Part 21
CS 34.2	— Update of the reference to the point of Part 21 for the applicant requirements for the issuance of a TC or RTC (point 21.A.21)
AMC 34.2	— Deletion of AMC 34.2. The references to ICAO Annex 16 Volume II appendices are moved to point 21.B.85(a)
GM1 34.2	<ul style="list-style-type: none"> — Addition of the explanation of the reference to point 21.A.21 of Part 21 — Different from NPA 2020-06: <ul style="list-style-type: none"> ○ The reference to recommendations in ICAO Annex 16 Volume II as initially proposed in NPA 2020-06 is currently explained in point (1) of GM 21.B.85(a) to Part 21 ○ The reference to Attachment E to Appendix 3 to ICAO Annex 16 Volume II, initially proposed in NPA 2020-06, and to ICAO Doc 9501 Volume II are moved to GM 21.B.85(a) to Part 21.

CS-36	
Amended points	Rationale
CS 36.1	— Update of the reference to the point of Part 21 for the applicant requirements for the issuance of a TC or RTC (point 21.A.21)
AMC 36.1	— Deletion of AMC 36.1. The references to ICAO Annex 16 Volume I appendices are moved to point 21.B.85(a)
GM1 36.1	<ul style="list-style-type: none"> — Addition of the explanation of the reference to point 21.A.21 of Part 21 — Different from NPA 2020-06: <ul style="list-style-type: none"> ○ The reference to recommendations in ICAO Annex 16 Volume I, initially proposed in NPA 2020-06, is currently explained in point (1) of GM 21.B.85(a) to Part 21 ○ Deletion of the references to ICAO Annex 16 Volume I attachments and to ICAO Doc 9501 Volume I. These references are moved to GM 21.B.85(a) to Part 21.

CS-CO₂	
Amended points	Rationale
CS CO ₂ .1	— Update of the reference to the point of Part 21 for the applicant requirements for the issuance of a TC or RTC (point 21.A.21)
AMC CO ₂ .1	— Deletion of AMC CO ₂ .1. The references to ICAO Annex 16 Volume III appendices are moved to point 21.B.85(a).
GM1 CO ₂ .1	<ul style="list-style-type: none"> — Addition of the explanation of the reference to point 21.A.21 of Part 21 — Deletion of the reference to ICAO Doc 9501 Volume III. This reference is moved to GM 21.B.85(a) to Part 21. — Different from NPA 2020-06: <ul style="list-style-type: none"> ○ The reference to recommendations in ICAO Annex 16 Volume III, initially proposed in NPA 2020-06, is currently explained in point (1) of GM 21.B.85(a) to Part 21



3. References

3.1. Related regulations

- Regulation (EU) 2018/1139 of the European Parliament and of the Council of 4 July 2018 on common rules in the field of civil aviation and establishing a European Union Aviation Safety Agency, and amending Regulations (EC) No 2111/2005, (EC) No 1008/2008, (EU) No 996/2010, (EU) No 376/2014 and Directives 2014/30/EU and 2014/53/EU of the European Parliament and of the Council, and repealing Regulations (EC) No 552/2004 and (EC) No 216/2008 of the European Parliament and of the Council and Council Regulation (EEC) No 3922/91 (OJ L 212, 22.8.2018, p. 1)
- Commission Regulation (EU) No 748/2012 of 3 August 2012 laying down implementing rules for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations, and repealing Commission Regulation (EC) No 1702/2003 (OJ L 224, 21.8.2012, p. 1)

3.2. Related decisions

- Decision N° 2012/020/R of the Executive Director of the Agency of 30 October 2012 on Acceptable Means of Compliance and Guidance Material for the airworthiness and environmental certification of aircraft and related products, parts and appliances, as well as for the certification of design and production organisations ('AMC and GM to Part 21') — Repealing Decision No 2003/01/RM of the Executive Director of the Agency of 17 October 2003
- Decision No. 2003/3/RM of the Executive Director of the Agency of 17 October 2003 on certification specifications providing for acceptable means of compliance for aircraft engine emissions and fuel venting ('CS-34')
- Decision No. 2003/4/RM of the Executive Director of the Agency of 17 October 2003 on certification specifications providing for acceptable means of compliance for aircraft noise ('CS-36')
- Decision 2019/016/R of the Executive Director of the Agency of 29 July 2019 issuing the Certification Specifications, Acceptable Means of Compliance and Guidance Material for Aeroplane CO₂ Emissions ('CS-CO₂ — Issue 1')

3.3. Other reference documents

- Amendment 13 to Annex 16 'Environmental Protection' to the Convention on International Civil Aviation, Volume I 'Aircraft Noise', 20 July 2020
- Amendment 10 to Annex 16 'Environmental Protection' to the Convention on International Civil Aviation, Volume II 'Aircraft Engine Emissions', 20 July 2020
- Amendment 1 to Annex 16 'Environmental Protection' to the Convention on International Civil Aviation, Volume III 'Aeroplane CO₂ Emissions', 20 July 2020



- ICAO Doc 9501 'Environmental Technical Manual' — Volume I 'Procedures for the Noise Certification of Aircraft', Third Edition, Amendment No. 1, 21/02/2020
- ICAO Doc 9501 'Environmental Technical Manual' — Volume II 'Procedures for the Emissions Certification of Aircraft Engines', Fourth Edition, 2020
- ICAO Doc 9501 'Environmental Technical Manual' — Volume III 'Procedures for the CO₂ Emissions Certification of Aeroplanes', Second Edition, 2020



4. Related document

CRD 2020-06 with the EASA responses to the comments related to the amendments proposed through NPA 2020-06 'Implementation of the latest CAEP amendments to ICAO Annex 16 Volumes I, II and III'

